Euro-Asian Journal of Surgery and Medicine

17th Annual Meeting of the Euro-Asian Bridge Society of Cardiovascular & Thoracic Surgeons

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Euro-Asian Journal of Surgery and Medicine

Volume III No. 1 October 2024

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Editorial board

Welcome message

Dear Colleagues and Friends,

It is a pleasure to welcome you to the **17th Annual Meeting of the Euro-Asian Bridge Society of Cardiovascular & Thoracic Surgeons**, hosted once again in the charming and historic city of **Iași, Romania**.

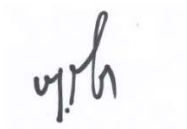
We are honored to have distinguished professionals from all over the world joining us for this important event. Their presence adds great value to the experience, providing attendees with a unique opportunity to connect, share, and learn from one another. This international collaboration not only enhances our collective knowledge, but also broadens perspectives on the global challenges within cardiovascular and thoracic surgery.

Throughout the next four days, we encourage you to immerse yourself in our carefully curated scientific program, featuring almost 200 speakers from 37 countries across every continent, including Europe, Asia, the Americas, Australia and Africa. From engaging lectures and case study presentations to hands-on workshops and informal discussions, we hope you will gain valuable insights from the sessions, and that they will drive progress in both your work and the wider medical community.

In addition to our comprehensive scientific program, we are pleased to host a specialized medical exhibition, showcasing the latest advancements and innovations in cardiovascular and thoracic surgery. We invite you to engage with exhibitors, discover cutting-edge technologies and explore how these developments can enhance your practice and patient care.

We are confident that your participation will contribute greatly to the success of this event, and we hope you leave with new knowledge, inspiration, and meaningful professional relationships.

Warm regards,



Prof. Grigore Tinică, MD, PhD
EABM 2024 Meeting President

MEETING PROGRAMME

Thursday, 17 October 2024
Hall 1

08:00 - 10:00 Session I – Congenital heart diseases I

Chairpersons:
Eugen Săndică (Bad Oeynhausen, Germany)
Giuseppe Isgrò (San Donato, Italy)
Marek Kopala (Łódź, Poland)
Shervin Ziabakhsh Tabary (Sari, Iran)

08:00 - 08:15
Surgical treatment of pulmonary hypertension (Eisenmenger)
Randas Vilela Batista (Curitiba, Brazil)

08:15 - 08:30
Resource utilisation analysis on UK congenital surgery linked data
Șerban Stoica (Bristol, United Kingdom)

08:30 - 08:45
Coagulation management of pediatric ECMO – the role of Bivalirudine
Giuseppe Isgrò (San Donato, Italy)

08:45 - 09:00
Ross and Konno – Ross operation in children
Marek Kopala (Łódź, Poland)

09:00 - 09:15
Ebstein surgery
Shingo Kasahara (Okayama, Japan)

09:15 - 09:30
Late repair of transposition of the great arteries
Mauro Lo Rito (San Donato, Italy)

09:30 - 09:45
Patients with single-ventricle physiology – a never-ending story
Eugen Săndică (Bad Oeynhausen, Germany)

09:45 - 10:00
Discussions

10:00 - 10:20 Break

10:20 - 11:55 Session III – Congenital heart diseases II

Chairpersons:
Jacek Moll (Łódź, Poland)
Horațiu Suciu (Târgu Mureș, Romania)
Marek Kopala (Łódź, Poland)
Liviu Maniuc (Chișinău, Republic of Moldova)

10:20 - 10:35
Anomalous aortic origin of coronary artery
Mauro Lo Rito (San Donato, Italy)
10:35 - 10:50
Own experience in treatment of hypoplastic left heart syndrome with own modifications of operation
Jacek Moll (Łódź, Poland)

10:50 - 11:05
Use of PEARS in congenital heart disease
Darryl Shore (London, United Kingdom)

11:05 - 11:20
Perioperative management of infants with TGA – the ASWAN Heart Center concept
Matthias Angrés (Hamburg, Germany)

11:20 - 11:35
Arterial switch operation in TGA with or without VSD. Our experience in over 800 cases. Complications and long-term results
Jacek Moll (Łódź, Poland)

11:35 - 11:50
Technical aspects for prevention of autograft dilatation – institutional experience
Marek Kopala (Łódź, Poland)

11:50 - 11:55
Discussions

11:55 - 12:00 Break

12:00 - 13:05 Session V – Heart failure – Heart & lung transplantation I

Chairpersons:
Horațiu Suciu (Târgu Mureș, Romania)
Lorenzo Menicanti (San Donato, Italy)
Borys Todurov (Kiev, Ukraine)
Shervin Ziabakhsh Tabary (Sari, Iran)

12:00 - 12:15
Novelties in durable LVAD therapy for advanced heart failure
Stephan Schueler (Newcastle upon Tyne, United Kingdom)

12:15 - 12:30
Challenges in cardiac transplant in Romania
Horațiu Suciu (Târgu Mureș, Romania)

12:30 - 12:45
Heart transplantation during the war – breaking barriers and exploring new frontiers
Borys Todurov, Gavrylo Kovtun, Sofia Chaikovska, Serhii Sudakevych, Stepan Maruniak, Anton Shpachuk, Maxim Taranov, Vitalii Demyanchuk (Kiev, Ukraine)

12:45 - 13:00
Revascularization in dysfunctional ventricles
Lorenzo Menicanti (San Donato, Italy)

13:00 - 13:05
Discussions

13:05 - 13:10 Break

13:10 - 13:30 Main lecture I – Complex combat trauma of cardiovascular system – details of preoperative evaluation and surgical management – Borys Todurov (Kiev, Ukraine)

Chairpersons:
Grigore Tinică (Iași, Romania)
Sotirios Prapas (Athens, Greece)

Speaker:
Borys Todurov, Yurii Viktorovych Hutsuliak, Ihor Yuriiovych Mokryk, Natalia Vasylivna Ponich (Kiev, Ukraine)

13:30 - 14:30 Lunch break & Satellite symposia

14:30 - 16:00 Session VII – Heart failure – Heart & lung transplantation II

Chairpersons:
Kosmas Tsakiridis (Thessaloniki, Greece)
Alexandru-Mihai Cornea (Dublin, Ireland)
Horațiu Suciu (Târgu Mureș, Romania)
Jeko Madjarov (Wilmington, U.S.A.)

14:30 - 14:45
How do we facilitate total recovery after heart surgery?
Allan S. Stewart (Florida, U.S.A.)

14:45 - 15:00
End-stage cardiogenic shock and acute mechanical circulatory support – how we can truly recover the heart
Jeko Madjarov (Wilmington, U.S.A.)

15:00 - 15:15
Redefining limits – the impact of extended criteria donors on lung transplantation

Alexandru-Mihai Cornea, Peter Riddell, Michelle Murray, Karen Redmond, Donna Eaton, Aisling Kinsella, Guillermo Rodriguez, Irfan Elahi, Lars Nölke, Hossein Javadpour (Dublin, Ireland)

15:15 - 15:30
Segmentectomy as the gold standard for lung cancer treatment – less is more?
Kosmas Tsakiridis (Thessaloniki, Greece)

15:30 - 15:45
Modified bicaval technique in heart transplantation
István Hartyánszky (Budapest, Hungary)

15:45 - 16:00
Ventriculoplasty to treat heart failure
Randas Vilela Batista (Curitiba, Brazil)

16:00 - 16:20 Break

16:20 - 17:35 Session IX – Congenital heart diseases III

Chairpersons:
Jacek Moll (Łódź, Poland)
Alessandro Varrica (Milan, Italy)
Matthias Angrés (Hamburg, Germany)
Giuseppe Isgrò (San Donato, Italy)

16:20 - 16:35
Evolution of the heart – from the beginning to the future
Duke Cameron (Baltimore, U.S.A.)

16:35 - 16:50
The role of new technologies in percutaneous treatment of congenital heart disease
Luca Giugno (San Donato, Italy)

16:50 - 17:05
Fluid therapy in Pediatric Cardiac ICU – uses and misuses of albumin
Giuseppe Isgrò (San Donato, Italy)

17:05 - 17:20
Norwood surgery
Shingo Kasahara (Okayama, Japan)

17:20 - 17:35
Management of Ebstein anomaly
Alessandro Giamberti (San Donato, Italy)

17:35 - 17:45 Break

17:45 - 19:00 **Session XI – Congenital heart diseases IV**

Chairpersons:
Jacek Moll (Łódź, Poland)
Oto Öztekin (Istanbul, Turkey)
Kosmas Tsakiridis (Thessaloniki, Greece)
Alessandro Varrica (Milan, Italy)

17:45 - 18:00
Performance monitoring in congenital cardiac surgery – an overview
Șerban Stoica (Bristol, United Kingdom)

18:00 - 18:15
Ross or Ross-Konno operation in severe aortic stenosis –technique and timing for operation
Jacek Moll (Łódź, Poland)

18:15 - 18:30
MDRO infections in pediatric cardiac ICU – the big challenge
Giuseppe Isgrò (San Donato, Italy)

18:30 - 18:45
Minimally invasive cardiac surgery in children
Oto Öztekin (Istanbul, Turkey)

18:45 - 19:00
Arch reconstruction in neonates and infants
Alessandro Varrica (Milan, Italy)

Thursday, 17 October 2024
Hall 2

08:00 - 10:00 **Session II – Cardiovascular rehabilitation**

Chairpersons:
Florin Mitu (Iași, Romania)
Viorica E. Ungureanu (Iași, Romania)
Paloma Moisii (Iași, Romania)
Serghei Popa (Chișinău, Republic of Moldova)

08:00 - 08:10
Rehabilitation in patients with coronary revascularisation
Florin Mitu, Radu-Sebastian Gavril (Iași, Romania)

08:10 - 08:20
Cardiac rehabilitation in patients with TAVI versus SAVR – a comparative analysis
Andra Oancea, Maria Magdalena Leon (Iași, Romania)

08:20 - 08:30
Cardiac rehabilitation in patients with devices
Ioana-Mădălina Zota, Florin Mitu (Iași, Romania)

08:30 - 08:40
Cardiac rehabilitation in patients after PCI
Irina-Mihaela Abdulan, Alexandra Maștaleru (Iași, Romania)

08:40 - 08:50
Cardiac coherence and cardiovascular health
Viorica E. Ungureanu (Iași, Romania)

08:50 - 09:00
Oddities in ultrasound examination of the aortic stenosis
Laurențiu Lucaci (Iași, Romania)

09:00 - 09:10
Unmet goals in patients with heart failure and low ejection fraction – the role of baroreflex activation therapy
Silviu-Ionel Dumitrescu, Ileana Hănțulie, Mihai Dumitrașcu, Tudor Păduraru, Dragoș Săvoiu, Ioana Răduță, Alice Munteanu (Bucharest, Romania)

09:10 - 09:20
The role of light in sanogenesis
Viorica E. Ungureanu (Iași, Romania)

09:20 - 09:30
Coronary artery disease and job strain
Paloma Moisii (Iași, Romania)

09:30 - 09:45
Cardiac surgery on athletes – what do we advise before surgery, when should we operate, and what do we advise afterwards
Allan S. Stewart (Florida, U.S.A.)

09:45 - 10:00
Influence of aortic valve calcium score and membranous septum length on prognosis in patients undergoing transcatheter aortic valve implantation
Marcel Abraș, Ecaterina Pasat, Artiom Surev, Vitalie Moscalu, Petru Nucă (Chișinău, Republic of Moldova)

10:00 - 10:20 Break

10:20 - 11:55 Session IV – Cardiology, interventional cardiology & cardiovascular imaging I

Chairpersons:
Marko Turina (Zürich, Switzerland)
Radu Sascău (Iași, Romania)
Cristian Stătescu (Iași, Romania)

10:20 - 10:35
Challenging scenarios – valve-in-valve for degenerated bioprosthesis
Alfonso Ielasi (Milan, Italy)

10:35 - 10:50
Restenosis in coronary stent – surgical treatment
Ionel Droc, Alice Munteanu (Bucharest, Romania)

10:50 - 11:05
Implantable cardioverter defibrillators – the future, today
Cristian Stătescu (Iași, Romania)

11:05 - 11:20
Aortic stenosis – beyond the valve
Radu Sascău (Iași, Romania)

11:20 - 11:35
Long-term impact of new left bundle branch block in STEMI patients – Clinical outcomes and implications
Larisa Anghel (Iași, Romania)

11:35 - 11:50
An update on the use of extracellular vesicles and novel drugs for the treatment of inoperable cardiac disease
Frank W. Sellke (Providence, U.S.A.)

11:50 - 11:55
Discussions

11:55 - 12:00 Break

12:00 - 13:05 Session VI – Cardiology, interventional cardiology & cardiovascular imaging II

Chairpersons:
Adrian Covic (Iași, Romania)
Radu Sascău (Iași, Romania)
Cristian Stătescu (Iași, Romania)

12:00 - 12:15
Peripartum cardiomyopathy: a single chance – multidisciplinary cooperation
Mircea Onofriescu, Dan Popescu, Adina Tănase, Bogdan Toma, Mirabela Petică, Dragoș Huțanu, Andreea Micu, Daniela Ionel (Iași, Romania)
12:15 - 12:30
Multiresistent bacteria – a continuous problem in clinical practice
Carmen Dorobăț (Iași, Romania)

12:30 - 12:45
Cardiovascular disfunction in HIV infected patients
Carmen Dorobăț (Iași, Romania)

12:45 - 13:00
Infectious endocarditis – I.B.C.V. Iași experience
Grigore Tinică, Adelina Matei (Iași, Romania)

13:00 - 13:05
Discussions

13:05 - 13:30 Break

13:30 - 14:30 Lunch break & Satellite symposia

14:30 - 16:00 Session VIII – Novelties in cardiac surgery I

Chairpersons:
Alexander Mărmureanu (Los Angeles, U.S.A.)
Frank W. Sellke (Providence, U.S.A.)
Ali Refatlari (Tirana, Albania)
Cristina Furnică (Iași, Romania)

14:30 - 14:45
Are the 2021 ACC/AHA revascularization guidelines really controversial?
Frank W. Sellke (Providence, U.S.A.)

14:45 -15:00
The miracle of heparin
Duke Cameron (Baltimore, U.S.A.)

15:00 - 15:15
Extended resection for HoCM patients from Asia
Shuichiro Takanashi (Kawasaki, Japan)

15:15 - 15:30
Proteomics/metabolomics studies and biomarkers of malignant ventricular arrhythmia associated with acute myocardial infarction and atrial fibrillation
Guo-Wei He (Tianjin, China)

15:30 - 15:45
Who decides what is best for our patient? Between information of all kinds, guidelines and economic interests
Lorenzo Menicanti (San Donato, Italy)

15:45 - 16:00
Patient-centered care – informed consent & shared decision-making
Alexander Mărmureanu (Los Angeles, U.S.A.)

16:00 - 16:20 Break

16:20 - 17:35 Session X – Valvular surgery I

Chairpersons:
Horațiu Moldovan (Bucharest, Romania)
Ali Refatllari (Tirana, Albania)
Lorenzo Menicanti (San Donato, Italy)
Maxim Rotari (Kiev, Ukraine)

16:20 - 16:35
Heart valve: is one as good as the other? the choice between mechanical valve and biological valve
Lorenzo Menicanti (San Donato, Italy)

16:35 - 16:50
Simultaneous Bentall procedure and aortic arch replacement –insights from a single center experience
Radu Gheta, Alexandru-Mihai Cornea, Beata Kis, Alina Cornea, Steve Oku, Lars Nölke, Mark Redmond (Dublin, Ireland)

16:50 - 17:05
Tips and tricks in valvular surgery through upper hemisternotomy
Pavle Kovačević, Leba Kabongo (Gaborone, Botswana)

17:05 - 17:20
Surgical treatment of infective endocarditis
Ali Refatllari, Selman Dumani, Ermal Likaj, Saimir Kuci, Alfred Ibrahimi, Adelina Musliu (Tirana, Albania)

17:20 - 17:35
Endoscopic approach in redo surgery of cardiac valves – case report
Vladimir Kornovski (Burgas, Bulgaria)

17:35 - 17:45 Break

17:45 - 19:00 Session XII – Valvular surgery II

Chairpersons:
Horațiu Moldovan (Bucharest, Romania)
Selman Dumani (Tirana, Albania)
Mate Dzsinich (Budapest, Hungary)

17:45 - 18:00
Management of aortic disease in connective tissue disorders
Duke Cameron (Baltimore, U.S.A.)

18:00 - 18:15
Evolution of the surgical approach in aortic valve surgery from full sternotomy to totally endoscopic
Stanislav Rurac, Theodor Cebotaru, Călin Popa, Flaviu Steiu, Dana Constantinescu (Bucharest, Romania)

18:15 - 18:30
Remodelling patterns and evolution of transvalvular gradients in aortic stenosis patients: a comparison between TAVI and SAVR with biological prostheses
Grigore Tinică, Andrei Țăruș, Alberto Bacușcă, Mihail Enache, Silviu Stoleriu (Iași, Romania)

18:30 - 18:45
Surgical implications of the aorto-mitral curtain
Alexandru Ciucu (Iași, Romania)

Thursday, 17 October 2024
Hall 3

08:00 - 10:00 Case reports session I

Chaipersons:
Lucian Stoica (Iași, Romania)
Liviu Macovei (Iași, Romania)

08:00 - 08:10
Surgical management of a particular case of aortic dissection
Gianina Ionel (Iași, Romania)

08:10 - 08:20
Aortic dissection in a 15-year-old patient
Andi Kacani, Rinard Kortoci, Jonela Burimi, Erion Panajoti, Laureta Dibra, Artan Kristo, Alban Dibra (Tirana, Albania)

08:20 - 08:30
Surgical approach in patients with renal cancer with metastatic thrombus in the inferior vena cava – the clinic's experience
Aurel Țurcan[1], Andrei Castraveț[1], Sorin Barat[1], Grigore Tinică[2], Maxim Trân[1], Ion Bodiu[1], Eduard Cheptănaru[1], Anatolie Ștefaneț[1], Anatol Ciubotaru[1]
[1]Chișinău, Republic of Moldova
[1]Iași, Romania

08:30 - 08:40
On the edge – clinical case of aortic aneurysm and bicuspid valve in a patient with chemotherapic-induced cardiomyopathy
Alexandru Tofan (Iași, Romania)

08:40 - 08:50
The intracardiac aorta – right atrial tunnel and the need for timely intervention
Florin Anghel, Andreea Blindaru, Andrei Dănet, Radu Isailă, Cătălin-Constantin Badiu (Bucharest, Romania)

08:50 - 09:00
Emergency TAVI – an anchor in the face of imminent danger
Delia-Melania Popa (Iași, Romania)

09:00 - 09:10
Simultaneous surgery of cardiac myxoma and thyroidectomy – short view
Selman Dumani, Arvin Dibra, Ermal Likaj, Laureta Dibra, Alfred Ibrahimi, Devis Pellumbi, Altin Veshti (Tirana, Albania)

09:10 - 09:20
Navigating the gray areas – distinguishing the real from the false in coronary dissection
Rareș Mănucă (Iași, Romania)

09:20 - 09:30
Epicardial cyst
Andi Kacani, Adelina Dine, Saimir Kuci, Marsela Goga, Edlira Ruci (Tirana, Albania)

09:30 - 09:40
Surgery versus interventional therapy in mesenteric ischemia
Andrei Bejenar (Iași, Romania)
09:40 - 09:50
Diabetic foot – considerations and implications
Ghenadie Eremița, Veaceslav Popa, Alin Bour (Chișinău, Republic of Moldova)

09:50 - 10:00
Discussions

10:00 - 10:20 Break

10:20 - 12:20 Case reports session II

Chairpersons:
Mihail Enache (Iași, Romania)
Andrei Țăruș (Iași, Romania)

10:20 - 10:30
Through median ministernotomy replacement of the ascending aorta and aortic valve repair with petal patch technique in a patient with Stanford type A aortic dissection
Andi Kacani, Jonela Burimi, Esmerilda Buku, Aferdita Veseli (Tirana, Albania)

10:30 - 10:40
Infectious endocarditis complicated with acute heart failure and splenectomy – importance of heart and multidisciplinary team for diagnosis and management
Georgiana Ionescu (Iași, Romania)

10:40 - 10:50
Rare case of fistula between two coronary arteries (LAD, RCA) and the main pulmonary trunk
Florin-Vlad Ioniță, Alexandru Vasilescu, Maria-Andreea Mursa, Iulia Ștefan, Cătălin-Constantin Badiu (Bucharest, Romania)

10:50 - 11:00
Treatment options in mesenteric ischemia. Clinical case
Aurel Țurcan[1], Grigore Tinică[2], Sorin Barat[1], Ștefan Manica[1], Ion Bodiu[1], Andrei Castraveț[1], Maxim Trân[1], Victor Plataș[1], Anatolie Ștefaneț[1], Anatol Ciubotaru[1]
[1]Chișinău, Republic of Moldova
[2]Iași, Romania

11:00 - 11:10
Challenges in the management of a patient with severe mitral regurgitations – a case report
Carmen Pleșoianu, Oana Gafițescu, Dan Năstasă, Eduard Dabija, Carina Ureche, Alexandru Ciucu, Doina Butcovan, Radu Sascău, Cristian Stătescu (Iași, Romania)

11:10 - 11:20
Imaging markers for predicting the outcome of aortic valve replacement in patients with chronic aortic insufficiency
Anca Diaconu (Iași, Romania)

11:20 - 11:30
Debranching aorto-viscero-birenal and aorto-bifemoral accompanied by TEVAR
Aurel Țurcan[1], Ștefan Manica[1], Grigore Tinică[2], Andrei Castraveț[1], Maxim Trân[1], Ion Bodiu[1], Anatolie Ștefaneț[1], Anatol Ciubotaru[1]
[1]Chișinău, Republic of Moldova
[2]Iași, Romania

11:30 - 11:40
Challenging clinical scenario – iliac artery stenting and femoro-popliteal crossover bypass in a patient with chronic limb-threatening ischemia and multiple comorbidities
Andrei Castraveț, Aurel Țurcan, Eugen Cerevan, Sorin Barat, Ștefan Manica, Ion Bodiu, Maxim Trân, Victor Plataș, Anatolie Ștefaneț, Anatol Ciubotaru (Chișinău, Republic of Moldova)

11:40 - 11:50
Surgical treatment of renal cell carcinoma extending to the inferior vena cava and right atrium
Andi Kacani, Saimir Kuci, Rinard Kortoci, Jonela Burimi, Sadik Ersoz, Arjan Hodaj, Astrit Mustafa, Petrika Gjergo, Aurel Janku (Tirana, Albania)

11:50 - 12:00
The first results in minimally invasive cardiac surgery – our experience
Ghenadie Bostan[1], Gheorghe Manolache[1], Sergiu Barnaciuc[1], Iurie Guzgan[1], Neli Ghicavii[1], Ionela Bulat[1], Vladisalv Maevschii[1], Valeriu Cebotari[1], Grigore Tinică[2]
[1]Chișinău, Republic of Moldova
[2]Iași, Romania

12:00 - 12:10 **Discussions**

12:10 - 13:30 Break

13:30 - 14:30 Lunch break & Satellite symposia

14:30 - 16:30 Case reports session III

Chairpersons:
Raluca Chistol (Iași, Romania)
Mihail Enache (Iași, Romania)

14:30 - 14:40
Prosthesis migration in the ascending aorta with myocardial ischemia – a rare TAVI complication
Ion Ernu, Mihai Romali, Silviu Stoleriu, Alberto Bacușcă, Andrei Țăruș, Mihail Enache, Igor Nedelciuc, Costin Sandu, Grigore Tinică (Iași, Romania)

14:40 - 14:50
Hybrid management of type A aortic dissection with mesenteric ischemia
Mihai Romali, Ion Ernu, Costin Sandu, Silviu Stoleriu, Alberto Bacușcă, Andrei Țăruș, Mihail Enache, Grigore Tinică (Iași, Romania)

14:50 - 15:00
Aorto-esophageal fistula: a 21st century treatment approach
Eugen Ducari (Iași, Romania)
15:00 - 15:10
Navigating severe tricoronary and trivalvular disease – is there still hope?
Mioara-Floricica Trofin (Iași, Romania)

15:10 - 15:20
Post-TEVAR stroke – unraveling the cause
Costin Sandu (Iași, Romania)

15:20 - 15:30
A rare case of mediastinal tumor with superior vena cava invasion
Mihai Păduraru, Alberto Bacușcă, Silviu Stoleriu, Lucian Stoica, Eugen Ducari, Andrei Țăruș, Mihail Enache, Adi Petrișor Ungurianu, Grigore Tinică (Iași, Romania)

15:30 - 15:40
Restoring hope in critical limb ischemia – rebuilding the arterial system
Cornel Vlas (Iași, Romania)

15:40 - 15:50
Tricuspid valve-in-valve – insights from our center's experience
Dumitru Orbu (Iași, Romania)

15:50 - 16:00
Endovascular exclusion of aortobronchial fistula and aneurysm post-aortoplasty for coarctation – a hybrid solution
Silviu Stoleriu, Alberto Bacușcă, Andrei Țăruș, Mihail Enache, Raluca-Ozana Chistol, Grigore Tinică (Iași, Romania)

16:00 - 16:10
Addressing ascending aorta pseudoaneurysm – strategic approaches
Veaceslav Cearvischi, Eugen Bitere, Dumitru Orbu, Alberto Bacușcă, Lucian Stoica, Eugen Ducari, Silviu Stoleriu, Andrei Țăruș, Mihail Enache, Adi Petrișor Ungurianu (Iași, Romania)

16:10 - 16:30
Discussions

Thursday, 17 October 2024
Training Hall 1

09:00 - 17:00 **Workshop CardioSim: Hands-on mastery in cardiac diagnostics & intervention**

Trainers:
Igor Nedelciuc (Iași, Romania)
Alberto Bacușcă (Iași, Romania)
Andrei Țăruș (Iași, Romania)
Silviu Stoleriu (Iași, Romania)

Friday, 18 October 2024
Hall 1

08:00 - 10:00 Session XIII – Tricuspid valve

Chairpersons:
Gheorghe Cerin (San Donato, Italy)
Hirokuni Arai (Nagano, Japan)
Marco Diena (Milan, Italy)
Kosmas Tsakiridis (Thessaloniki, Greece)

08:00 - 08:15
The surgical anatomy and pathophysiology of the right ventricle and tricuspid valve
Horia Mureșian (Bucharest, Romania)

08:15 - 08:30
Tricuspid valve assessment in right ventricle failure – tips and tricks
Gheorghe Cerin, Maria-Mădălina Cojocaru-Oiță (San Donato, Italy)

08:30 - 08:45
Subvalvular procedures for advanced tricuspid regurgitation
Hirokuni Arai (Nagano, Japan)

08:45 - 09:00
Transcatheter mitral and tricuspid intervention
Francesco Bedogni (San Donato, Italy)

09:00 - 09:15
3D endoscopic mitral and tricuspid valve repair
Marco Diena (Milan, Italy)

09:15 - 09:30
Concomitant minimally invasive tricuspid and mitral valve repair
Oto Öztekin (Istanbul, Turkey)

09:30 - 09:45
Tricuspid – still the forgotten valve?
Manuel Antunes (Coimbra, Portugal)

09:45 - 10:00
Right heart failure – an overview
Gry Dahle (Oslo, Norway)

10:00 - 10:15 Break

10:15 - 11:00 Session XV – Novelties in cardiac surgery II

Chairpersons:
Magued Zikri (Cairo, Egypt)
Jeko Madjarov (Wilmington, U.S.A.)
Bojan Biočina (Zagreb, Croatia)
Hirokuni Arai (Nagano, Japan)

10:15 - 10:30
Critical insights on comparative cost of newer cardiac interventions in developing countries
Magued Zikri (Cairo, Egypt)

10:30 - 10:45
Complex sternal reconstruction
Jeko Madjarov (Wilmington, U.S.A.)

10:45 - 11:00
Innovative sternal fixation device using hydroxyapatite
Hirokuni Arai (Nagano, Japan)

11:00 - 11:05 Break

11:05 - 12:00 Session XVII – Honouring Prof. Francis Robicsek – A reflection of 70 years of clinical practice and research in cardiothoracic surgery

Chairpersons:
Marko Turina (Zürich, Switzerland)
Grigore Tinică (Iași, Romania)
Mate Dzsinich (Budapest, Hungary)

Francis Robicsek, MD, PhD – A seventy-five year medical career
Steven A. Robicsek (Florida, U.S.A.)

Dr. Francis Robicsek – Trailblazer, innovator, mentor
Jeko Madjarov (Wilmington, U.S.A.)

12:00 - 12:10 Break

12:10 - 13:15 Session XVIII – Aortic diseases II

Chairpersons:
Mate Dzsinich (Budapest, Hungary)
Rolf Dammrau (Merzenich, Germany)
Joseph S. Coselli (Houston, U.S.A.)
Kay-Hyun Park (Seoul, South Korea)

12:10 - 12:25
Aortic surgery in Heritable Thoracic Aortic Disease (HTAD)
Joseph S. Coselli (Houston, U.S.A.)

12:25 - 12:40
Aortic arch surgery – open, endovascular or hybrid?
Rolf Dammrau (Merzenich, Germany)

12:40 - 12:55
Conventional approach to total arch replacement
Susumu Oshima (Kawaski, Japan)

12:55 - 13:10
Acute type A dissection with brain malperfusion
Yutaka Okita (Kobe, Japan)

13:10 - 13:15 **Discussions**

13:15 - 13:20 Break

13:20 - 13:40 Presidential Lecture – A surgeon's journey: triumphs and trials in cardiac surgery

Chairpersons:
Georges B. Tedy (Beirut, Lebanon)
Sotirios Prapas (Athens, Greece)

Speaker:
Grigore Tinică (Iași, Romania)

13:40 - 14:40 Lunch break & Satellite symposia

14:40 - 16:10 Session XX – Aortic diseases III

Chairpersons:
Bojan Biočina (Zagreb, Croatia)
Susumu Oshima (Kawaski, Japan)
Kay-Hyun Park (Seoul, South Korea)
Ivan Kravchenko (Kiev, Ukraine)

14:40 - 14:55
Results of total aortic arch replacement in patients with complex aortic pathology
Ivan Kravchenko, Bohdan Cherpak, Vitaliy Kravchenko, Olena Larionova, Vasil Lazoryshynets (Kiev, Ukraine)

14:55 - 15:10
Approaches to extensive aortic aneurysms including the aortic arch – 101 cases of left thoracotomy total arch replacement over 10 years
Susumu Oshima (Kawaski, Japan)

15:10 - 15:25
Strategies for extended arch aneurysm
Kay-Hyun Park (Seoul, South Korea)

15:25 - 15:40
Treatment strategies for acute aortic dissection Stanford type A – approaching malperfusion complications
Susumu Oshima (Kawaski, Japan)

15:40 - 15:55
Surgery for acute type A dissection – strategies aiming at better long-term outcomes beyond early survival
Kay-Hyun Park (Seoul, South Korea)

15:55 - 16:10
Thoracoabdominal aortic aneurysm – current operative therapy & results
Joseph S. Coselli (Houston, U.S.A.)

16:10 - 16:20 Break

16:20 - 17:30 Session XXII – Heart failure – Heart & lung transplantation III

Chairpersons:
Bojan Biočina (Zagreb, Croatia)
Horațiu Suciu (Târgu Mureș, Romania)
Belhan Akpinar (Istanbul, Turkey)

16:20 - 16:30
Challenges in cardiac transplant in Romania
Horațiu Suciu (Târgu Mureș, Romania)

16:30 - 16:45
History and perspectives of artificial circulatory support
Bojan Biočina (Zagreb, Croatia)

16:45 - 17:00
Local experience of transplant in the ACHD population – challenges to bridging and technical difiiculties
Lars Nölke (Dublin, Ireland)

17:00 - 17:15
Acute circulatory support – potential and pitfalls
Bojan Biočina (Zagreb, Croatia)

17:15 - 17:30
Heart transplant recipients over 65 years old – long-term outcome
Manuel Antunes (Coimbra, Portugal)

17:30 - 17:40 Break

17:40 - 19:10 Session XXIV – Infectious complications in cardiac surgery

Chairpersons:
Ali Refatllari (Tirana, Albania)
Carlos Mestres (Bloemfontein, South Africa)
Adrian Molnar (Cluj-Napoca, Romania)
Yutaka Okita (Kobe, Japan)

17:40 - 17:55
The changing scenario of infective endocarditis
Carlos Mestres (Bloemfontein, South Africa)

17:55 - 18:10
Surgery for infected aorta and stent-graft
Yutaka Okita (Kobe, Japan)

18:10 - 18:25
Surgical management of acute bacterial endocarditis
Adrian Molnar (Cluj-Napoca, Romania)

18:25 - 18:40
Surgery for aortic root abscess
Yutaka Okita (Kobe, Japan)

18:40 - 18:55
The complexity of aortic root infections
Carlos Mestres (Bloemfontein, South Africa)

18:55 - 19:10
Discussions

Friday, 18 October 2024
Hall 2

08:00 - 10:00 Session XIV – Aortic diseases I

Chairpersons:
Kamran Musayev (Baku, Azerbaijan)
Frank W. Sellke (Providence, U.S.A.)
Joseph S. Coselli (Houston, U.S.A.)
Cătălin-Constantin Badiu (Bucharest, Romania)

08:00 - 08:15
First Ukrainian experience of frozen elephant trunk operation
Vitaliy Kravchenko, Bohdan Cherpak, Ivan Kravchenko, Olena Larionova, Vasil Lazoryshynets (Kiev, Ukraine)

08:15 - 08:30
The role of guidelines in aortic disease to unify practices
Carlos Mestres (Bloemfontein, South Africa)

08:30 - 08:45
Aortic aneurysms in the young – guidelines
Adrian Molnar (Cluj-Napoca, Romania)

08:45 - 09:00
Surgical management of aortic arch pathology
Joseph S. Coselli (Houston, U.S.A.)

09:00 - 09:15
Open repair of the thoracoabdominal aortic aneurysms – Baku experience
Kamran Musayev (Baku, Azerbaijan)

09:15 - 09:30
Acute type A aortic dissection in Japan
Yutaka Okita (Kobe, Japan)

09:30 - 09:45
Aortic intramural hematoma – should we treat it like an acute dissection?
Frank W. Sellke (Providence, U.S.A.)

09:45 - 10:00
Surgical management of aortic catastrophe – how to ensure a live patient
Allan S. Stewart (Florida, U.S.A.)

10:00 - 10:15 Break

10:15 - 11:00 Session XVI – Joint session RSC – Euro-Asian Bridge Society

Chairpersons:
David Taggart (Oxford, United Kingdom)
Elisabeta Bădilă (Bucharest, Romania)
Cristian Stătescu (Iași, Romania)
Kamran Musayev (Baku, Azerbaijan)
Serghei Popa (Chișinău, Republic of Moldova)

Update ESC guidelines for peripheral arterial disease 2024
Elisabeta Bădilă (Bucharest, Romania)

Update ESC guidelines for aortic diseases 2024
Laura Antohi (Bucharest, Romania)

CABG and PCI in 2024
David Taggart (Oxford, United Kingdom)

11:00 - 12:10 Break

12:10 - 13:15 Session XIX – Minimally invasive and robotic surgery I

Chairpersons:
Bernhard Voss (Munich, Germany)
Frank Van Praet (Aalst, Belgium)
Barış Çaynak (Istanbul, Turkey)

12:10 - 12:25
How to teach endoscopic mitral valve surgery – hands-on training program is a must!
Frank Van Praet (Aalst, Belgium)

12:25 - 12:40
MIC mitral valve repair – 25 years of German Heart Centre experience
Bernhard Voss (Munich, Germany)

12:40 - 12:55
Minimally invasive aortic valve replacement – how to do? Surgical technique
Levan Karazanishvili (Tbilisi, Georgia)

12:55 - 13:10
Minimally invasive valve surgery
Michael Grimm (Innsbruck, Austria)

13:10 - 13:15
Discussions

13:15 - 13:20 Break

13:40 - 14:40 Lunch break & Satellite symposia

14:40 - 16:10 Session XXI – Minimally invasive and robotic surgery II

Chairpersons:
Kosmas Tsakiridis (Thessaloniki, Greece)
Ergun Demirsoy (Istanbul, Turkey)
Vladimir Kornovski (Burgas, Bulgaria)

14:40 - 14:55
Endoscopic mitral valve surgery, your standard approach...of course!
Frank Van Praet (Aalst, Belgium)

14:55 - 15:10
MIC mitral valve repair – tips and tricks to make it easier
Bernhard Voss (Munich, Germany)
15:10 - 15:25
The feasibility of multivessel minimally invasive coronary revascularization for all comers
Ergun Demirsoy (Istanbul, Turkey)

15:25 - 15:40
Minimal invasive techniques in advanced heart failure – the miniRVAD concept
István Hartyánszky (Budapest, Hungary)

15:40 - 15:55
Shockwave therapy in ischemic cardiomyopathy (from bench to bedside)
Michael Grimm (Innsbruck, Austria)

15:55 - 16:10
Robotic-assisted thoracic surgery as the new norm – myths and truths
Kosmas Tsakiridis (Thessaloniki, Greece)

16:10 - 16:20 Break

16:20 - 17:30 Session XXIII – Aortic diseases IV

Chairpersons:
Yutaka Okita (Kobe, Japan)
Carlos Mestres (Bloemfontein, South Africa)
Victor-Sebastian Costache (Bucharest, Romania)

16:20 - 16:35
TAVI in aortic regurgitation
Francesco Bedogni (San Donato, Italy)

16:35 - 16:50
Extensive arch – descending aorta replacement
Yutaka Okita (Kobe, Japan)

16:50 - 17:05
Thoracoabdominal aortic replacement – reports from a high-volume center in Japan
Susumu Oshima (Kawasaki, Japan)

17:05 - 17:20
Total arch replacement – Japanese experiences
Yutaka Okita (Kobe, Japan)

17:20 - 17:30
Discussions

17:30 - 17:40 Break

17:40 - 19:10 XXV – Aortic diseases V

Chairpersons:
Susumu Oshima (Kawasaki, Japan)
Ionel Droc (Bucharest, Romania)
Cătălin-Constantin Badiu (Bucharest, Romania)

17:40 - 17:55
Valve sparing root replacement: quo vadis?
Duke Cameron (Baltimore, U.S.A.)

17:55 - 18:10
Open surgery after TEVAR – recovery procedures from TEVAR failures
Susumu Oshima (Kawaski, Japan)

18:10 - 18:25
The genetics of aortic disease
Duke Cameron (Baltimore, U.S.A.)

18:25 - 18:40
Infrarenal isolated aortic dissection – case presentation and actual strategy
Ionel Droc (Bucharest, Romania)

18:40 - 18:55
Interventional management of type B aortic dissection
Andrada Bogdan (Bucharest, Romania)

18:55 - 19:10
Discussions

Friday, 18 October 2024
Hall 3

08:00 - 10:00 Oral presentations session I – Cardiology, cardiovascular imaging
Chairpersons:
Cristian Stătescu (Iași, Romania)
Radu Sascău (Iași, Romania)

08:00 - 08:15
The need and use of Dual Source CT and Dual Energy CT in cardiac and vascular examinations
Ioana-Smărăndița Lacău, Cătălin Dumitru Bulai, Andrei Crăescu, Alice Cazacu, Sonia Liliana Crăciun, Elena Mădălina Petran (Iași, Romania)

08:15 - 08:30
Transesophageal echocardiography for the evaluation and interventional treatment in mitral regurgitation
Carina Ureche (Iași, Romania)

08:30 - 08:45
Management of obstruction in hypertrophic cardiomyopathy – navigating the intersection of cardiology and cardiovascular surgery
Laura Vasiliu (Iași, Romania)

08:45 - 09:00
The role of myocardial viability assessment by cardiac magnetic resonance in the current clinical landscape
Oana Munteanu-Mirea[1], Luiza Cobzeanu[2]
[1]Craiova, Romania
[2]Iași, Romania

09:00 - 09:15
Arrythmias in adult congenital heart disease
Ștefan Ailoaei (Iași, Romania)

09:15 - 09:30
Is there place for conservative treatment in type A aortic dissections
Loukia Alexopoulou Prounia, Vasilis Patris, Michalis Argyriou (Athens, Greece)

09:30 - 09:45
Complications and management strategies in TAVI – current challenges and innovations
Laura Benchea (Iași, Romania)

09:45 - 10:00
Treatment strategies for ventricular free-wall rupture after acute miocardial infarction case report /miniseries
Victor Raicea, Mihaela Berceanu, Oana Munteanu-Mirea, Elian Boldu, Mihai Meșină, Daniel Nica, Andrei-Dan Raicea (Craiova, Romania)

10:00 - 13:40 Break

13:40 - 14:40 Lunch break & Satellite symposia

14:40 - 16:10 Oral presentations session II – Cardiovascular surgery I

Chairpersons:
Larisa Anghel (Iași, Romania)
Andrei Țărus (Iași, Romania)

14:40 - 14:55
Patient-prosthesis mismatch in aortic valve replacement with prosthesis No-19 – impact on early and late outcomes
Selman Dumani, Alessia Mehmeti, Ermal Likaj, Laureta Dibra, Alfred Ibrahimi, Stavri Llazo, Ilir Alimehmeti, Fjorba Mana, Ali Refatllari, Altin Veshti (Tirana, Albania)

14:55 - 15:10
12-years experience with Perceval sutureless valve
Loukia Alexopoulou Prounia, Vasilis Patris, Michalis Argyriou, Ilias Samiotis, (Athens, Greece)

15:10 - 15:25
Aortic valve repair – mid and long-term outcomes of a single centre
Andreea Blindaru, Florin Anghel, Ramona Olaru, Oana Zimnicaru, Cătălin-Constantin Badiu (Bucharest, Romania)

15:25 - 15:40
Minimally invasive aortic valve surgery – one team standard approach
Selman Dumani, Laureta Dibra, Ermal Likaj, Saimir Kuci, Ervin Bejko, Elizana Petrela, Fjorba Mana, Alessia Mehmeti, Ali Refatllari, Altin Veshti (Tirana, Albania)

15:40 - 15:55
Arterial revascularisation – PROs & CONs
Andi Kacani (Tirana, Albania)

15:55 - 16:10
Late mediastinal tumor after mitral valve plasty
Victor Raicea, Mihaela Berceanu, Oana Munteanu-Mirea, Daniel Nica, Andrei-Dan Raicea (Craiova, Romania)

Friday, 18 October 2024
Training Hall 1

09:00 - 17:00 **Workshop CardioSim: Hands-on mastery in cardiac diagnostics & intervention**

Trainers:
Igor Nedelciuc (Iași, Romania)
Alberto Bacușcă (Iași, Romania)
Andrei Țăruș (Iași, Romania)
Silviu Stoleriu (Iași, Romania)

Saturday, 19 October 2024
Hall 1

08:00 - 10:00 **Session XXVI – Aortic valve I**

Chairpersons:
Barış Çaynak (Istanbul, Turkey)
Kamran Musayev (Baku, Azerbaijan)
Toshimi Ujiie (Tochigi Ustunomiya, Japan)
Belhan Akpinar (Istanbul, Turkey)

08:00 - 08:15
Use of rapid deployment aortic valve – where and when?
Belhan Akpinar (Istanbul, Turkey)

08:15 - 08:30
Long-term durability of sutureless aortic valve – results of contemporary studies
Slobodan Micovic (Belgrade, Serbia)

08:30 - 08:45
Aortic valve neocuspidization (Ozaki procedure) – Baku experience
Kamran Musayev (Baku, Azerbaijan)

08:45 - 09:00
Surgery of left ventricular outflow obstruction in hypertrophic cardiomyopathy
Michael Grimm (Innsbruck, Austria)

09:00 - 09:15
Navigating treatment selection for patients with severe aortic stenosis – a case-based discussion
Milan Milojevic, Aleksandar Nikolic (Belgrade, Serbia)

09:15 - 09:30
The experience of right lateral access for all valve pathologies
Ergun Demirsoy (Istanbul, Turkey)

09:30 - 09:45
The strategy for initial aortic valve replacement – consideration about the higher life expectancy, Japan situation
Toshimi Ujiie (Kanazawa, Japan)

09:45 - 10:00
The Ross operation – another false dawn?
Darryl Shore (London, United Kingdom)

10:00 - 10:20 Break

10:20 - 12:00 Session XXVIII – Aortic root

Chairpersons:
Tirone E. David (Toronto, Canada)
Yutaka Okita (Kobe, Japan)
Grigore Tinică (Iași, Romania)
Marko Turina (Zürich, Switzerland)

10:20 - 10:35
Surgical treatment of aortic root abscess
Tirone E. David (Toronto, Canada)

10:35 - 10:50
When to use PEARS (Personalised External Aortic Root Support)
Darryl Shore (London, United Kingdom)

10:50 - 11:05
Aortic valve-sparing operations to treat aortic root aneurysm –matching the operative technique to the pathology
Tirone E. David (Toronto, Canada)

11:05 - 11:20
Long-term results of aortic root replacement with the Freestyle valve
Belhan Akpinar (Istanbul, Turkey)

11:20 - 11:35
20 years of valve sparing root replacement – evolution of surgery, results, and lessons learned
Allan S. Stewart (Florida, U.S.A.)

11:35 - 11:50
Aortic root reimplantation of 400 cases with long-term results
Yutaka Okita (Kobe, Japan)

11:50 - 12:00
Discussions

12:00 - 12:10 Break

12:10 - 12:55 Session XXX – Aortic valve II

Chairpersons:
Grigore Tinică (Iași, Romania)
Marco Diena (Milan, Italy)
Tirone E. David (Toronto, Canada)

12:10 - 12:25
Aortic valve repair in bicuspid incompetence through ministernotomy
Marco Diena (Milan, Italy)
12:25 - 12:40
What is the optimal treatment for aortic valve disease and aortopathy
Allan S. Stewart (Florida, U.S.A.)

12:40 - 12:55
Life time management of aortic valve stenosis
Michael Grimm (Innsbruck, Austria)

12:55 - 13:00 Break

13:00 - 13:30 Main lecture II – Results of aortic valve reimplantation at 25 years – Tirone E. David (Toronto, Canada)

Chairpersons:
Grigore Tinică (Iași, Romania)
Belhan Akpinar (Istanbul, Turkey)

Speaker:
Tirone E. David (Toronto, Canada)

13:30 - 14:30 Lunch break & Satellite symposia

14:30 - 16:10 Session XXXII – CABG I

Chairpersons:
David Taggart (Oxford, United Kingdom)
Sotirios Prapas (Athens, Greece)
Grigore Tinică (Iași, Romania)

14:30 - 14:45
Total arterial myocardial revascularization up to 6000 cases
Marco Diena (Milan, Italy)

14:45 - 15:00
Routine on-pump multivessel minimally invasive coronary artery bypass surgery (mini bypass surgery) – experience of 450 cases
Barış Çaynak (Istanbul, Turkey)

15:00 - 15:15
The I – graft: an additional "arterial" conduit in coronary surgery
Sotirios Prapas (Athens, Greece)

15:15 - 15:30
Management of atrial fibrillation in CABG
Vadim A. Popov (Moscow, Russia)

15:30 - 15:45
Total arterial revascularisation versus conventional revascularisation in low EF patients
Grigore Tinică, Mihail Enache, Alberto Bacușcă, Andrei Țăruș, Silviu Stoleriu, Mihai Romali, Ion Ernu, Costin Sandu (Iași, Romania)

15:45 - 16:10
Myocardial revascularization on vs off-pump (comparative clinical and imaging study) – stage study
Alexandru Manea, Adrian Molnar, Claudia Gherman, Simona Manole (Cluj-Napoca, Romania)

16:10 - 16:20 Break

16:20 - 17:20 Session XXXIV – CABG II

Chairpersons:
David Taggart (Oxford, United Kingdom)
Hirofumi Takemura (Kanazawa, Japan)
Shervin Ziabakhsh Tabary (Sari, Iran)
Slobodan Micovic (Belgrade, Serbia)

16:20 - 16:35
Lessons learned from the ART trial
David Taggart (Oxford, United Kingdom)

16:35 - 16:50
CABG after previous stenting – elective or urgent
Shervin Ziabakhsh Tabary (Sari, Iran)

16:50 - 17:05
Multi and total arterial grafting – lessons learnt
James Tatoulis (Melbourne, Australia)

17:05 - 17:20
Surgical treatment of acute septal rupture – results of infarct exclusion technique
Tirone E. David (Toronto, Canada)

17:20 - 17:30 Break

17:30 - 19:00 Session XXXVI – CABG III

Chairpersons:
Sotirios Prapas (Athens, Greece)
David Taggart (Oxford, United Kingdom)
Shervin Ziabakhsh Tabary (Sari, Iran)
Horațiu Moldovan (Bucharest, Romania)

17:30 - 17:45
Updated surgical closure of ventricular septal rupture
Tohru Asai (Kamakura, Japan)

17:45 - 18:00
Multiarterial grafting in coronary revascularization in the experience of I.B.C.V. Iași
Lucian Stoica (Iași, Romania)

18:00 - 18:15
Total arterial off-pump CABG using ITAs and GEA
Tohru Asai (Kamakura, Japan)

18:15 - 18:30
CABG in poor ventricular function
David Taggart (Oxford, United Kingdom)

18:30 - 18:45
MIDCAB – stage of a hybrid strategy in myocardial revascularisation
Vladimir Kornovski, Jordan Krasnaliev, Petar Uzov (Burgas, Bulgaria)
18:45 - 19:00
Discussions

Saturday, 19 October 2024
Hall 2

08:00 - 10:00 Session XXVII – Transcatheter interventions

Chairpersons:
Mauro Cassese (Bari, Italy)
Victor-Sebastian Costache (Bucharest, Romania)
Sotirios Prapas (Athens, Greece)

08:00 - 08:15
TAVI versus open surgery in bicuspid aortic valve
Horațiu Moldovan (Bucharest, Romania)

08:15 - 08:30
Lifetime management of AS, TAVI/SAVR
Gry Dahle (Oslo, Norway)

08:30 - 08:45
Aortic regurgitation – a new transcatheter frontier
Mauro Cassese (Bari, Italy)

08:45 - 09:00
TMVI and TEER – can it postpone heart tx/LVAD
Gry Dahle (Oslo, Norway)

09:00 - 09:15
My first 1000 TAVRs – what have I learned?
Allan S. Stewart (Florida, U.S.A.)

09:15 - 09:30
Percutaneous coronary dilatation – how it all started in Zurich, in the seventies
Marko Turina (Zürich, Switzerland)

09:30 - 09:45
Important clinical trials and key findings of Lendmark RCT
Andreas Holzamer (Regensburg, Germany)

09:45 - 10:00
Discussions

10:00 - 10:20 Break

10:20 - 12:00 Session XXIX – Mitral valve I

Chairpersons:
Manuel Antunes (Coimbra, Portugal)
Gheorghe Cerin (San Donato, Italy)
Mate Dzsinich (Budapest, Hungary)
Maxim Rotari (Kiev, Ukraine)

10:20 - 10:35
Mitral geometry and mechanics in mitral valve prolapse
Gheorghe Cerin, Samuel Mancuso, Diana Benea, Marco Diena (San Donato, Italy)

10:35 - 10:50
Mitral valve towards 100% repair
Manuel Antunes (Coimbra, Portugal)

10:50 - 11:05
Ultrasound-guided myectomy and mitral leaflet height reduction for hypertrophic obstructive cardiomyopathy
Kiyotoshi Oishi, Hirokuni Arai, Keiji Oi, Masafumi Yashima, Hidehito Kuroki, Tatsuki Fujiwara, Masashi Takeshita, Tomohiro Mizuno (Nagano, Japan)

11:05 - 11:20
Strategies to prevent SAM in mitral valve repair
Bernhard Voss (Munich, Germany)

11:20 - 11:35
Barlow's disease without prolapse can be treated by ring annuloplasty
Hirofumi Takemura (Kanazawa, Japan)

11:35 - 11:50
Mitral valve annuloplasty with personalized ring, sewn from Dacron tube
Levan Karazanishvili (Tbilisi, Georgia)

11:50 - 12:00
Discussions

12:00 - 12:10 Break

12:10 - 12:55 Session XXXI – Mitral valve II

Chairpersons:
Tohru Asai (Kamakura, Japan)
Mauro Cassese (Bari, Italy)
Lars Nölke (Dublin, Ireland)

12:10 - 12:25
Butterfly technique in mitral valve repair
Tohru Asai (Kamakura, Japan)

12:25 - 12:40
What are the shortcomings of the currently available prostheses
Gry Dahle (Oslo, Norway)

12:40 - 12:55
Redo mitral valve replacement or transcatheter mitral valve in valve?
Mauro Cassese (Bari, Italy)

12:55 - 13:30 Break

13:30 - 14:30 Lunch break & Satellite symposia

14:30 - 16:10 Session XXXIII – Mitral valve III

Chairpersons:
Tirone E. David (Toronto, Canada)
Georges B. Tedy (Beirut, Lebanon)
Victor-Sebastian Costache (Bucharest, Romania)

14:30 - 14:45
Mitral valve surgery in patients with mitral annulus calcification –operative techniques and long-term outcomes
Tirone E. David (Toronto, Canada)

14:45 - 15:00
The Mitral Valve Complex – an evolving concept
Horia Mureșian (Bucharest, Romania)

15:00 - 15:15
Endoscopic mitral valve repair – technique, challenges and perspectives
Victor-Sebastian Costache (Bucharest, Romania)

15:15 - 15:30
When do we need more than ring annuloplasty for secondary mitral regurgitation
Plamen Panayotov (Varna, Bulgaria)

15:30 - 15:45
Arrhythmogenic mitral valve prolapse – does correction of mitral annulus disjoint affect the ventricular dysrhythmias?
Tirone E. David (Toronto, Canada)

15:45 - 16:00
Prevention of systolic anterior motion (SAM) after mitral valve repair
Vitalie Moscalu, Andrei Ureche, Aureliu Batrînac, Vitalie V. Moscalu, Petru Șerban (Chișinău, Republic of Moldova)

16:00 - 16:10
Discussions

16:10 - 16:15 Break

16:15 - 17:55 Session XXXV – Patient Blood Management in cardiac surgery symposium

Chairperson:
Ioana Grigoraș (Iași, Romania)
Grigore Tinică (Iași, Romania)

16:15 - 16:30
Patient Blood Management in the new standard of care
Ioana Grigoraș (Iași, Romania)

16:30 - 16:45
Patient Blood Management in cardiac surgery
Grigore Tinică, Alberto Bacușcă, Mihail Enache, Silviu Stoleriu, Ion Ernu, Mihai Romali, Costin Sandu, Andrei Țăruș (Iași, Romania)

16:45 - 17:00
PBM in "C. C. Iliescu" Hospital Bucharest
Cornelia Predoi (Bucharest, Romania)

17:00 - 17:15
Patient Blood Management as part of Enhanced Recovery After Surgery Protocol in cardiac surgery
Konstantina Triantafyllopoulou (Thessaloniki, Greece)

17:15 - 17:30
PBM in pediatric/neonatal patients
Matthias Angrés (Hamburg, Germany)

17:30 - 17:55
Discussions

17:55 - 18:00 Break

18:00 - 19:00 Session XXXVII – CABG IV

Chairpersons:
Levan Karazanishvili (Tbilisi, Georgia)
Hirofumi Takemura (Kanazawa, Japan)
Konstantinos Katsavrias (Athens, Greece)

18:00 - 18:15
Total arterial revascularization is always possible?
Levan Karazanishvili (Tbilisi, Georgia)

18:15 - 18:30
Tow-patch technique for VSD after acute myocardial infarction
Hirofumi Takemura (Kanazawa, Japan)

18:30 - 18:45
Multi-arterial CABG in Japan and Asia
Hirokuni Arai (Nagano, Japan)

18:45 - 19:00
CABG – achieving superior outcomes in octogenarians – the <<II>> graft technique
Konstantinos Katsavrias (Athens, Greece)

Saturday, 19 October 2024
Hall 3

08:00 - 09:30 Oral presentations session III – Cardiovascular surgery II
Chairpersons:
Stanislav Rurac (Bucharest, Romania)
Amin Bazyani (Iași, Romania)

08:00 - 08:15
Surgery for type A aortic dissection in Albania
Ermal Likaj, Selman Dumani, Andi Kacani, Saimir Kuci, Laureta Dibra, Edlira Rruci, Fatjon Hamiti, Altin Veshti (Tirana, Albania)

08:15 - 08:30
Suturing right pleura (surgical integrity) affects early respiratory functions in bilateral internal mammary artery used in CABG operations
Begench Orazgeldiyev, Bayram Hojagulyyev (Ashgabat, Turkmenistan)

08:30 - 08:45
Short term results from novel Allegra transcatheter aortic valve
Loukia Alexopoulou Prounia, Vasilis Patris, Michalis Argyriou (Athens, Greece)

08:45 - 09:00
Surgical explantation after transcatheter aortic valve implantation
Loukia Alexopoulou Prounia, Vasilis Patris, Michalis Argyriou (Athens, Greece)

09:00 - 09:15
Genetic aortopathies – a short review of the 2024 guidelines
Alexandru Goicea, Adrian Molnar (Cluj-Napoca, Romania)

09:15 - 09:30
Discussions

09:30 - 13:30 Break
13:30 - 14:30 Lunch break & Satellite symposia

14:30 - 15:15 e-Poster presentation session I

Chairpersons:
Cristina Furnică (Iași, Romania)
Matthias Angrés (Hamburg, Germany)

14:30 - 14:33
Obesity-provocation for minimally invasive cardiac surgery. Clinical case
Ghenadie Bostan[1], Gheorghe Manolache[1], Sergiu Barnaciuc[1], Vladisalv Maevschii[1], Alexandru Mărginean[1], Vasile Corcea[1], Iurie Guzgan[1], Grigore Tinică[2]
[1]Chișinău, Republic of Moldova
[2]Iași, Romania

14:33 - 14:36
The impact of abdominal organ transplantation on cardiac surgery
Alberto Bacușcă, Mihail Enache, Andrei Țăruș, Silviu Stoleriu, Grigore Tinică (Iași, Romania)

14:36 - 14:39
Benefits of early extubation after cardiac surgery
Saimir Kuci, Alfred Ibrahimi, Marsela Goga, Ervin Bejko, Ermal Likaj, Jacob Zeitani (Tirana, Albania)

14:39 - 14:42
Fully implantable wirelessly powered magnetically levitated radial flow ventricular assist device – innovative design and early prototyping
Alexandru Pleșoianu (Iași, Romania)

14:42 - 14:45
The particularity of minimally invasive excision of cardiac myxoma from the left atrium via transseptal access, with femoral cannulation-clinical case
Ghenadie Bostan[1], Gheorghe Manolache[1], Sergiu Barnaciuc[1], Iurie Guzgan[1], Neli Ghicavii[1], Vladisalv Morozan[1], Alexandru Marginean[1], Nichifor Sciuca[1], Grigore Tinică[2]
[1]Chișinău, Republic of Moldova
[2]Iași, Romania

14:45 - 14:48
Factors influencing postoperative evolution and the role of postoperative rehabilitation in congenital heart surgery
Iurie Guzgan, Varvara Naghita-Pila, Oleg Repin, Eduard Cheptănaru, Vasile Corcea, Victor Platas (Chișinău, Republic of Moldova)

14:48 - 14:51
Short-term outcomes of ALCAPA repair by translocation – our experience
Oleg Repin, Iurie Guzgan, Liviu Maniuc, Nichifor Sciuca, Eduard Cheptănaru, Denis Repin, Varvara Naghita-Pila, Grigore Namesnic, Vera Dogotari (Chișinău, Republic of Moldova)

14:51 - 14:54
The role of prophylactic tricuspid annuloplasty in heart transplantation
Alberto Bacușcă, Mihail Enache, Agnes-Iacinta Bacușcă, Andrei Țăruș, Silviu Stoleriu, Grigore Tinică (Iași, Romania)

14:54 - 14:57
Treatment of type B dissection – our experience with 12 cases
Saimir Kuci, Alfred Ibrahimi, Marsela Goga, Ermal Likaj, Sokol Xhepa, Jacob Zeitani (Tirana, Albania)

14:57 - 15:00
Performance and eficiency analysis of a TET system for implantable MCS
Vlad Onceanu (Iași, Romania)

15:00 - 15:03
Transcatheter tricuspid valve-in-valve implantation for the treatment of dysfunctional bioprosthetic valves
Silviu Stoleriu, Alberto Bacușcă, Alexandra Gall, Igor Nedelciuc, Grigore Tinică (Iași, Romania)

15:03 - 15:15
Discussions

15:15 - 15:30 Break

15:30 - 16:15 e-Poster presentation session II

Chairpersons:
Cristina Furnică (Iași, Romania)
Konstantinos Katsavrias (Athens, Greece)

15:30 - 15:33
Volatile anaesthetics versus total intravenous anaesthesia for cardiac surgery
Elena Leventi, Nikoletta Tyrovola, Ouranis Panagiotis, Stamatina Nikolopoulou, Nikolaos Papastathis, Maria Rempelou, Anastasios Stathopoulos, Konstantina Romana, Maria Mis (Athens, Greece)

15:33 - 15:36
Patent ductus arteriosus in a 37-year-old female patient
Ermal Likaj, Arben Baboci, Anxhela Muhaj, Ervin Bejko, Altin Veshti (Tirana, Albania)

15:36 - 15:39
When all hope is lost in critical limb ischemia: rebuilding the arterial system
Silviu Stoleriu, Alberto Bacușcă, Andrei Țăruș, Mihail Enache, Grigore Tinică (Iași, Romania)

15:39 - 15:42
The role of cardiac surgeons in TAVI
Loukia Alexopoulou Prounia, Vasileios Pantelis Patris, Michalis Argyriou (Athens, Greece)

15:42 - 15:45
Transfusion therapy in CABG population: economic considerations
Mirna Petričević, Mate Petricevic (Split, Croatia)

15:45 - 15:48
Current role of vasopressin in cardiac surgery
Anastasios Stathopoulos, Georgia Nazou, Prodromos Temperikidis, Ioannis Koumarianos, Stavroula Poulou, Sofia Vontitsou, Maria Mis, Konstantina Romana (Athens, Greece)

15:48 - 15:51
Anaesthetic considerations for the trans-catheter aortic valve implantation (TAVI) procedure
Maria Zachariadi, Katerina Astropekaki, Klio Hronopoulou, Katerina Scabellone, Alketa Marto, Despina Karatza, Konstantina Romana, Maria Mis (Athens, Greece)

15:51 - 15:54
A 23-year journey to mastering on-pump coronary artery bypass
Alberto Bacușcă, Mihai Enache, Andrei Țăruș, Silviu Stoleriu, Grigore Tinică (Iași, Romania)

15:54 - 15:57
The postoperative evolution of a patient with hypoplastic left heart syndrome complicated by SARS-CoV-2
Agnes-IacintaBacușcă, Domnica Bacușcă, Matei Amanci, Alberto Bacușcă, Adorata Coman (Iași, Romania)

15:57 - 16:00
Endovascular exclusion of aortobronchial fistula and aneurysm post-aortoplasty for coarctation – a hybrid solution
Silviu Stoleriu (Iași, Romania)

16:00 - 16:15 **Discussions**

Saturday, 19 October 2024
Training Hall 1

09:00 - 17:00 **Workshop CardioSim: Hands-on mastery in cardiac diagnostics & intervention**

Trainers:
Igor Nedelciuc (Iași, Romania)
Alberto Bacușcă (Iași, Romania)
Andrei Țăruș (Iași, Romania)
Silviu Stoleriu (Iași, Romania)

Sunday, 20 October 2024
Hall 1

08:00 - 09:45 **Session XXXVIII – Cardiac surgery worldwide**

Chairpersons:
Michalis Argyriou (Athens, Greece)
Grigore Tinică (Iași, Romania)
Georges B. Tedy (Beirut, Lebanon)
Kamran Musayev (Baku, Azerbaijan)

08:00 - 08:15
The real history of the heart transplantation in the world
Radu Deac (Târgu Mureș, Romania)

08:15 - 08:30
History of heart transplantation in Lebanon
Georges B. Tedy (Beirut, Lebanon)

08:30 - 08:45
The role of artificial intelligence (AI) in mitral and tricuspid valve assessment
Daniela Panayotova (Varna, Bulgaria)

08:45 - 09:00
Generative AI and machine-based learning – what is essential for cardiologists and cardiac surgeons to understand
Allan S. Stewart (Florida, U.S.A.)

09:00 - 09:15
Cardiac surgery worldwide – past, present, future
Michalis Argyriou (Athens, Greece)

09:15 - 09:30
Telemedicine services in underserved areas – results of a successful project
Alexandru Burlacu (Iași, Romania)

09:30 - 09:45
Goal directed perfusion in the pediatric setting
Mauro Cotza (San Donato, Italy)

09:45 - 09:50 Break

09:50 - 10:10 Main lecture III – CABG with all arterial revascularization – why do we need it? – Georges B. Tedy (Beirut, Lebanon)

Chairpersons:
Grigore Tinică (Iași, Romania)
Ali Refatllari (Tirana, Albania)

Speaker:
Georges B. Tedy (Beirut, Lebanon)

10:10 - 10:20 Break

10:20 - 12:20 Session XL – CABG V

Chairpersons:
Igor Živković (Belgrade, Serbia)
Hirofumi Takemura (Kanazawa, Japan)
Shervin Ziabakhsh Tabary (Sari, Iran)

10:20 - 10:35
Our strategy of CABG for very impaired LV function – as many grafts as possible
Hirofumi Takemura (Kanazawa, Japan)

10:35 - 10:45
Long term results in CABG
Adrian Molnar (Cluj-Napoca, Romania)

10:45 - 10:55
BIMA In situ vs Y configuration – a 2-year retrospective analysis
Jahangir Kabir (Dhaka, Bangladesh)

10:55 - 11:10
The Radial and RITA – what are their relative advantages and when to use
James Tatoulis (Melbourne, Australia)

11:10 - 11:25
Transformation from conventional to minimally invasive surgical coronary revascularization – single center experience
Igor Živković (Belgrade, Serbia)

11:25 - 11:40
Radial versus RITA versus saphenous vein as the second conduit after LITA
James Tatoulis (Melbourne, Australia)

11:40 - 11:55
Long onlay patch reconstruction for diffuse LAD
Shuichiro Takanashi (Kawasaki, Japan)

11:55 - 12:10
Treatment strategy for concomitant carotid and coronary disease – ten years single center results
Igor Živković (Belgrade, Serbia)

12:10 - 12:20
Challenges in coronary artery bypass grafting in an adult thalidomide patient
Sujeeth Suvarna (Dublin, Ireland)

12:30 - 13:00 Scientific Awards Ceremony

Sunday, 20 October 2024
Hall 2

08:00 - 09:30 Session XXXIX – Atrial fibrillation

Chairpersons:
Belhan Akpinar (Istanbul, Turkey)
Mihaela Grecu (Iași, Romania)
David Taggart (Oxford, United Kingdom)

08:00 - 08:15
Minimally invasive techniques for the surgical treatment of atrial fibrillation
Belhan Akpinar (Istanbul, Turkey)

08:15 - 08:30
The methodology and results of the Maze-V procedure for simultaneous elimination of AF and CABG
Amiran Sh. Revishvili (Moscow, Russia)

08:30 - 08:45
New frontiers in real time mapping and imaging for enhanced atrial fibrillation ablation
Mihaela Grecu (Iași, Romania)

08:45 - 09:00
Hybrid treatment of persistent forms of atrial fibrillation all in one hand
Amiran Sh. Revishvili (Moscow, Russia)

09:00 - 09:30
Discussions

09:30 - 10:20 Break

10:20 - 12:20 Session XLI – Vascular surgery

Chairpersons:
Belhan Akpinar (Istanbul, Turkey)
Horia Mureșian (Bucharest, Romania)
Alexandru Burlacu (Iași, Romania)

10:20 - 10:35
Possibility of enlarge landing zone in hybrid approach in treatment of complex pathology of aorta, results of 111 consecutive operations
Vitaliy Kravchenko, Bohdan Cherpak, Ivan Kravchenko, Yurii Tarasenko, Vasil Lazoryshynets (Kiev, Ukraine)

10:35 - 10:50
Superior Vena Cava Syndrome, a serious epidemiological and surgical problem in Africa/our experience in SVC reconstruction and challenges in complex vascular access in about 1000 cases/Botswana correction
Pavle Kovačević, Leba Kabongo, Shalva Rtskhiladze, Guram Rtskhiladze, Motsholathebe Puthego (Gaborone, Botswana)

10:50 - 11:05
The surgical planning in carotid artery disease – beyond the guidelines
Horia Mureșian (Bucharest, Romania)

11:05 - 11:20
Combined coronary and carotid artery surgery – our experience in 900 cases
Pavle Kovačević, Leba Kabongo, Shalva Rtskhiladze, Guram Rtskhiladze, Motsholathebe Puthego (Gaborone, Botswana)

11:20 - 11:35
Multifocal arterial disease – carotid, coronary, aorta and peripheral – diagnostic algorithm and therapeutic strategy
Ionel Droc, Alin Anastasoaie, Cosmin Buzilă, Liviu Stan (Bucharest, Romania)

11:35 - 11:50
Endovascular treatment of Infrainguinal peripheral arterial disease
Anil Özen (Ankara, Turkey)

11:50 - 12:05
Hybrid revascularization techniques in patients with limb ischemia
Cristian Păiuș (Iași, Romania)

12:05 - 12:20 **Discussions**

Sunday, 20 October 2024
Hall 3

08:00 - 09:00 Students oral presentation session I

Chairpersons:
Laura Vasiliu (Iași, Romania)
Laura Benchea (Iași, Romania)
Alberto Bacușcă (Iași, Romania)

08:00 - 08:07
From a ventricular extrasystole to minoca – case study
Alexia Urtoi (Iași, Romania)

08:07 - 08:14
Broken heart syndrome – the crossroads of emotional stress and cardiac dysfunction
Mălina-Alexandra Bercu, Daria-Ioana Vreme (Iași, Romania)

08:14 - 08:21
Hypertrophic obstructive cardiomyopathy – surgical myectomy and septal ablation
Larisa Corneanu, Octavian-Călin Genes, Petronela Pascu (Iași, Romania)

08:21 - 08:28
Vascular Ehlers-Danlos syndrome – strategies for prevention and surgical management of rare aneurysms
Alexandru-Ionuț Sănduleanu, Miruna-Olguța Ciobanu, Daria-Ioana Vreme, Miruna Harter-Radu, Maria Manole, Iuliana Vrăjitoru, Ioana Adumitresei, Nicolae-Florin Iftimie, Gabriel-Erich Ganea (Iași, Romania)

08:28 - 08:35
Navigating surgical strategies for aortic root pathology – sparing or replacing the valve?
Ioana Adumitresei, Miruna-Olguța Ciobanu, Miruna Harter-Radu, Alexandru-Ionuț Sănduleanu, Iuliana Vrăjitoru, Alberto Bacușcă (Iași, Romania)

08:35 - 08:42
Predicting the unpredictable – AI in the prevention of cardiovascular risks
Daria-Ioana Vreme, Miruna-Olguța Ciobanu, Alexandru-Ionuț Sănduleanu, Cosmin-Ștefan Velnic, Nicolae-Florin Iftimie, Gabriel-Erich Ganea, Iuliana Vrăjitoru, Mălina-Alexandra Bercu, Ionuț-Alexandru Ghicu, George-Vlad Jemna (Iași, Romania)

08:42 - 08:49
From pixels to pulses – the journey of 3D bioprinted heart valves
Daria-Ioana Vreme, Miruna-Olguța Ciobanu, Alexandru-Ionuț Sănduleanu, Ioana Adumitresei, Nicolae-Florin Iftimie, Gabriel-Erich Ganea, Iuliana Vrăjitoru, Mălina-Alexandra Bercu, Ionuț-Alexandru Ghicu, George-Vlad Jemna (Iași, Romania)

08:49 - 08:56
Surgical approach of a left main bronchus typical carcinoid tumor with infracentimetric pulmonary nodules
Marina Cioran, Mária-Noémi Kantor, Dinu Ciornohuz (Iași, Romania)

09:00 - 09:30 Break

09:30 - 10:30 Students oral presentation session II

Chairpersons:
Laura Vasiliu (Iași, Romania)
Laura Benchea (Iași, Romania)
Alberto Bacușcă (Iași, Romania)

09:30 - 09:37
The Crown of Death – a literature review of the anatomy, prevalence, and surgical risks of the corona mortis
Nicolae-Florin Iftimie, Briceanu Oana-Georgiana, Mălina-Alexandra Bercu, Daria-Ioana Vreme, Alexandru-Ionuț Sănduleanu, Ionuț-Alexandru Ghicu, George-Vlad Jemna, Gabriel-Erich Ganea, Bogdan-Tudor Bugeac, Iuliana Vrăjitoru (Iași, Romania)

09:37 - 09:44
Catheter ablation as an alternative to implantable cardioverter defibrillators – treat the cause, not the symptoms
Gabriel-Erich Ganea, Nicolae-Florin Iftimie, Dîrja Lavinia, Loredana Clapa (Iași, Romania)

09:44 - 09:51
The threat of infective endocarditis in patients with bicuspid aortic valve
Gabriel-Erich Ganea, Nicolae-Florin Iftimie, Daria-Ioana Vreme, George-Vlad Jemna, Ionuț-Alexandru Ghicu, Alexandru-Ionuț Sănduleanu, Dîrja Lavinia, Clapa Loredana, Ciobotaru Larisa, Bujor Raluca Alexandra (Iași, Romania)

09:51 - 09:58
Stem cell therapy for congenital heart disease –bridging the gap between promise and practice
Petronela Pascu, Larisa-Valentina Corneanu (Iași, Romania)

09:58 - 10:05
Dexmedetomidine – safeguarding against postoperative delirium in cardiac surgery
Ionuț-Alexandru Ghicu, Maria Manole, Andreea Ghicu, Daria-Ioana Vreme, Gabriel-Erich Ganea, George-Vlad Jemna, Nicolae-Florin Iftimie, Matei-Gabriel Ciubotaru, Albu Elena (Iași, Romania)

10:05 - 10:12
Mitochondrial modulation in cardiac therapy – unveiling the potential of partial respiratory chain inhibition
Andreea-Laura Antohi (Iași, Romania)

10:12 - 10:19
The importance of maintaining optimal INR values in patients undergoing aortic valve replacement surgery
Miruna Harter-Radu, Miruna-Olguța Ciobanu, Ioana Adumitresei, Florin Mitu, Grigore Tinică, Alexandru-Dan Costache (Iași, Romania)

10:19 - 10:26
Iliac artery angioplasty complicated with retroperitoneal haemorrhage – what went wrong?
Matei Amanci (Iași, Romania)

10:30 - 11:00 Break

11:00 - 12:00 Students oral presentation session III

Chairpersons:
Laura Vasiliu (Iași, Romania)
Laura Benchea (Iași, Romania)
Alberto Bacușcă (Iași, Romania)

11:00 - 11:07
Understanding May-Thurner syndrome – benign condition or possible killer?
Bogdan-Tudor Bugeac (Iași, Romania)

11:07 - 11:14
Acute aortic dissection in bicuspid valve disease –navigating severe postoperative complications
Maria-Bianca Andrei[1], Mădălina Maria Savu[2], Iulia Raluca Simion[2], Alexandru Călin[1]
[1]Iași, Romania
[2]Cluj-Napoca, Romania

11:14 - 11:21
Managing ascending aortic aneurysm in a morbidly obese patient – the role of the Tirone David procedure
Alexandru Călin[1], Maria-Bianca Andrei[1], Mădălina Maria Savu[2], Iulia Raluca Simion[2]
[1]Iași, Romania
[2]Cluj-Napoca, Romania

11:21 - 11:28
Donor-related personality changes following heart transplantation – evaluating scientific evidence and subjective reports
George-Vlad Jemna, Nicolae-Florin Iftimie, Gabriel-Erich Ganea, Ionuț-Alexandru Ghicu, Daria-Ioana Vreme, Alexandru-Ștefan Chiculiță, Furtună Dan-Gabriel (Iași, Romania)

11:28 - 11:35
Vitreous hemorrhage as a side effect of postoperative anticoagulation after mechanical valve replacement
Iuliana Vrăjitoru, Alexandru-Ionuț Sănduleanu, Miruna-Olguța Ciobanu, Daria-Ioana Vreme, Maria Manole, Ioana Adumitresei, Nicolae-Florin Iftimie, Anton Nicoleta (Iași, Romania)

11:35 - 11:42
Unmasking the hidden obstacle – avoiding a debilitating result in popliteal artery entrapment syndrome
Maria Manole, Ionuț-Alexandru Ghicu, Alexandru-Ionuț Sănduleanu, Iuliana Vrăjitoru, Miruna-Olguța Ciobanu (Iași, Romania)

11:42 - 11:49
Antegrade migration of trans-aortic valve prosthesis: a rare surgical emergency
Miruna-Olguța Ciobanu, Miruna Harter-Radu, Ioana Adumitresei, Alexandru-Ionuț Sănduleanu, Maria Manole, Daria-Ioana Vreme, Iuliana Vrăjitoru, Grigore Tinică, Alberto Bacușcă (Iași, Romania)

11:49 - 11:56
Lifting a weight off your chest – removal of a giant asymptomatic right atrial myxoma
Alexandru-Sebastian Stoica (Iași, Romania)

12:00 - 12:30 Break

12:30 - 14:30 Session dedicated to nurses and perfusionists

Chairpersons:
Mihail Enache (Iași, Romania)
Carmen Pleșoianu (Iași, Romania)

12:30 - 13:00
Managing anxiety before and after surgery in cardiac patients
Antonela Muntianu (Iași, Romania)

13:00 - 13:30
The spiritual dimension of caring for patients undergoing cardiac surgery
Emanuel Urecheanu (Iași, Romania)

13:30 - 14:00
Geriatric care for elderly patients with low blood pressure
Monica Sava (Iași, Romania)

14:00 - 14:30
Discussions

14:30 - 14:45 Break

14:45 - 16:45 Session II dedicated to nurses and perfusionists

Chairpersons:
Mihail Enache (Iași, Romania)
Carmen Pleșoianu (Iași, Romania)

14:45 - 15:15
Management of the patient with acute myocardial infarction and atrial fibrillation
Adina Huțan (Iași, Romania)

15:15 - 15:45
How to recognize acute myocardial infarction?
Ilona Acatrinei (Iași, Romania)

15:45 - 16:15
Management of transfusion therapy in patients with cardiovascular conditions
Teodora Ursache (Iași, Romania)

16:15 - 16:45
Discussions

Sunday, 20 October 2024
Training Hall 1

09:00 - 12:00 **Workshop CardioSim: Hands-on mastery in cardiac diagnostics & intervention**

Trainers:
Igor Nedelciuc (Iași, Romania)
Alberto Bacușcă (Iași, Romania)
Andrei Țăruș (Iași, Romania)
Silviu Stoleriu (Iași, Romania)

Sunday, 20 October 2024
Ion Iancu Institute of Anatomy

08:30 - 09:30 **Workshop – Atrial septal defect surgical closure**

Trainers:
Mihail Enache (Iași, Romania)
Andrei Țăruș (Iași, Romania)
Silviu Stoleriu (Iași, Romania)

10:00 - 11:30 **Workshop – Aortic valve replacement**

Trainers:
Grigore Tinică (Iași, Romania)
Mihail Enache (Iași, Romania)
Alberto Bacușcă (Iași, Romania)

MAIN LECTURES

CARDIAC REHABILITATION IN PATIENTS AFTER PCI

Irina-Mihaela Abdulan[1], Alexandra Maștaleru[1]
[1]*"Dr. C. I. Parhon" Clinical Hospital, Iași, Romania*

The program of cardiac rehabilitation (CR) is a comprehensive and multidisciplinary approach encompassing exercise training, risk factor modification, and psychosocial counseling. It covers a broad spectrum from simple exercises to intensive supervised exercise training and dietary monitoring, and has been proven to reduce mortality and hospitalizations while enhancing the quality of life for patients with heart disease.

CR involves various methods that impact an individual's overall physical, mental, and social health, such as dietary guidance and vigorous physical exercise. Its significance in managing different cardiac conditions, particularly ischemic heart disease, has been extensively demonstrated in numerous studies. However, the real-world adoption of CR remains inadequate. With ongoing advancements in coronary intervention techniques and an increasing number of patients undergoing percutaneous coronary intervention (PCI), it's essential to continuously reassess and adapt the role of CR in this changing patient population.

In studies that included patients who underwent CR following PCI, were observed significant reductions in revascularization rates and in incidence of major adverse CV events, including MI, revascularization, recurrent stenosis, recurrent angina, and death, in CR participants compared with non-participants. However, no reduction in the rate of recurrent MI was found.

In conclusion, CR is a crucial therapeutic intervention for post-MI and post-PCI patients, with ample evidence showing benefits in quality of life, symptom improvement, exercise capacity, overall well-being, and even mortality.

INFLUENCE OF AORTIC VALVE CALCIUM SCORE AND MEMBRANOUS SEPTUM LENGTH ON PROGNOSIS IN PATIENTS UNDERGOING TRANSCATHETER AORTIC VALVE IMPLANTATION

Marcel Abraș[1,2], Ecaterina Pasat[1], Artiom Surev[1], Vitalie Moscalu[1], Petru Nucă[1,2]
[1]*Institute of Cardiology, Chișinău,* [2]*"Nicolae Testemițanu" State University of Medicine and Pharmacy, Chișinău*

Introduction:
In the current era of transcatheter aortic valve implantation (TAVI), evaluating prognostic factors such as calcium scoring and membranous septum (MS) length is essential for risk assessment.

Objective:
This study investigates the impact of MS length and aortic valve calcium (AVC) score on clinical outcomes in patients undergoing TAVI.

Methods:
We conducted a retrospective analysis of 106 patients treated at the Cardiology Institute in Chișinău from July 2021 to December 2023. Patients were categorized by MS length: 75 patients with MS length <5 mm and 31 patients with MS length ≥5 mm. Additionally, 87 patients were categorized by AVC scores: 17 with non-severe AVC (score < 2000 units Agatston) and 70 with severe AVC (score ≥ 2000 units Agatston). Key parameters evaluated included cardiac conduction abnormalities, AVC scores, and post-TAVI complications.

Results:
MS length <5 mm emerged as an independent predictor for permanent pacemaker (PPM) implantation (13.33% vs. 3.22%, p=0.025) and advanced atrioventricular blocks. The type of transcatheter valve did not significantly affect PPM rates. Severe AVC scores correlated with increased PPM implantation (7.14% vs. 0%, p=0.0121) and paravalvular regurgitation (67.14% vs. 41.17%, p=0.033). No significant differences in mortality or stroke were observed at 6-month follow-up.

Conclusion:
MS length and AVC score are crucial determinants of PPM implantation and other complications following TAVI. Integrating these parameters into preprocedural evaluation can improve patient management and outcomes.

Keywords: TAVI, aortic valve calcium score, membranous septum length, pacemaker implantation.

MITRAL GEOMETRY AND MECHANICS IN MITRAL VALVE PROLAPSE

Gheorghe Cerin[1], Samuel Mancuso[1], Diana Benea[1], Marco Diena[1]
[1]*Minimally Invasive Cardiac Surgery Unit, IRCCS San Donato, Milan, Italy*

Abrevations:
LV – left ventricle
MV – mitral valve
PSLAx – parasternal long axis view

Although scientific literature only minimally discusses the geometry and mechanics of the MV, these two elements are essential in reconstructive surgery in order to understand the pathophysiologic mechanisms of mitral valve prolapse and thus to choose appropriate surgical treatment strategies and to identify patients at risk for sudden death as well (Cerin, 2023).

First, it must be said that transthoracic echocardiography is the standard method of MV judgment and that the most informative echocardiographic approach is the PSLAx. In a histologically normal MV, the plane of its coaptation is always located in the lower third of the LV cavity, more precisely in the inflow chamber. This is a crucial detail when analyzing a MV prolapse, as we will see later. Since these patients have a disease of elastic tissue the coaptation zone slowly migrates to the left atrium over time.

The current diagnosis of MV prolapse was established on two-dimensional echocardiography in 2008 (R. Bonow & c) and identifies as diagnostic criteria the protrusion of the valve leaflet(s) 2mm behind the mitral septo-marginal (or antero-posterior) mitral annulus in the PSLAx or Apical 3-Chamber view.
Today, when echocardiography has become three-dimensional, reproducing exactly the actual mitral valve structure, these diagnostic criteria are found to be vulnerable and/or incomplete, mainly because the current definition of MV prolapse does not take into account valve coaptation. In cardiac surgery, the ultimate reason why the patient enters the operating room is precisely to restore a coaptation of at least 6 mm. Even in patients treated with MitraClip, the main purpose of the interventional treatment is that of restoring valve coaptation as well.

For this reason, if in the echocardiographic analysis of the MV we also take into account its coaptation, by joining the coaptation with the two points on the anterior and posterior mitral annulus (used as a landmark for the current diagnosis of prolapse), we can construct a triangle, that we called the coaptation triangle (Cerin 2006, Tesler 2009, Cerin 2012). The height of this coaptation triangle is strictly related to the degree of elasticity of the mitral apparatus. However, when the coaptation is located in the inflow chamber, we know that we are in front of a valve with a balanced ratio of elastic and collagen fibers.
In patients with Barlow, Marfan, Ehlers-Danlos disease or fibroelastic deficiency mitral valve, the triangle of the valve's coaptation is most often missing, since the valve coaptation is often found inside the left atrium.

In our experience, the coaptation triangle is an important tool for valve assessment both preoperatively and post-operatevely: its reconstruction is a key element that has been shown to guarantee the stability of valve repair over time. If we analyze the motion of the posterior MV leaflet by itself and if we look at it from a mechanical point of view, we can see that a sharp angle is created between the inferior wall of the LV and the posterior mitral leaflet. In fact, the posterior valve creates a third-degree lever in its motion related to the inferior wall, in which the fulcrum of the lever is the posterior mitral annulus. In patients with posterior leaflet prolapse, this angle of valve displacement becomes an obtuse angle, also in relation to the LV inferior wall. Therefore, when the valve mechanics is profoundly transformed, the posterior leaflet becomes the force arm in a first-degree lever. In this case, the fulcrum is the posterior mitral annulus too and the load is

the muscle mass at the base of the posterior MV. The phenomenon is more evident in the prolapse of both leaflets, when the entire mitral apparatus is loaded in the systole with kinetic energy due to the displacement of the coaptation inside the left atrium. This energy will be than transferred to the papillary muscles and to the posterior leaflet insertion base, on the infero-basal wall musculature.

We can therefore compare the MV in a prolapsing valve to a sling. These pulling forces correlate on gadolinium cardiac magnetic resonance with areas of myocardial fibrosis, as previously described (C. Basso 2015) and are the source of triggering malignant arrhythmias in arrhythmogenic mitral valve prolapse. As it has also been described, there is not a directly proportional relationship between the presence of fibrosis areas and the degree of mitral regurgitation. Myocardial fibrosis is not generated by mitral valve regurgitation, but originally by the transformation of the mitral leaflets into an elastic system, which pulls the papillary muscles and compresses the muscle mass at the base of the insertion of the posterior valve, forming the curling phenomenon. In ultrasound, if we use filters that allow the reading of velocities in centimeters/second (for example, the TDI method applied to the cardiac walls), we have the possibility to identify the phenomenon of the pickelhaube helmet (Muthukumar 2017), which expresses nothing other than the twitching felt by the LV wall in systole, more precisely at the time of the systolic click.

In conclusion, the association of the prolapse of both leaflets, with the displacement of the coaptation zone inside the left atrium, in the presence of mitral anulus disjunction, curling and pickelhaube helmet, are key elements in identifying candidates with mitral prolapse who are predisposed to malignant arrhythmias and sudden death, rather than the degree of mitral regurgitation. Using concepts of geometry and mechanical analysis of the prolapsed MV, we are able to choose surgical techniques that allow a reconstruction of the coaptation triangle and thus modify the mechanics of the mitral valve. Valvular geometry elements are also important in the identification of patients at risk of systolic anterior motion, but also in the reconstruction of a mitral valve with a mobile (not fixed) posterior leaflet. Although echocardiographic software dedicated to mitral geometry analysis is available, the simple use of these concepts in the ultrasound analysis of the patient with MV prolapse is useful and has very practical significance.

Bibliography:

1. G. Cerin - Is the Mechanics of the Posterior Mitral Leaflet the Trigger of Malignant Mitral Valve Prolapse? May 4, 2023, Mitral Conclave, New York.
2. G. Cerin, M Diena, G Lanzillo, S Casalino, A Zito, D Benea, U Filippo Tesler. Degenerative mitral regurgitation - surgical and echocardiographic consideration for repair. Romanian Journal of Cardiovascular Surgery, 5 (3), pp. 131-39, 2006.
3. U.F. Tesler, G Cerin, E. Novelli, A.M. Popa, M. Diena - Evolution of Surgical Techniques for Mitral Valve Repair, PMID: 19876422, PMCID: PMC2763455, Tex Heart Inst J. 2009;36(5):438-40.
4. G. Cerin, B.A. Popa, M. Diena - The Degenerative Mitral Valve Regurgitation: From Geometrical Echocardiographic Concepts to Successful Surgical Repair January 2012, DOI: 10.5772/31010; Source - Chapter In book: Echocardiography - In Specific Diseases.
5. Lakshmi Muthukumar, Faraaz Rahman, M. Fuad Jan, Armaan Shaikh, Lindsey Kalvin, Anwer Dhala, Arshad Jahangir, A. Jamil Tajik - The Pickelhaube Sign: Novel Echocardiographic Risk Marker for Malignant Mitral Valve Prolapse Syndrome; J Am Coll Cardiol Img. 2017 Sep, 10 (9) 1078–1080.
6. Cristina Basso 1, Martina Perazzolo Marra 2, Stefania Rizzo 2, Manuel De Lazzari 2, Benedetta Giorgi 2, Alberto Cipriani 2, Anna Chiara Frigo 2, Ilaria Rigato 2, Federico Migliore 2, Kalliopi Pilichou 2, Emanuele Bertaglia 2, Luisa Cacciavillani 2, Barbara Bauce 2, Domenico Corrado 2, Gaetano Thiene 2, Sabino Iliceto 2 - Arrhythmic Mitral Valve Prolapse and Sudden Cardiac Death, Circ, 2015 Aug 18;132(7):556-66. doi: 10.1161/CIRCULATIONAHA.115.016291 PMID: 26160859, Epub 2015 Jul 9.
7. 2008 Focused Update Incorporated Into the ACC/AHA 2006 Guidelines for the Management of Patients With Valvular Heart Disease: A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Writing Committee to Revise the 1998 Guidelines for the Management of Patients With Valvular Heart Disease): Endorsed by the Society of Cardiovascular

Anesthesiologists, Society for Cardiovascular Angiography and Interventions, and Society of Thoracic Surgeons
Circulation Volume 118, Number 15, https://doi.org/10.1161/CIRCULATIONAHA.108.19074
2006 WRITING COMMITTEE MEMBERS, Robert O. Bonow, MD, MACC, FAHA, Blase A. Carabello, MD, FACC, FAHA, Kanu Chatterjee, MB, FACC, Antonio C. de Leon, Jr, MD, FACC, FAHA, David P. Faxon, MD, FACC, FAHA, Michael D. Freed, MD, FACC, FAHA, …, and Jack S. Shanewise, MD.

TRICUSPID VALVE ASSESSMENT IN RIGHT VENTRICLE FAILURE – TIPS AND TRICKS

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Abbreviation:
AF – Atrial fibrillation
RV – Right ventricle
FAC – Fractional area change
TA – Tricuspid Annulus
FW – Free wall
TAPSE – Tricuspid annular plane systolic excursion
FWLS – Free wall longitudinal strain
TR – Tricuspid regurgitation
PASP – Pulmonary arterial systolic pressure
TDI – Tissue Doppler Imaging

Clinically significant TR (moderate or severe) is a common valvular heart disease, affecting 0.55% of general population and its prevalence is increasing with age, the aetiology being secondary in more than 90% of the cases [1]. TR is most often secondary to left-sided valvular disease/myocardial dysfunction, but we can have secondary isolated TR due to RV pressure/volume overload, enlarged right atrium/TA secondary to AF and in relation with cardiac implantable devices leads or primary isolated TR.

In the 2021 ESC/EACTS Guidelines for the Management of Valvular Heart Disease, surgery is recommended in symptomatic patients with severe primary/isolated secondary TR, in patients undergoing left-sided valve-surgery and should be considered in some other specific cases, in the absence of severe RV dysfunction or severe pulmonary hypertension [2]. Appropriate timing for intervention in patients with severe TR is crucial to avoid irreversible RV damage and organ failure with subsequent increased surgical risk.
It is well documented that the mortality for isolated tricuspid valve surgery is higher, ranging from 8 to 10% in a large cohort of 1364 patients reported by Alqahtani and co-authors, compared to 4% for isolated aortic/mitral valve surgery [3, 4]. The most common cause of death in patients with severe TR undergoing surgery is the RV failure [5], therefore RV function evaluation should be carefully assessed by both conventional and newer echocardiographic parameters.

The most important parameters to consider for patient selection are RV dilatation and dysfunction, severe pulmonary hypertension and TA dilatation. Among those, the only parameter that is not well defined in terms of practical definition is RV dysfunction, especially the stage that makes the intervention futile, therefor a complex echocardiographic assessment of the RV function before any intervention must be performed.

Visual assessment of RV systolic function gives an initial qualitative evaluation, but remains insufficient and several simple and reproductible methods should be incorporated into the routine assessment as the well-known TAPSE (normal value >17 mm), FAC (normal value >35%), pulsed tissue Doppler S' (normal value >10 cm/sec) and other less routinely represented by regional RV strain and strain rate, 3D ejection fraction (normal value >45%) and in some cases TAPSE/PASP ratio.

All of these parameters can remain in normal ranges for a long time and are not always reliable, excepting possibly RV global and FW longitudinal strain that emerged as a new promising technique to assess myocardial contractility (in the study of Ancona et. al. a cutoff value of RV FWLS of -14 was identified to predict all-cause mortality in patients undergoing tricuspid valve interventions [6]), and TDI Tei index which is a global estimate of both systolic and diastolic function based on the relationship between ejection and nonejection work of the heart, avoiding the geometrical assumptions and limitation of complex RV geometry. Also, TAPSE/PASP ratio has been validated as an independent and strong predictor of right and left heart failure and an important marker for severe TR, a value less than 0.31 mm/mmHg being associated with significant reduced survival [7,8].

The actual definition of RV dysfunction can be multifaced and the best parameter to establish RV dysfunction is not established, but promising evidence for the role of strain imaging as an early expression of early myocardial damage have emerged and we hope that in the future it will be widely available and, in his absence, TDI Tei index should be considered as a reliable parameter especially when TAPSE, FAC or RV ejection fraction are still in normal ranges.

References:

1.Topisky Y., et. al., burden of tricuspid regurgitation in patients diagnosed in the community setting. JACC Cardiovasc Imaging 2019-12-433 224.
2.Alec Vahanian et. al., 2021 ESC/EACTS Guidelines for the Management of Valvular Heart Diseases. European Heart Journal (2022) 43, 561–632, https://doi.org/10.1093/eurheartj/ehab395.
3. Alqahtani F, Berzingi CO, Aljohani S, Hijazi M, Al-Hallak A, Alkhouli M. Contemporary trends in the use and outcomes of surgical treatment of tricuspid regurgitation. J Am Heart Assoc. 2017;6(12).
4. Astor, Brad C et al., Mortality after aortic valve replacement: results from a nationally representative database, The Annals of Thoracic Surgery, Volume 70, Issue 6,2000, p.1939 – 1945.
5.Nath J, Foster E, Heidenreich PA. Impact of tricuspid regurgitation on long-term survival. J Am Coll Cardiol. 2004 Feb 4;43(3):405-9. doi: 10.1016/j.jacc.2003.09.036. PMID: 15013122.
6. Ancona, F.; Melillo, F.; Calvo, F.; El Halabieh, N.A.; Stella, S.; Capogrosso, C.; Ingallina, G.; Tafciu, E.; Pascaretta, A.; Ancona, M.B.; et al. Right ventricular systolic function in severe tricuspid regurgitation: Prognostic relevance of longitudinal strain. Eur. Heart J. Cardiovasc. Imaging 2021, 22, 868–875.
7. Tadic M, Nita N, Schneider L, et al.. The predictive value of right ventricular longitudinal strain in pulmonary hypertension, heart failure, and valvular diseases. Front Cardiovasc Med 2021; 8:698158.
8. Fortuni, F.; Butcher, S.C.; Dietz, M.F.; van der Bijl, P.; Prihadi, E.A.; De Ferrari, G.M.; Marsan, N.A.; Bax, J.J.; Delgado, V. Right Ventricular–Pulmonary Arterial Coupling in Secondary Tricuspid Regurgitation. Am. J. Cardiol. 2021, 148, 138–145.

REDEFINING LIMITS – THE IMPACT OF EXTENDED CRITERIA DONORS ON LUNG TRANSPLANTATION

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Introduction:
Lung transplantation is a critical, life-saving intervention for patients with end-stage lung disease. However, the shortage of suitable donors significantly contributes to higher waiting list mortality.

Material and Methods:
This retrospective study examines the impact of using extended donor criteria on lung transplantation outcomes, particularly in reducing waiting list mortality and enhancing postoperative results. We analyse 539 donation offers between 2018 and 2023, from which 139 lung transplants were performed. The transplants were categorized into two groups: Group 1 consisted of lungs from ideal criteria donors (ICD), and Group 2 included lungs from extended criteria donors (ECD). Survival estimates were compared between transplants using ideal donor criteria (IDC) and those using extended donor criteria (EDC). The conversion rate from ECD to lung transplant was 20.37%.

Results:
The Euro transplant Lung Donor Score (LDS) was used to assess donor lung quality, with donors categorized into three groups: Group 1 (LDS 6) representing ideal donors, Group 2 (LDS 7-8) for intermediate-risk donors, and Group 3 (LDS 9-15) for extended criteria donors. Survival outcomes between Groups 1 (ICD) and Group 2 & 3 (ECD) showed no significant differences post-transplant ($p=0.217$). Additionally, no difference in overall survival was observed when comparing lung transplants from ECD with LDS scores of 8-9 versus those with scores above 9 ($p=0.84$).

Conclusion:
This study should provide greater confidence to utilise an increasing proportion of ECD for lung, reducing risk of waiting list mortality whilst maintaining post-transplant.

AORTIC ARCH SURGERY – OPEN, ENDOVASCULAR OR HYBRID?

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Aortic arch surgery is one of the challenges in cardiothoracic surgery. Over the past decades open surgery developed and in experienced centers open surgery is done with moderate mortality and morbidity. Since the introduction of endovascular therapy in the thoracic aorta by Volodos and Dake in the last century this technique evolved and gives us nowadays multiple treatment options such as TEVAR with chimney, custom made branched and fenestrated grafts, in situ fenestration with laser or puncture, of the shelf grafts with side branches for even physician modified grafts beside of hybrid procedures as complete or partial debranching before TEVAR and prefabricated hybrid grafts.

The different pathologies as acute for chronic dissections, aneurysms, anomalies of the branches as bovine arch, offset of the vertebral arteries from the arch or arteria lusoria require individual concepts from the available open and endovascular armentorium.

With these techniques we are able to reduce the surgical trauma, some procedures can be made complete percutaneous, avoid extracorporeal circulation in some cases and reduce the operative morbidity and mortality. The combination of open, hybrid and ends allows us even to treat more patients which were in the past unfit for treatment, staged procedures even reduce the operative trauma to the patient.
Modern aortic arch surgery has to offer the whole variety of open, hybrid and endovascular techniques to achieve good results.

MULTIFOCAL ARTERIAL DISEASE – CAROTID, CORONARY, AORTA AND PERIPHERAL – DIAGNOSTIC ALGORITHM AND THERAPEUTIC STRATEGY

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Introduction:
Atherosclerosis is a global disease affecting multiple organs. The more symptomatic lesion or the lesion with the strongest prognostic impact should be treated first.
Coronary artery disease may coexist with carotid artery stenosis, abdominal aortic aneurysms, and/or peripheral artery disease (PAD).
Recent studies have confirmed that patients with multivascular bed disease have a greater risk for major cardiovascular events than patients with monovascular attempt.

Matherials and Methods:
In 2003 on one year period, on 400 direct arterial revascularisations we had 11 patients with multiple sites of atherosclerotic disease. The decade more affected was 60 – 70 years old. After 20 years, in 2023, the number of patients increases a lot, at 140 (35%), and the patients were older (decade 70-80 y.). Men were more affected.

The lesions should be treated as follows: carotid, coronaries and aorta or peripheral lesions. When two arterial beds are symptomatic (ex: AAA more than 7 cm in diameter or in imminence of rupture associated with left main disease) we can perform simultaneous procedures (open or endovascular), but with higher mortality rate (25%).

Results:
Vascular patients often have concomitant arterial disease affecting more than one territory. Identification of silent vascular disease is essential to improve cardiovascular mortality and morbidity rates. The treatment of multifocal arterial disease should include aggressive risk factor management, lifestyle changes, and appropriate drug therapy.

Conclusion:
In conclusion, specific surgical/endovascular therapeutic options available, aggressive medical treatment and vascular disease prevention strategies should be rigorously implemented to best manage the overall atherosclerotic sites.

RESTENOSIS IN CORONARY STENT – SURGICAL TREATMENT

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Nowadays stenting is the procedure of choice for coronary stenosis, but there is the risk of in-stent restenosis in a significant number of cases (15-45%). In-stent restenosis is an important clinical problem and those patients are a challenging group for both interventional cardiologists and cardiac surgeons as generally they are patients with aggressive coronary atherosclerosis.

In-stent restenosis is mainly caused by intimal hyperplasia and sometimes by stent elastic recoil. There is consistent evidence that the percutaneous retreatment of these cases leads to suboptimal clinical results and is associated with high risk of additional restenosis or occlusion.

Because of the increasing use of multiple stents in diffuse and distal lesions of coronary arteries, the surgeon should use special and difficult techniques in order to perform coronary revascularization. One of them is coronary endarterectomy (CE) and stent removal followed by arterial or venous grafting.

Endothelial dysfunction induced by stenting is well known and is possible that it could have an adverse effect on adjacent graft patency. Distal microembolization in the downstream vessel from stents is an other possible cause of left ventricular dysfunction. The loss of collateral circulation due to occlusion of side branches when long stenting are performed can also alter the left ventricular function.
A multicenter study investigated that issue. Were involved 8 cardiac surgical centers in Germany and they provided outcome data of 37140 consecutive patients who underwent isolated first time CABG on a five years period. The patients were divided in 3 groups as to their previous status: without any PTCA, with one successful PTCA, with 2 or more previous percutaneous interventions. The authors looked at the in-hospital mortality and major adverse cardiac events. This study concludes that a history of multiple previous PTCA increases in-hospital mortality and the incidence of major adverse cardiac events.

CABG has better outcome in patients with ISR rather than the use of interventional methods. After successful PTCA, operative risk for surgery does not increase as long as the coronary bed and the ventricular function are not deteriorated. Surgical technique is not modified due to the previous PTCA. Most of the patients who will need surgery after PTCA will be operated during the first year. Rapid evolution of the coronary artery disease seems to be as important as restenosis in determining patients who will require surgery.

INFRARENAL ISOLATED AORTIC DISSECTION – CASE PRESENTATION AND ACTUAL STRATEGY

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Introduction:
Aortic dissection is rarely limited to the abdominal aorta. Abdominal pain is the most frequent symptom, although dissection may be painless. Usually the dissection of the abdominal aorta is diagnosed in asymptomatic patients during computed tomography examination for other reasons. Because of the small number of patients, there are no guidelines of definitive treatment. The presence of complications, such as unrelenting pain despite the blood pressure control, pulse deficits, limb ischemia, mesenteric ischemia or infarction, acute renal failure, must be treated surgically. The goal of the surgical treatment of the aortic dissection is to close the entry site and decompress the false lumen. The standard procedure is open surgery, although endovascular approach is the modern alternative to the standard procedure whenever possible.

Methods:
We present a case of a 62 y.o. man with multiple cardiovascular risk factors (obesity – 130 kg and 1,70 m; hypertension; dyslipidemia), asymptomatic patient; routine abdominal echography discovered and AAA with right iliac extension.
The diagnosis was determined at multislice CT with 3D reconstruction.

For surgical treatment we debated between three options: (1) Open surgery with an aorto-bifemoral by-pass, but the patient was overweight and the operative risk was too high. (2) Endovascular treatment with a bifurcated graft, but at the right side the true lumen of the iliac artery was too small. (3) Hybrid procedure, with an aorto-uni-iliac graft that blocks the entrance orifice of the dissected area and lands on the common iliac artery at the bifurcation, followed by a femoro-femoral by-pass to avoid the right side leg ischemia.

In a multidisciplinary vascular team (cardiovascular surgeon, interventional cardiologist and anesthesiologist), we decide to operate the patient using the hybrid technique under loco-regional anesthesia. The procedure was done in the Cath lab suite. We used a Treo device from Bolton Medical (AORTO-UNI-ILIAC GRAFT) with cut down for the two femorals. After finishing the endovascular procedure, we proceeded with the femoro-femoral (extra anatomic) by-pass using a silver impregnated Dacron graft no. 8.

Results:
The postoperative suits were simple and the patient was discharged the 4th day post-operatively.

Conclusion:
Hybrid procedures, performed in patients at high surgical risk, have similar results to standard or endovascular surgical treatment, in short and medium terms, but with lower morbidity and mortality and shorter stay time in intensive care and hospitalization.

PROTEOMICS/METABOLOMICS STUDIES AND BIOMARKERS OF MALIGNANT VENTRICULAR ARRHYTHMIA ASSOCIATED WITH ACUTE MYOCARDIAL INFARCTION AND ATRIAL FIBRILLATION

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Background:
Acute myocardial infarction (AMI) is one of the leading causes of death. Malignant ventricular arrhythmia (MVA) secondary to AMI is the highest risk factor of sudden cardiac death. It is particularly important to predict the MVA timely and accurately in patients with AMI. In addition, atrial fibrillation （AF) is the most common type of arrhythmias worldwide and is associated with serious complications. This study was designed to explore biomarkers and to reveal possible mechanisms of MVA in AMI as well as AF for clinical diagnosis.

Methods:
Blood samples from 190 human subjects were collected to reveal the differences in three comparisons (AMI/control, AMI+MVA/control, and AMI+MVA/AMI) using data independent acquisition proteomic approach (Part I). In addition, in Part II, plasma samples were prospectively collected from patients with AF and patients in sinus rhythm with negative coronary angiography. The patients were divided into 3 groups: paroxysmal AF (AFPA), persistent AF (AFPE), and sinus rhythm (N =54) and Metabolomics (n =36) using ultra-high performance liquid chromatography mass spectrometry was used to detect differential metabolites (DMs) that were validated in a new cohort (n=18). The differentially expressed proteins (DEPs) and DMs were analyzed with bioinformatics and validated using enzyme linked immunosorbent assay in new cohorts. The diagnostic value of candidate DEPs for AMI+MVA and the DMs for AF was also evaluated by the receiver operating characteristic curve (ROC).

Results:
In Part I, a total of 8,365 peptides and 460 proteins from the LC-MS/MS analysis were identified. Of these proteins, 90 in AMI/control, 94 in AMI+MVA/control, and 43 in AMI+MVA/AMI were identified as DEPs. TGFBI level had notable decreasing trend in AMI+MVA compared with AMI ($P<0.0001$) or control ($P<0.0001$). vWF level in AMI+MVA patients was significantly higher than that in AMI patients $P<0.01$) and control ($P<0.0001$). ROC analysis showed that TGFBI and vWF had the strong and potential value of predicting MVA in AMI. In Part II, among the 36 DMs detected by omics assay, 4 were successfully validated with AUC (area under curve) more than 0.8 ($p<0.05$).

Conclusion:
This study found that decreased TGFBI and increased vWF are the characteristics of proteins in the MVA patients with AMI. In the metabolomics study we detected 36 DMs in AF and 4 were validated with high sensitivity and specificity. These findings provide new insight into the diagnosis and pathogenesis of the development of MVA and AF. Further, the validated proteins/metabolites may be developed s biomarkers in these diseases.

Keywords: Acute myocardial infarction; malignant ventricular arrhythmia; proteomics; data independent acquisition.

References:
1. Zhang JL, Hou HT, Song Y, Guo M, Liu XC, Yang Q, He GW. Proteomics study and protein biomarkers of malignant ventricular arrhythmia in acute myocardial infarction patients. Clin Transl Med. 2023 Nov;13(11):e1435. doi: 10.1002/ctm2.1435. PMID: 37962003; PMCID: PMC10644326.
2. Zhang LL, Lin WH, Di CY, Hou HT, Chen HX, Zhou J, Yang Q, He GW. Metabolomics and Biomarkers for Paroxysmal and Persistent Atrial Fibrillation. J Am Heart Assoc. 2024 Feb 6;13(3):e032153. doi: 10.1161/JAHA.123.032153. Epub 2024 Jan 31. PMID: 38293949; PMCID: PMC11056137.

BIMA IN SITU VS Y CONFIGURATION – A 2-YEAR RETROSPECTIVE ANALYSIS

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Background:
Bilateral internal mammary artery showed superiority over other grafts to the left coronary system. Although several configurations are proposed for CABG using BIMA but there is still controversy for outcome of the in-situ vs Y grafting technique. Curiosity is growing towards in-situ BIMA grafting technique because of unique properties of IMA while attached to subclavian artery.

Methods:
This retrospective observational study was performed in United Hospital Ltd, Gulshan, Bangladesh from January 2022 to December 2023. 1010 patient underwent isolated coronary artery bypass surgery using BIMA by a single operating surgeon, allocated to in-situ grafting (n=486) and Y configuration (n = 524), then evaluated for clinical, functional outcome after 1 months & 6 months. Primary & secondary endpoints were major cardio-cerebrovascular events (MACCE) and deep sternal wound infection (DSWI).

Results:
Male participants were 93.68 % & 86.56 % in in-situ group vs Y group respectively. Pre-operative comorbidities i.e., DM, COPD, CKD, Low EF etc. showed no significant difference between the groups ($p>0.05$). No significant difference between the 2 groups in terms of in hospital mortality or morbidity. At follow up, there were no significant difference were found in any MACCE rate (1.4% vs 1 %) & DSWI (2.2% vs 2.3%) between in situ & Y groups respectively.
Conclusion:
Almost similar patency & survival rate were found using BIMA configurations with no significant differences.

Keywords: Bilateral Internal Mammary Artery (BIMA), In-situ, Y grafting, DSWI.

COMBINED CORONARY AND CAROTID ARTERY SURGERY – OUR EXPERIENCE IN 900 CASES

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Objective:
Due to increased life expectancy, the risk profile of the patients undergoing cardiac surgery changed dramatically. This is especially important in case of concomitant coronary artery disease and carotid artery stenosis (CAS). Careful decision making and appropriate surgical strategy in these patients is critical for the success of the operation. Controversy about relationship between staged and concomitant carotid endarterectomy (CEA) and coronary artery bypass grafting (CABG) still exists. In the current study, we present our case load in treating patients with concomitant carotid artery stenosis and coronary artery disease.

Methods:
CABG with additional CEA due to neurologic symptoms or high grade (>80%) CAS has been performed in 905 patients in the period of 1982-2014. Results of evaluation of perioperative mortality and morbidity in regard to the surgical approach have been discussed.

Results:
The average patient age was 62.6 +/- 8.7 years. Echocardiography revealed that 28% of the patients had poor left ventricle ejection fraction (<30%). Coronarography demonstrated that 21.4% of the operated patients had significant left main coronary artery stenosis (>60%). In terms of neurological status, majority of the patients (88.3%) were neurologically asymptomatic. The overall mortality regardless the sequence of procedures was 2.3%. In the group of concomitantly treated patients 44.6% required triple coronary bypass while the mean number of coronary bypasses was 2.6. Postoperative neurologic complications were present in 12.2%. Ninety-one patients (10.0%) have had TIA, while 18 patients have had permanent neurologic deficit while 4 patients died as a result of it.

Conclusion:
It is imperative that every patient being considered for CABG should undergo ultrasonic evaluation of the carotid arteries regardless the neurological symptomatology. Concomitant surgery on patients with severe CAS and coronary disease carries a slightly higher operative risk and, therefore, should be avoided. Concomitant surgical treatment should only be considered in patients with unstable angina and significant CAS in whom we may expect higher morbidity and mortality.

SUPERIOR VENA CAVA SYNDROME, A SERIOUS EPIDEMIOLOGICAL AND SURGICAL PROBLEM IN AFRICA/OUR EXPERIENCE IN SVC RECONSTRUCTION AND CHALLENGES IN COMPLEX VASCULAR ACCESS IN ABOUT 1000 CASES/BOTSWANA CORRECTION

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In the last period apart from March 2020 until August 2024 we started with a previously nonexistent vascular program in the Republic of Botswana, in Sidilega Private Hospital, Gaborone.This programs are also nonexistent in important part of Subsacharian Africa as well, excluding Republic of South Africa, in Sidilega Private Hospital, Gaborone, Botswana. We have done several thousand vascular procedures in this period, with many challenges. Challenges have been the nonexistence of qualified staff for this type of surgery including diagnostic procedures, operative theater staff as well as qualified ICU nurses. Apart of this, we had a huge challenge with screening vascular patients due to a lack of awareness of existence of this diseases in the population and am healthcare professionals of this widespread pathology.

Concerning the status of the patients, at least 60% of them were HIV positive, mostly on HART treatment, with a lot of other comorbidities. Self-evident vascular cases have been the patients for vascular access due to a very developed network of hemodialysis units. Due to the absence of qualified cardiac and vascular surgeons majority of the patients have been dyalised through the tunneled HD catheters, inserted by different health care professionals, not well trained for these procedures with an extremely high rate of complications such as thrombosis and infection and even perforation of the big vessels and heart. Consquent SVC syndrome which is present in at least 80 % of our patients. The severity and diversity of symptoms related to SVC syndromes vary from mild up to very severe with the development of severe cutaneous collateral network, and the development of collaterals through azygos and hemiazygos vein as well sinus coronarius. An interesting collateral network was developed in peri rachidian veins with consequent venous myelopathy.

Some of patients had a problem with respiration due to severe edema of hypopharynx and trachea. All this in concordance with problems related to the previously failed vascular access mostly done in the Republic of South Africa, made us a lot of challenges in the treatment of severe SVC syndromes. On the other side creation of the proper and very often / life salvage vascular access - in highly symptomatic SVC syndromes was challenging. We have done stenting whenever it was doable but with a high rate of rethrombosis of the SVC and its tributaries. Best results in reconstruction of the SVC we had in cases in which we did Hybrid procedure including stenting with additional spiral venous grafts, or solely open surgical reconstructions including spiral or bovine pericardial grafts from iugular, anonymous or subclavian veins down to the right atrium depending on the extension of the venous obstruction.

According to adequate vascular access whenever it was feasible we did proximal or distal AV fistula. For complicated vascular access of great help was the usage of the Flixene graft /PTFE HD graft. We did a great number of complex vascular access configurations likewise axillar or cubital artery to the iugular vein with Flixene grafts (52), Axillar artery to inferior vena cava grafts (9), Femoral to Inferior Vena Cava grafts (1). Axillary artery to Axillary artery grafts (10), Femoral artery to femoral vein grafts -(25).
We did a big number of aneurysmectomies (72) of the previous AV fistula with implantation of the Flixene PTFE graft, which have been either thrombosed or ruptured.

Conclusion:
African continent is in a great demand for qualified cardiovascular surgeons and specific institutions with good equipment and skilled healthcare profesionals. SVC syndrome in patients on chronic hemodialysis

program is just one of the Pan African cardiovascular problems with huge epidemiological and clinical impact.

TIPS AND TRICKS IN VALVULAR SURGERY THROUGH UPPER HEMISTERNOTOMY

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Objective:
The aim of this study was to report on our experience after 7 years of practicing partial upper median sternotomy in surgery of cardiac valves and to present technical tips and tricks when using this approach.

Methods:
The study included all the patients who underwent minimally invasive cardiac valve surgery through the partial upper median sternotomy, during the period from December 2008 to September 2015. We analyzed the data on mean age of patients, type of valve surgery (aortic or mitral) they underwent, postoperative day of extubation, mean extracorporeal circulation time, mean duration of hospital stay (and postoperative hospital stay), as well as on occurrence of postoperative complications (bleeding that required surgical revision or drainage of pericardium, surgical wound infection, CVI, and instability of sternum that required resuture).

Results:
During the observed period, in the Institute for Cardiovascular Diseases of Vojvodina, 96 mini-sternotomies were performed, with 92 aortic valve replacements (95,83%), of which 88 (91,67%) due to aortic valve stenosis, and 4 (4,17%) due to aortic valve insufficiency; and 4 mitral valve replacements (4.17%), of which 1 (1,04%) due to mitral valve stenosis, and 3 (3,12%) due to mitral valve insufficiency. Mean age of the patients was 65.57±10.21 years - 42 (43.75%) were females, and 54 (56.25%) were males. On the day of operation 50 (52.08%) patients were extubated; 41 (42.71%) were extubated on the first postoperative day; 2 (2.08%) were extubated on the second postoperative day; and 1 (1.04%) patient was extubated on the seventh postoperative day (2 patients were not extubated). On the average, time of 0.52 days (12.5 hours) passed from operation to extubating of the patients. Mean extracorporeal circulation time was 93.56±30.36 minutes. Mean duration of hospital stay was 18.68±11.07 days (postoperative hospital stay was 11.86±6.75 days). Postoperative complications included: 2 (2.08%) surgical revisions of bleeding and 2 (2.08%) drainages of pericardium; 2 (2.08%) surgical wound infections; 3 (3.12%) CVI; and 1 (1.04%) resuture of sternum. Conversion to total median sternotomy was performed on 3 (3.12%) patients. Death in perioperative period occurred in 2 (2.1%) cases.

Conclusion:
Partial upper median sternotomy still represents an optimal surgical method for interventions on the cardiac valves (especially aortic valve) and whole ascending aorta, with a few significant advantages compared to the surgical approach of total median sternotomy.

POSSIBILITY OF ENLARGE LANDING ZONE IN HYBRID APPROACH IN TREATMENT OF COMPLEX PATHOLOGY OF AORTA, RESULTS OF 111 CONSECUTIVE OPERATIONS

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Background:
The hybrid approach to the treatment of the pathology of the thoracic aorta allows us to significantly expand the possibilities of the isolated TEVAR.

Methods:
From 2014 to 2024 at the our clinic 253 patient with aortic aneurysms were treated endovascular (TEVAR); 111 (43,8%) patients of them were operated with the hybrid approach, 56 (22,1%) of them received carotid-subclavian anastomosis. The causes of aortic injury were: descending aortic aneurysm without dissection – 12; 38 patients had an aortic dissection (4 – acute, 6 – subacute, 28 – chronic), PAU (n = 2), postcoarctation aortic aneurysm (n = 3), enlargement residual aorta after previous ascending aortic grafting(n = 1). If patients admitted emergency: first TEVAR operation were performed(only two cases). Carotid-subclavian shunt was performed from a 5-6 cm supraclavicular access. The middle thirds of the left carotid and left subclavian arteries were connected with the armed d=6mm PTFE grafts, no need to cross the neck muscles.

Results:
Mortality among 56 operated on patients consist 1.7% (one patient). There were several complications: endoleak type I or II (3 and 1); bleeding (>200 ml) treated surgically (n-1), treated conservative (n-2): thrombosis of the anastomosis and reoperation (n-1), dissection of the LSA (n-2), trauma of the n.laryngeal recurrent (n-1), stroke (1). No one case of SCI. In the remote period, one patient died after 3 months from an unknown reason.

Conclusion:
Carotid-subclavian bypass for revascularization of the subclavian artery performed in the setting of TEVAR is durable, safe method for expand endograft landing zone to Ishimaru II.

RESULTS OF TOTAL AORTIC ARCH REPLACEMENT IN PATIENTS WITH COMPLEX AORTIC PATHOLOGY

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Background:
Ongoing development of cardiovascular technologies has made it possible to carry out simultaneous replacement of the ascending, arch and descending thoracic aorta (elephant trunk operation), constantly improving the results and reducing the number of complications during such difficult surgery.

Methods:
From 2020 to 2024, 50 patient with thoracic aortic pathologies were operated by elephant trunk operation (ET) in our clinic. Half of them received one stage, FET operation, other – two stage approach – conventional elephant trunk – first, TEVAR – second. Patients age were 32 – 74 y.o, mean – 52,4; 37 (72,0%) patients are male. Concomitant CAD - 12 (24,0%), COPD – 16 (32,0%), CRF – 10 (20,0%), DM - 10 (20,0%), pulmonary hypertension – 6 (12,0%), severe mitral insufficiency – 4 (8,0%). Part of the patients, 22 (44,0%), had cardiac operation previously. The causes of aortic disease were: TAAD – 2 (4,0%); chronic TAAD – 24 (48,0%), non A non B AD – 7 (14,0%), chronic TBAD – 7 (14,0%); BAI – 4 (8,0%), TAAA – 6 (12.0%). Simultaneously of the ET procedure, we performed Yacoub operation – 3, CABG – 12, mitral valve repair – 5, tricuspidal valve plication – 5. All operation we performed with 25ºC hypothermia and ACP for all three cerebral vessels. For FET operation we used E-Vita Hybrid stentgraft. For the 25 CET, TEVAR step we performed in 16 patients.

Results:
Hospital mortality consist 11,5% (8 pts). The reasons of death were multiorgan failure (3), progressive heart failure (2), stroke (1), uncontrolled bleeding (1) and severe pulmonary insufficiency (1). Three patients had neurological complication – permanent paraplegia (2) and transient stroke. Renal failure needed temporary dialysis – 8. Bleeding, needed re-thoracotomy – 2. Prolonged ventilation (more 2 p o days) – 8 pts.

Conclusion:
Elephant trunk operation allowed optimal kind for treatment of complex patients with extensive thoracic aortic diseases with satisfactory short- and mid-term results. Acute and chronic TAAD and TBAD, non-A non-B type of aortic dissections represent interesting subsets for ET procedure.

MYOCARDIAL REVASCULARIZATION ON VS OFF-PUMP (COMPARATIVE CLINICAL AND IMAGING STUDY) – STAGE STUDY

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Coronary artery bypass grafting (CABG) represents one of the most frequently practiced interventions in cardiovascular surgery, a procedure that has remained preferred in patients with complex coronary disease in the current era of increased use of percutaneous treatment (1,2). During the last 30 years, CABG was mainly performed with the use of cardiopulmonary bypass (ONPCAB), the interest in surgery without the use of cardiopulmonary bypass (OPCAB) was start in the mid-90s, with the aim of reducing the incidence complications associated with extracorporeal circulation (ECC) and aortic manipulation (1,3). Each of these techniques has advantages and disadvantages of course. Thus, the question of which strategy is safer and more effective is topical (4).

There are a multitude of randomized trials comparing the short – and medium – term prognosis of patients treated by these 2 techniques, but their results are controversial, and furthermore, there is limited information on long-term graft patency (5).

The role of this study is to compare the long-term results in patients treated by both surgical techniques. In particular, it is desired to study the long-term patency of the grafts used, compare the patency of grafts harvested skeletonized vs. pedicled and anastomosed sequentially vs. individually by using CT coronary angiography.

The current study included patients undergoing aorto-coronary bypass surgery in the Cardiovascular Surgery Clinic of the Heart Institute, Cluj-Napoca from 2011-2012, establishing an end point >10 years after surgery. They were evaluated by CT coronary angiography, the evaluation of the systolic-diastolic function of the left ventricle was performed using echocardiographic techniques.

In the study we analyzed a series of variables: the type of intervention; the type of grafts used; pedicled/skeletonized IMA graft harvesting technique; individual/sequential anastomoses; complete/incomplete revascularization; the permeability of the grafts at the study time; left ventricular ejection fraction at admission, immediate and remote postoperative; associated valvulopathies during hospitalization and their evolution over time; the dimensions of the ventricles at admission and their remodeling over time; disorders of parietal kinetics at admission, immediate and remote postoperative; reinterventions in time after the first revascularization: PCI and CABG; postoperative quality of life at study time, assessed by the SF-36 form.

The study is ongoing, with 35 patients enrolled, out of a total of approx. 100 proposed.

References:
1. Joanna Chikwe, MD, Timothy Lee, MD, Shinobu Itagaki, MD, et al. Long-Term Outcomes After Off-Pump Versus On-Pump Coronary Artery Bypass Grafting by Experienced Surgeons. JACC VOL. 72, NO. 13, 2018.
2. Raja SG. Off-pump versus on-pump coronary artery bypass grafting: comparative effectiveness. Comparative Effectiveness Research 2015:5 73–79.
3. A. Laurie Shroyer, Ph.D., Frederick L. Grover, M.D., et al. On-Pump versus Off-Pump Coronary-Artery Bypass Surgery. NENGLJMED 361;19, NEJM.ORG, November 5, 2009.
4. Busheng Zhang, PhD, Jingxin Zhou, PhD, Haiqing Li, PhD, et al. Comparison of Graft Patency Between Off-Pump and On-Pump Coronary Artery Bypass Grafting: An Updated Meta-Analysis. Ann Thorac Surg 2014;97:1335–42.

5. Limeng Yang, Shen Lin, Heng Zhang, et al. Long-Term Graft Patency After Off-Pump and On-Pump Coronary Artery Bypass: A CORONARY Trial Cohort. Ann Thorac Surg. 2020 Dec; 110(6):2055-2061.

PATIENT-CENTERED CARE – INFORMED CONSENT & SHARED DECISION-MAKING

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Physicians are entrusted with the responsibility to provide accurate and sensitive information tailored to each patient's preferences when delivering medical information. This includes:

1. Clearly communicating the diagnosis (when known).
2. Explaining the nature and purpose of recommended interventions.
3. Discussing the burdens, risks, and expected benefits of all available options, including the option of forgoing treatment.

Informed consent for surgery is a crucial aspect of surgical practice, encompassing specific legal requirements for disclosure to patients and documentation. It's important to recognize that surgical consent is not merely a signature on a form; it's an ongoing process of communication throughout the preoperative, perioperative, and postoperative phases of care.
Within the framework of patient-centered medicine, consent is best achieved through shared decision-making between clinicians and patients or their surrogates. This approach involves:

1. Providing balanced, evidence-based information on all options, potentially utilizing decision aids.
2. Discussing the benefits and risks of each option in understandable language.
3. Understanding and respecting patient values and preferred roles in decision-making.
4. Arriving at a treatment decision collaboratively.

Ethically, informed consent reflects an individual's autonomous authorization of a medical intervention. It's also a formal process mandated by institutions and a legal safeguard aimed at reducing physician liability. However, at its core, informed consent involves a conversation between physician and patient about treatment options, risks, and benefits.

Enhancing patient choice is central to medical ethics and law. Informed consent promotes patient autonomy, while shared decision-making fosters a collaborative, patient-centered approach. This process ensures a balanced and individualized consideration of the risks and benefits of each available alternative.

While physicians may offer guidance, the ultimate decisions should come from the patient, who bears the consequences. Shared decision-making moves beyond passive informed consent, allowing patients to express their values and goals in the context of healthcare decisions.

Incorporating shared decision-making tools into the consent process facilitates informed choice by providing objective information about treatment options and engaging patients in decision-making. This collaborative approach is particularly valuable when treatment options are not clear-cut or when patient preferences significantly influence decision-making.

Successful implementation of shared decision-making requires physicians to recognize and respect patients' preferences for involvement in treatment decisions. Patients play a crucial role in determining the treatment option that aligns best with their individual circumstances, goals, and values.

Ultimately, the competent adult patient retains final decisional authority over their healthcare, with decisions delegated to family or surrogates when necessary. The physician's role is to recommend a course of action, prioritizing patient autonomy and ensuring informed decision-making throughout the healthcare journey.

NAVIGATING TREATMENT SELECTION FOR PATIENTS WITH SEVERE AORTIC STENOSIS – A CASE-BASED DISCUSSION

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Introduction:
Symptomatic severe aortic stenosis (AS) is life-threatening and requires immediate intervention. Technological advancements in SAVR and TAVR present nowdays a dilemma for optimal treatment even in younger patients.

Clinical Case Presentation:
A 65-year-old patient with high flow, high gradient, symptomatic severe bicuspid AS was reffered to our Hospital. Following a multidisciplinary decision, the patient underwent SAVR with the implantation of an ATS Open Pivot Bileaflet Valve No. 23. The surgery was uneventful, performed through a conventional sternotomy approach. The patient was extubated early, and discharged home on the 5th day in sinus rhythm, and in good clinical condition.

Discussion:
Although SAVR remains the gold standard of care, TAVR is increasingly used in youngers. Given the highly unfavorable outcomes in bicuspid pathology, TAVR was not option. The dilemma between bio and mechanical prostheses in this age category is still ongoing. However, given this patient's low risk of bleeding, suitability for warfarin therapy compliance, and a life expectancy of at least 14.5 years by North Macedonian life scales, we jointly decided on a mechanical valve. We decided on conventional sternotomy based on local practices and the lack of clear benefits in trials of a minimally invasive approach. The patient was discharged in good condition but requires education for warfarin treatment using self-monitoring and secondary prevention medication to yield the most benefit from the intervention.

Singularity of the Case:
The choice between SAVR and TAVR involves long-term outcomes, durability, and quality of life, on case-by-case basis with no one-size-fits-all solution.

REHABILITATION IN PATIENTS WITH CORONARY REVASCULARISATION

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Rehabilitation in patients with coronary revascularization, such as after coronary artery bypass grafting (CABG) or percutaneous coronary intervention (PCI), is a major component of recovery aimed to restore functional capacity, prevent future cardiac events, and improve overall quality of life. These procedures, while effective at restoring normal heart function, do not address the underlying risk factors of coronary artery disease. Therefore, a structured rehabilitation program is essential.

Cardiac rehabilitation for these patients typically begins in the hospital shortly after the procedure, known as Phase I, focusing on early mobilization and education about lifestyle changes. This early intervention aims to reduce complications such as muscle atrophy, deep vein thrombosis, and to initiate the recovery process smoothly. Breathing exercises, gentle movements, and wound care management are emphasized, especially for those recovering from CABG, where sternum stability is crucial.

Phase II occurs on an outpatient basis and involves monitored, individualized exercise programs designed to improve cardiovascular endurance, strength and flexibility. Resistance training for the upper body is cautiously introduced after sternal wound healing, while lower-body exercises may begin earlier. Alongside physical training, patients receive guidance on modifying lifestyle habits, including diet and smoking cessation, and managing risk factors such as hypertension and diabetes.

Phase III focuses on long-term management and is often conducted at home. Patients are encouraged to maintain physical activity independently while continuing regular medical follow-ups. Ongoing support, education, and motivation are essential to ensure adherence and prevent recurrence.
Overall, rehabilitation post-coronary revascularization significantly improves physical and psychological outcomes, reduces hospital readmissions and contributes to long-term cardiovascular health.

CORONARY ARTERY DISEASE AND JOB STRAIN

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Introduction:
High job strain is worsening the outcome of coronary artery disease (CAD). Stress mediators are released when at workplace are high demands. Imbalance between efforts and rewards is another part of job strain. The study included 210 patients, divided in two groups: group 1 with CAD and group 2 with cardiovascular risk factors like diabetes melitus, arterial hypertension, smokig, obesity. CAD was defined as angina pectoris, myocardial infarction, silent myocardial ischemia.

Materials and Methods:
Clinical examination, electrocardiogram, transthoracic echocardiography, laboratory findings (lipid profile, glycemia, high sensitivity CRP, microalbuminuria); type D scale, DS 14; depression questionnaire, PHQ-9; satisfaction with work scale, SWWS.

Results:
The highest values for endothelial dysfunction biomarkers were noticed in the patients with the lowest score SWWS for job satisfaction. The most vulnerable patients, with severe CAD, high scores for depression PHQ-9 and low scores for SWWS were females.

Conclusion:
Job strain has a great impact towards CAD patients and also in patients without CAD, but with major cardiovascular risk factors. Active interventions are necessary for reducing cardiovascular mortality and for increasing life quality of our patients. These interventions are represented by medication, interventional and surgical procedure, psychothrapy.

CARDIAC REHABILITATION IN PATIENTS WITH TAVI VERSUS SAVR – A COMPARATIVE ANALYSIS

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Introduction:
Over the last decade, transcatheter aortic valve implantation (TAVI) has emerged as a first-line treatment option for patients with severe aortic stenosis who are at high surgical risk, frail, providing an effective alternative to traditional surgical aortic valve replacement (SAVR). This study aimed to evaluate the efficacy and safety of cardiac rehabilitation in TAVI patients compared to those undergoing SAVR.

Materials and Methods:
Between January 2022 and April 2024, 68 TAVI patients and 100 SAVR patients were enrolled in a phase IIa cardiac rehabilitation program. Both at the initial and final assessment, patients underwent a 6-minute walk test (6MWT) and the Barthel index evaluation. Patients followed a personalized moderate intensity exercise program, with a frequency of 5-6 sessions per week.

Results:
In the TAVI group, women predominated (52.9% vs. 40%), and patients were older (75.01 ± 6.28 vs. 64.93 ± 9.49 years) and had a higher mortality risk (EuroSCORE II 4.87±3.26). They covered shorter distances in the 6MWT compared to SAVR patients (159 ± 76 vs. 201 ± 52 and 221 ± 75 vs. 311 ± 88) at both the admission and discharge of the program. Additionally, TAVI patients showed a 1.5-point reduction in the Barthel index.

Conclusion:
Cardiac rehabilitation in both TAVI and SAVR patients is safe, well-tolerated, and offers benefits in reducing disability, decreasing the risk of falls, and improving exercise capacity.

APPROACHES TO EXTENSIVE AORTIC ANEURYSMS INCLUDING THE AORTIC ARCH – 101 CASES OF LEFT THORACOTOMY TOTAL ARCH REPLACEMENT OVER 10 YEARS

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Introduction:
Aortic arch replacement via left thoracotomy is a unique procedure standardized at the Kawasaki Aortic Center, Japan. This approach is particularly beneficial for complex cases where median sternotomy is challenging, such as after coronary artery bypass grafting (CABG) or previous surgeries involving omentum flap transplants. While other hospitals may perform this surgery infrequently, our center has achieved significant results by standardizing it.

Purpose:
This study evaluates the efficacy and outcomes of left thoracotomy total arch replacement (TAR) in patients with complex aortic arch aneurysms. The procedure is considered when traditional approaches are anatomically impossible or pose significant risks due to rapid aneurysm enlargement.

Methods:
From January 2015 to April 2024, 101 cases of left thoracotomy TAR were performed at the Kawasaki Aortic Center. The study analyzed patient demographics, surgical techniques, and outcomes. The procedure involves a right lateral decubitus position, cardiopulmonary bypass via femoral vessels, and brain protection through retrograde and antegrade cerebral perfusion. The average patient age was 63.7 years, with a median age of 65.5 years. The majority of cases were non-elective, including rapidly expanding aneurysms and infectious or ruptured aneurysms.

Results:
The average surgery time was 428 minutes, with a cardiopulmonary bypass time of 254 minutes. The thirty-day mortality rate was zero, and the in-hospital mortality rate was two percent. There were three cases of stroke and two instances of incomplete paraplegia. Left vocal cord paralysis was noted in 31 patients. The one-year survival rate was 91.8%, with a three-year survival rate of 83.8%.

Conclusion:
Left thoracotomy TAR is an effective approach for complex aortic arch cases where median sternotomy is difficult. The procedure demonstrates promising short-term outcomes, though further observation is needed to assess long-term prognosis.

THE ROLE OF ARTIFICIAL INTELLIGENCE (AI) IN MITRAL AND TRICUSPID VALVE ASSESSMENT

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We present our experience on the role of artificial intelligence (AI) in the echocardiographic assessment of mitral and tricuspid valves. Its most essential importance is mainly in 4 aspects:
1. Obtaining the images;
2. Finding the best possible valve assessment position on echocardiography;
3. Ability to Segmentify the valve images;
4. More correct identification of the disease.

In evaluating mitral valve pathology, AI has a specific role in determining the type of mitral regurgitation – primary or secondary. Parameters obtained using AI in echocardiographic evaluation of mitral and tricuspid valves are expected to be important for the decision-making in surgical or interventional procedures.

SURGICAL TREATMENT OF INFECTIVE ENDOCARDITIS

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Purpose:
Despite optimal medical and surgical treatment, mortality in infective endocarditis (IE) remains high. Aim of this study was to emphasize some news in recent guidelines of endocarditis and to evaluate predictors of in-hospital all-cause mortality in patients with IE in our surgical center.

Methods:
Sixty one consecutive patients underwent surgery for active infective endocarditis in our center between January 2017 and April 2024. Modified Duke Criteria was used to include the patients in the study.

Results:
Mean age of the patients was 55.62 years (SD ±12.5 years); 70% were men. The most common indications for surgery were congestive heart failure (52%), uncontrolled infection 30%, embolic phenomenon (13%) and septic shock (6,5%). Endocarditis was left-sided in 59 (97%). Thirty one patients (51 %) were culture positive, and the most frequent pathogenic agent was staphylococcus aureus and epidermidis (22.5%). 52 patients (85.2%) had IE on native valves and 9 (14.8%) on prosthetic valves. 21 (34.4%) patients underwent surgery in urgent situation. 19.7% were redo surgery. Ten out of 61 patients died during hospital course that accounts for 16% of the mortality rate. At univariable analysis, mortality was associated with presence of vegetations, double valve infection, paravalvular extension, prosthetic valve infection and especially, urgent status ($p<0.01$).

Conclusion:
The short term results of our study showed relatively high in-hospital mortality rates, the high frequency of staphylococcal IE, and high mortality in urgent surgery.

EVOLUTION OF THE SURGICAL APPROACH IN AORTIC VALVE SURGERY FROM FULL STERNOTOMY TO TOTALLY ENDOSCOPIC

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Introduction:
From the first aortic valve replacement through a right thoracotomy reported in 1996, upper hemi sternotomy (MS) and right anterior thoracotomy (MT) have become the predominant approaches for minimally invasive aortic valve replacement (MIAVR). Clinical studies have already documented equivalent operative mortality, with less bleeding and reduced intensive care and hospital stays, compared to full sternotomy despite initial longer procedure time. We present to you the evolution in number, type and prevalence of the surgical approaches in aortic valve surgery in over 10 years' experience, correlated with procedure times (bypass and cross clamping times).

Materials and Methods:
One center experience in over 10 years of aortic valve surgery. 778 cases were studied between 2012 and 2024.

Results:
213 patients underwent aortic valve procedures through full sternotomy (27%), 203 (26%) patients with MS and 362 (47%) patients with MT. Since the first patient with MT in 2015, this approach became rapidly the most used one, with more than 50% of the procedures between 2016 and 2024. CPB times are comparable in all three methods, with minimal reduced times for MS and MT compared to sternotomy, but with minimal longer cross-clamping times for MS and MT compared to sternotomy.

Conclusion:
MIAVR is currently predominant procedure with more than 70% of the cases, it is safe and effective, without longer CPB times and no significant longer cross-clamping times.

EXTENDED MYECTOMY FOR ANOMALOUS APICAL BASAL BUNDLES IN HOCM

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We focus on the surgical treatment of hypertrophic cardiomyopathy (HCM), extended myectomy through a trans-apical approach. We discuss our myectomy techniques, highlighting the importance of adequate myectomy to avoid residual systolic anterior motion (SAM). We address the challenges associated with anomalous papillary muscles and their impact on the left ventricular outflow tract. The importance of modifying anomalous papillary muscle insertion to realign the axis of the heart and improve the direction of blood flow is emphasised. In addition, the benefits of combined approaches for mid-apical ventricular hypertrophy are discussed. The role of preoperative simulation in improving the surgical technique is also discussed. The trans-apical approach is presented as a safe and effective method, particularly for the treatment of mid-apical ventricular obstruction, with favourable short- and midterm results reported.

PATIENT BLOOD MANAGEMENT IN CARDIAC SURGERY

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[1] *"Prof. Dr. George I. M. Georgescu" Institute of Cardiovascular Diseases, Iași, Romania*

Introduction:
Patient Blood Management (PBM) has emerged as a critical strategy in reducing the need for allogeneic blood transfusions and optimizing patient outcomes in cardiac surgery.

Methods:
This narrative review examines the key principles, evidence, and practices surrounding PBM in the context of cardiac surgery, and analyses the studies and guidelines published between 2000 and 2024.

Results:
PBM is based on three pillars: (1) optimizing red blood cell mass, (2) minimizing blood loss, and (3) enhancing patient tolerance to anemia. Preoperative anemia management, intraoperative blood conservation techniques, and postoperative blood monitoring are essential elements in this strategy. Several approaches, including preoperative iron and erythropoietin therapy, use of antifibrinolytics, cell salvage systems, and restrictive transfusion triggers, have demonstrated efficacy in improving outcomes.

Conclusion:
In conclusion, adopting a comprehensive PBM program in cardiac surgery can significantly reduce transfusion needs, improve surgical outcomes, and promote more effective use of blood resources. Future research should focus on refining protocols and expanding PBM strategies to enhance patient care in cardiac surgery.

REMODELING PATTERNS AND EVOLUTION OF TRANSVALVULAR GRADIENTS IN AORTIC STENOSIS PATIENTS: A COMPARISON BETWEEN TAVI AND SAVR WITH BIOLOGICAL PROSTHESES

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Aim:
Aortic stenosis (AS) is the most prevalent heart valve disease in the Western world and is associated with a poor prognosis after the onset of symptoms. Its prevalence is rising rapidly as a consequence of the aging population. Restoring the aortic valve function by treatment with either SAVR or TAVR aims to increase the aortic valve area, lower aortic valve gradients, reverse left ventricular hypertrophy, and reduce mortality. Our objective was to delve into the intricacies of LV mass alterations post-TAVI and SAVR, examining the factors impacting these shifts. To our knowledge, this study represents the inaugural endeavor of its kind documented in Romania.

Methods:
Conducted retrospectively, this study examined 315 patients treated from December 2014 to December 2022, dividing them into surgical and transcatheter treatment cohorts. Baseline and six-month follow-up clinical and echocardiographic data were gathered. Statistical analysis evaluated group disparities and factors predicting reduction in LV mass.

Results:
TAVI was associated with a faster recovery with a shorter ICU stay and a lower need of inotrope medication, but also with a higher rate of permanent pacing and a reduced LV mass regression and remodeling. The reduction in atrial volume was more pronounced in the TAVI group compared to the SAVR group. The reduction in both maximal and mean gradients and LV mass index following SAVR surpassed those observed after TAVI. Preoperative LVMi and mean pressure gradient positively correlated with LVM reduction, while TAVI negatively impacted it.

Conclusion:
Both TAVI and SAVR procedures offer advantages in decreasing left ventricular mass, albeit with SAVR demonstrating superior efficacy. Identifying predictors of LV mass reduction is pivotal for enhancing treatment approaches, underscoring the importance of considering early valve replacement to prevent irreversible LV hypertrophy.

TOTAL ARTERIAL REVASCULARISATION VERSUS CONVENTIONAL REVASCULARISATION IN LOW EF PATIENTS

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Introduction:
Coronary Artery Disease (CAD)-induced left ventricular dysfunction affects nearly 50 million people globally. Both the ACC/AHA and ESC define heart failure with reduced ejection fraction (HFrEF) as an ejection fraction (EF) ≤40%. However, patients with severely reduced EF are often excluded from clinical trials, leaving the optimal revascularization strategy unclear.

Methods:
This retrospective study analyzed patients who underwent CABG for multivessel CAD and LV dysfunction (EF <40%) at a single center between 2000 and August 2024. Patients were divided into two groups: Total Arterial Revascularization (TAR) or Conventional Revascularization (CR). Left ventricular function was assessed using echocardiography at admission, before discharge, and annually for up to five years. Survival data were collected over 24 years.

Results:
Among 436 patients, 41% underwent TAR and 59% received CR. TAR was associated with shorter ICU and hospital stays, likely due to better hemodynamic stability and fewer postoperative complications, including a lower incidence of wound infections from the absence of venous graft harvesting. Sustained EF in the TAR group indicated long-term advantages of arterial grafts. TAR also showed superior long-term survival, particularly in younger patients and those with severely reduced EF. Despite similar perioperative mortality and early complications between groups, TAR demonstrated better outcomes in maintaining heart function and survival over five years.

Conclusion:
This study, with the largest cohort and longest follow-up, provides critical insights into the superior long-term outcomes of TAR compared to CR in patients with multivessel CAD and low EF.

COMPLEX COMBAT TRAUMA OF CARDIOVASCULAR SYSTEM: DETAILS OF PREOPERATIVE EVALUATION AND SURGICAL MANAGEMENT

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Background / Study Objective:
Combat trauma during full-scale war:
• number of combat injuries among military servicemen and civilians is increased dramatically
• medical system of the country-victim of aggression is significantly damaged
• every hospital with preserved personnel and infrastructure takes part in the management of the wounded patients
Aim of this study is to analyze the experience of tertiary Cardiac Surgery Center in preoperative assessment and surgical management of combat injuries of cardiovascular system.

Patients:
We prospectively collected and retrospectively analyzed medical notes of all consective patients with combat trauma treated at our Insitution in the period between March 2014 and December 2023.

Total number of hospitalised patients	91
Military servicemen	85 (Male 85)
Civilians	6 (Male 4, Female 2)
Total number of patients operated on for Combat Injuries	52

Methods:
1. Precise three-dimensional localization (3DL) of shell fragments with the combination of preoperative CT and intraoperative fluoroscopy.
2. Off-pump method to remove shell fragments from the heart.
3. Off-pump extraction of migrating shell fragments and bullets from great vessels using Neodymium Magnets.
4. Multidisciplinary approach in management of combined combat trauma.

Results:
3DL was used in 35 (67%) cases
Types of operations (N=52):
1. Extraction of shell fragments from the heart – 14
Off-pump – 10 (71%)
2. Extraction of shell fragments from great vessels – 6
Off-pump – 5 (83%)
Feasibility of magnets – 6 (100 %)
3. Complex combined trauma – 14
Heart, lungs and musculoskeletal system – 9
Heart, lungs and abdomen – 5
4. Others – 18
Types of traumatic agents:
Shards – 43
Bullets – 9
In-hospital Mortality – 2 (4%)

Conclusion:
1. Combat trauma of the Heart, Vessels, and Thorax can be successfully managed in Cardiac Surgery Center.
2. 3DL method is essential for correct intraoperative localization of the shards and bullets.
3. The Neodymium Magnets is a useful tool for the localization and extraction of the shards from the heart, vessels and wounded tissues.
4. The off-pump methods to remove the shards from the heart and great vessels is feasibile and effective. In urgent cases or in non-transportable patients, these methods may be used in medical facilities not equipped with a heart-lung machine.
5. Aggressive prophylaxis of septic complications is mandatory of all stages of management in patients with combat trauma.

HEART TRANSPLANTATION DURING THE WAR – BREAKING BARRIERS AND EXPLORING NEW FRONTIERS

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Introduction:
Heart transplantation remains the gold standard for the treatment of end-stage heart failure. However, a persistent problem exists due to a shortage of donor organs, stemming from a disparity between the increasing number of recipients and the limited pool of effective donors. From a legitimacy standpoint, heart transplantation began operating fully in Ukraine from 2019. In 2022 Russia's horrific war against Ukraine has upended the entire transplant service system in the country. The critical shortage of donor organs and the inability to deliver them safely and promptly due to checkpoints on the roads and closed airspace have compelled us to change logistical approaches to transplant organization.

Materials and Methods:
We analyzed the outcomes of patients who underwent orthotopic heart transplantation during the period of martial law from February 2022 to April 2024. All donor hearts were obtained from donors with brain death. The primary endpoints were hospital and 1-year survival, while secondary endpoints included donor heart ischemia time, duration of cardiopulmonary bypass (CPB), lung ventilation time, ICU length of stay, and the presence of early and midterm postoperative complications. To facilitate heart transplantations, we employed a strategy where the surgical team, all necessary equipment, and the recipient were transported toward the donor. We called it the TERtoD (TeamEquipmentRecipientToDonor) concept. The following day after transplantation, the team, equipment, and donor returned to the base hospital (our institute) for further treatment.

Results:
During the period of martial law, 71 orthotopic heart transplantations were performed. The average donor heart ischemic time was ±92 (63.00-158.00) minutes, CPB time was ±107 (95.00-124.00) minutes, and lung ventilation time was ±14 (5.75-22.35) hours and ICU length of stay ± 5 (4.50-11.00) days. Hospital survival was 85%, while 1-year survival was 81%. The most common postoperative complication was primary graft dysfunction, while infectious complications predominated in the long term period. Marginal donor hearts were utilized, with normothermic perfusion preconditioning employed in 4 cases, coronary artery stenting in 2 cases, coronary artery bypass grafting in 3 cases, and mitral valve ring annuloplasty during the "back-table" phase in 2 cases.

Conclusion:
The results of our study demonstrated the feasibility of successful heart transplantations during wartime. We believe that careful recipient selection, evaluation of donor organs, assessing the risks and benefits of transplants are essential for achieving the best outcomes. The use marginal donor hearts can be successful in cases of timely and effective correction.
We hope that our experience of working as a transplant team during wartime will never be needed somewhere else.

CARDIAC COHERENCE AND CARDIOVASCULAR HEALTH

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"The state through which you can realize kinship with everything what exists and you can understand how it relates to the divine anything signifies the realization of humanity." – Rabindranath Tagore
This state, which Rabindranath Tagore speaks of, is a state of grace which can be accessed by the human being through the awareness that through its very nature one is part of the Universe and Universal Genesis.

Universe in itself, but on a micro-scale, man, this bio-psycho-social entity, reflects in himself the macro-universe and is subjec to the same universal cosmic laws; if these laws are violated, the psycho-physiological balance is interrupted, which generates disturbances at all levels. In this context, a holistic interpretation is necessary, because we are more than our body, more than our soul and spirit and these three aspects together make more than their sum.

Interpreted in the light of the laws of cybernetics and resonance, health is a state of consonance and dynamic balance that ensures good functioning at all levels of our entire being.
Homeostasis is maintained by the proper functioning of the entire physical- psycho-emotional system. In this extensive process, the heart and brain play a major role, the consonance of their good functioning influencing the whole.
Cardiac coherence (a term coined by a team of researchers from California Heartmath Institute) depends on heart rate (influenced by internal and external environmental factors, emotions and feelings), autonomic nervous system and respiratory rate. The regulation of this rhythm also depends on complex circuits in several cortical and limbic regions of the brain; the synchronization of the sympathetic and parasympathetic systems generates a physiological phenomenon of balance.

As research by researchers at the Heartmath Institute and the University of Arizona demonstrates, the heart sends signals to the brain and the entire body, influencing the functioning of the whole.
It has been demonstrated that the energetic information of the heart field (this field which is five thousand times stronger than the brain field and extends more than three meters around the physical body – this field measured with magnetometers), is detected not only by the brain of the respective person, but also by the surrounding people.

Cardiac coherence can be achieved by controlling our mind, our reactions to various situations, by maintaining a positive state and controlling our breathing.
Applied daily, cardiac coherence can have a beneficial effect on our health and life.

Keywords: cardiac coherence, holistic interpretation, state of consonance.

THE IMPACT OF PREVIOUS CORONARY INTERVENTION ON CABG OUTCOMES

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The aim is to critically evaluate the outcomes of CABG in patients with pre-existing stents compared to those who undergo primary surgery without prior stenting. This will highlight the implications of initial PCI on subsequent surgical interventions and the necessity for a more collaborative approach between cardiologists and cardiac surgeons to optimize patient care.

With the pervasive implementation of Percutaneous Coronary Intervention (PCI) in managing coronary artery disease, both in appropriate and questionable scenarios, cardiac surgeons are increasingly encountering a subset of patients requiring Coronary Artery Bypass Grafting (CABG) who have previously undergone stent placement. Interventionist cardiologists, often the initial medical professionals diagnosing coronary artery disease, tend to autonomously determine the treatment pathway without engaging cardiac surgeons in the decision-making process.

This practice is particularly prevalent in urgent scenarios where angiography is performed during acute myocardial infarction, followed by an attempt at angioplasty, thereby potentially limiting future treatment options for the patient.

CARDIAC REHABILITATION IN PATIENTS WITH DEVICES

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Little information and no guidelines are currently available regarding the cardiovascular rehabilitation (CR) of patients with cardiac devices. The latest CR expert consensus suggests that cardiac device recipients could benefit from a multifaceted exercise-based CR program, similar to that implemented in heart failure patients.

Cardiac device recipients must be thoroughly investigated prior to inclusion in a CR program, including a symptom-limited cardiopulmonary stress test screening for device malfunction (oversensing of myopotentials or loss of resynchronization) during exercise. Fear of device intervention in ICD patients is associated with a higher risk of depression and sedentary behavior.

In cardiac device recipients, exercise prescription should be based on measured (not estimated) maximal heart rate (HR), maximal oxygen uptake (VO2) or rating of perceived exertion (RPE). RPE may be preferred for exercise intensity monitoring as chronotropic response can be impaired in CRT recipients. Upper extremity exercises should be avoided in the first 4-6 weeks following device implantation. All exercise sessions should include 5-15 minutes of warm up and cool. Training duration should be slowly increased, targeting 20-40 minutes of low-to-moderate intensity aerobic training, 3-5 times/week. CR is associated with increased VO2 max and improved general and mental health in patients with cardiovascular devices.

Despite scarce data, CR seems to be feasible, safe and beneficial in patients with left ventricular assist devices (LVAD). Current recommendations emphasize on the importance of early mobilization, individualized assessment and prescription and thorough risk stratification. Low-to-moderate aerobic training improves peak VO2, muscular strength and QoL in LVAD recipients.

E-POSTERS

A 23-YEAR JOURNEY TO MASTERING ON-PUMP CORONARY ARTERY BYPASS

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Aim:
Despite the increasing severity of patients' risk profiles, advancements in surgical techniques and refined patient selection have contributed to improving post-CABG outcomes, with a significant decrease in mortality and morbidity rates. Our objective was to showcase the evolution over a period of 23 years at our center by assessing both the short-term and long-term outcomes, as well as the changes and adaptations in surgical management in accordance with the guidelines issued during this time frame.

Methods:
This study reflects the 23 year-long experience of a single center serving a population of over 5 million, employing a retrospective design that encompasses all patients who underwent at least one CABG, including those who had an additional auxiliary procedure, whether emergent or elective.

Results:
Between 2000 and 2023, at the Institute of Cardiovascular Diseases in Iași, over 3000 myocardial revascularization interventions were performed through CABG, with the majority being on-pump procedures. Most patients referred to our clinic had tri-coronary disease (70%), while 25% had double-vessel lesions, and 5% presented lesions in a single coronary artery. The majority were revascularized either through triple bypass surgery (39%) or quadruple bypass surgery (27%). The proportion of total arterial revascularization reached over 70% in recent years. Regarding mammary artery configuration, 69% remained in situ, while 31% were anastomosed in a Y or T shape. Over 1100 procedures were performed using the radial artery, representing approximately 37% of total revascularizations. The postoperative mortality rate was 0.8%, with a cardiovascular-related mortality rate of 0.5%. The 5-year postoperative survival rate was 95% for patients undergoing total arterial revascularization and 90% for those with mixed revascularization.

Conclusion:
Advancements in CABG techniques over 23 years at our center significantly reduced mortality and morbidity rates, showcasing successful long-term outcomes and adherence to evolving surgical guidelines.

THE IMPACT OF ABDOMINAL ORGAN TRANSPLANTATION ON CARDIAC SURGERY

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Introduction:
Patients undergoing abdominal organ transplants exhibit a higher prevalence of cardiovascular risk factors compared to the general population. This meta-analysis aims to evaluate the risks associated with open-heart surgery in patients with a history of abdominal organ transplantation.

Methods:
The study design is meta-analysis. We have searched three electronic databases – PubMed, EMBASE, and SCOPUS for the following terms: "cardiac surgery", "heart surgery", "solid organ transplantation", "liver transplantation", "kidney transplantation", and "pancreas transplantation".

Results:
This meta-analysis included five studies. The average time between transplantation and subsequent cardiac surgery was 7.96±7.04 years. Transplant patients were generally younger and had higher rates of hypertension and congestive heart failure. In contrast, non-transplant patients showed greater prevalence of prior myocardial infarction and smoking. The incidence of infectious complications, including wound infections and sepsis, was significantly higher among transplant patients. Although there were no significant differences in 30-day mortality rates, long-term mortality at 5 years and 10 years was significantly elevated in the transplant group.

Conclusion:
The findings underscore the need for a solid evidence base to inform management strategies in transplant patients requiring cardiac surgery. Given the risks of major complications, we suggest exploring alternatives to conventional surgical approaches, such as minimally invasive or percutaneous interventions, to optimize patient outcomes.

THE ROLE OF PROPHYLACTIC TRICUSPID ANNULOPLASTY IN HEART TRANSPLANTATION

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Introduction: Tricuspid regurgitation (TR) is a common complication in heart transplant recipients. This study evaluates the effect of prophylactic tricuspid annuloplasty (TA) on donor hearts during orthotopic heart transplantation (HTX-A) and compares the clinical outcomes with standard HTX.

Materials and Methods:
We systematically searched PubMed, EMBASE, and SCOPUS for relevant studies. Key outcomes included rates of postprocedural TR (measured immediately, at one week, six months, and one year), postoperative complications (permanent pacemaker implantation and bleeding), reoperation rates for severe TR, and overall mortality.

Results:
Seven studies were included in the meta-analysis. The rates of immediate, one-week, six-month, and one-year TR were significantly lower in the HTX-A group. No significant differences were found in permanent pacemaker implantation or postoperative bleeding rates between the groups. Two studies reported reoperation for severe TR, with more events noted in the HTX cohort, but pooled analysis indicated no significant difference. One-year mortality rates were similar in both groups.

Conclusions:
Prophylactic TA on donor hearts effectively reduces TR incidence during the first year post-orthotopic heart transplantation without increasing surgical complexity. These findings are crucial for optimizing outcomes in heart transplantation, particularly when donor resources are limited.

Keywords: heart transplantation, tricuspid annuloplasty, tricuspid regurgitation, prophylactic, meta-analysis.

THE PARTICULARITY OF MINIMALLY INVASIVE EXCISION OF CARDIAC MYXOMA FROM THE LEFT ATRIUM VIA TRANSSEPTAL ACCESS, WITH FEMORAL CANNULATION – CLINICAL CASE

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Introduction:
Minimally invasive cardiac surgeries (MICS) may be applicable as the interventions of choice for intracardiac myxoma excision. The presented case is one of considerable intraoperative complexity. Thus, good was to obtain full range benefits for the oncological pacient from minimally invasive technics: no sternum cut, fast postoperative recovery, minimal pain, reduced risk of infection, good aesthetic appearance.

Material and Methods:
74-year-old female patient, admitted to the hospital with the diagnosis of cardiac myxoma (25 x 22mm) fixed on a pedicle on the interatrial septum (insertion surface on the septum: 1.7cm2). No enclavation in the mitral annulus. According to oncological rooles, there are indications for excision en bloc with the root of the pedicle inserted into the interatrial septum.

Results:
There was performed a video-assisted minimally invasive cardiac intervention (MICS), through 4th intercostal space anterolateral on the right. Transesophageal echocardiographic control (TEE) was done during the surgery. Cardiopulmonary bypass with femoral-femoral peripheral cannulation, double-stage (bicaval) venous cannula applied. Intraoperatively was executed the opening of the right atrium, later the sectioning of the interatrial septum with the excision of the tumor en complex with the insertion of the pedicle (histopathologically confirmed preparation: cardiac myxoma). Aortic clamping time: 48 min. Cardiopulmonary by-pass: 86 min. Extubation: 4 hours post-operatively. Intensive care unite (ICU) stay: 17 hours. Post-operative recovery: 7 days.

Conclusion:
The performed technique is complying with the main oncological criteria of removing the tumor en complex with the interatrial septum. Avoidance of jugular cannulation in minimally invasive cardiac operations reduces trauma.

FACTORS INFLUENCING POSTOPERATIVE EVOLUTION AND THE ROLE OF POSTOPERATIVE REHABILITATION IN CONGENITAL HEART SURGERY

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Introduction:
Postoperative evolution in congenital heart malformations (CHM) subsequently leads to long-term disability of patients, with the need for adequate rehabilitation.

Purpose:
Highlighting the main factors that influence the postoperative evolution of patients with CHM in relation to the effectiveness of rehabilitation programs.

Materials and Methods:
The study group included 2524 patients (1294 F and 1230 M) with CHM, operated during the years 2011-2020. According to age category: Newborns (N=109), infants (N=852), 1-8 years (N=947), > 8 years (N=616). 5.3% of patients presented with malformations associated to other systems, genetic syndromes; 12% presented with a specific phenotype. The correlation between different factors (age, type of MCC, type and duration of surgical intervention) and postoperative evolution was analyzed using the SPSS program. 120 patients benefited from special rehabilitation programs.

Results:
In all cases, positive correlations were determined between age, type of MCC, type and duration of surgical intervention, and postoperative evolution, but with weak correlational power. Postoperative dynamics at 3 and 6 months: 37% of those with degree III disability no longer possessed the degree, 29% of those with degree I or II, migrated to a lighter degree. And 34% remained with the same degree of disability, mostly caused by concomitant pathologies.

Conclusion:
The occurrence of postoperative complications is a multifactorial phenomenon induced by the combination of the age of the child, the type of MCC, the type and duration of the surgical intervention. The application of postoperative rehabilitation programs shows significant results in decreasing morbidity and invalidity.

TREATMENT OF TYPE B DISSECTION – OUR EXPERIENCE WITH 12 CASES

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Background:
Aortic dissection is a serious condition and may be fatal if not treated early.
The most important risk factor is increased blood pressure as this result in greater stress against the aortic wall. Other risk factors include atherosclerosis, smoking, pre-existing aneurysm, aortic valve defects and previous surgery on the aorta. A number of genetic disorders, such as Marfan's syndrome, also predispose the aorta to dissect. Traumatic chest injury may also cause dissection.

Materials and Methods:
We treated 12 patients with type B aortic dissection at the German Hospital. Age group of the patients was from 45-67 years old. In all cases, we used endoprosthesis in the descending aorta TEVAR (Thoracic Endovascular Aortic Repair) with access from the femoral artery, with surgical incision of 2 cm in 7 cases and with percutaneous femoral access, puncture of the femoral artery, in 5 cases. In 11 cases endotracheal anesthesia was used, and in one of them we used LMA anesthesia.
In 5 cases we performed cannulation and drainage of cerebrospinal fluid maintaining a pressure of 10-15 mmHg. In 7 cases we did not find it reasonable to use liquor drainage. In no case have we had any spinal cord problem.

Discussion:
The TEVAR procedure is the preferred solution for Type B treatment dissection. Medical management is usually preferred to surgical management for type B dissection in the absence of complications.

Conclusion:
The TEVAR technique associated with Medical management is the best choice for the treatment of uncomplicated Type B dissection.

BENEFITS OF EARLY EXTUBATION AFTER CARDIAC SURGERY

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Objective:
Early extubation in the operation room or few hours after adult cardiac surgery is rare in our everyday routine. We examined the outcome, factors and benefits of early extubation.

Methods:
We operated 60 patients, who had undergone cabg: 52 patients, mitral valve repair: 5 patients, aortic stenosis: 1 patient, Bentall procedure: 1 patient, left atrial myxoma: 1 patient.
The patients age was 46-82 years, there were 24 female patients and 36 male patients, 24 diabetic patients, 36 non-diabetic patients. In all cases we did not apply epidural anesthesia. Anesthesia was applied with low doses of fentanyl, in combination with propofol and sevoflurane.
In all cases neostigmine was used for decurarisation. The quality and depth of anesthesia was assessed with obvious signs such as tachycardia, hypertension, sweating.
As extubation criteria were assesed the patient's consciousness, respiratory mechanics, hemodynamic stability, diuresis, bleeding from drains.

Results:
16 patients were extubated in the OR and 44 patients were extubated 15-20 minutes after the intervention in ICU. We had no cases of re-intubation. 2 patients were transferred immediately from the OR to the ward. 35 patients were transferred to the ward 3-4 hours after extubation. 23 patients were transferred to the ward the next morning.
All patients left the hospital after 5-7 days.

Conclusion:
Extubation in the early postoperative period has now become a routine in all specialized clinics. The benefits stays in the best and fastest activation of patients in the early postoperative period as well as in reduced intervention costs.

PATENT DUCTUS ARTERIOSUS IN A 37-YEAR-OLD FEMALE PATIENT

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This case report details the presentation, diagnosis, and successful treatment of a 37-year-old female patient with patent ductus arteriosus (PDA). The patient presented with symptoms of weakness and shortness of breath. Echocardiography revealed left ventricle volume overload and evidence of a shunt from the proximal descending aorta to the main pulmonary artery. Cardiac catheterization confirmed the presence of a patent ductus arteriosus with left-to-right shunting, which was contributing to the patient's symptoms and posed the potential for long-term complications. We do not use percutaneous devices for closure because there are missing in Albania. Consequently, a decision was made to proceed with open cardiac surgery for PDA ligation. The patient underwent open cardiac surgery with a median sternotomy for the ligation of the PDA. The extracorporeal circulation was ready in the operating room in case of complications. The procedure was conducted without complications, leading to the resolution of symptoms and normalization of cardiac parameters.

CURRENT ROLE OF VASOPRESSIN IN CARDIAC SURGERY

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Arginine – vasopressin (AVP – vasopressin) is a hormone produced in hypothalamus and excreted by the posterior pituitary. It regulates water homeostasis and blood pressure. AVP's main therapeutic indication is treatment of hypotension refractory to administration of catecholamines or sympathomimetics. So conditions in which AVP is administrated include: septic shock, hemorrhagic shock, vasodilatory shock after cardiac surgery and other vasodilatory shock states such as anaphylactic shock. Vasopressin has a very attractive profile in cardiac surgery. It does not affect pulmonary circulation, improves left ventricle contractility during weaning from extracorporeal circulation, it's use is correlated with fewer blood transfusions, reduces catecholamine dose, acts in acidosis and exhibits a favorable profile in renal function. The most important action of vasopressin however is considered to be the prevention of vasoplegia during and after cardiac surgery when administered as a prophylactic infusion of 0.01 U/min - 0.03 U/min. Infusion lower than 0.1 U/min is considered exceptionally safe regarding abnominal ischemia.

ANAESTHETIC CONSIDERATIONS FOR THE TRANS-CATHETER AORTIC VALVE IMPLANTATION (TAVI) PROCEDURE

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Transcatheter aortic valve implantation (TAVI) has emerged as an alternative to surgical aortic valve replacement and has become a popular treatment modality for inoperable or patients at high surgical risk with severe aortic stenosis. The perioperative anaesthetic experience with patients undergoing TAVI under sedation or general anaesthesia (GA) varies among different centers. The duration of surgery and anaesthesia seems to be significantly longer in patients who received GA. Insertion site complication and post-TAVI pacemaker implantation rates are similar between the groups, but the frequency of intraoperative complications (10% vs. 0.8%; P=0.015), intraoperative hypotension (35.3% vs. 70%; P < 0.001), and acute kidney injury (12.6% vs. 27.5%; P=0.028) is significantly higher in the GA group. Local anaesthesia and sedation may be the first option in patients undergoing TAVI.

VOLATILE ANAESTHETICS VERSUS TOTAL INTRAVENOUS ANAESTHESIA FOR CARDIAC SURGERY

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In adults undergoing cardiac surgery with cardiopulmonary bypass, the class of volatile anesthetics is considered to be superior to propofol with regard to long-term (one year) mortality, as well as to many secondary outcomes indicating myocardial protection. Short term mortality and renoprotective action are the same. Although a recent large (3123 patients) multicenter randomized clinical trial found no difference in the clinical effectiveness of volatile anaesthesia and propofol-based total intravenous anesthesia (TIVA). The comparative effectiveness of volatile anaesthesia and total intravenous anaesthesia (TIVA) in terms of patient outcomes after cardiac surgery remains a topic of debate.

THE ROLE OF CARDIAC SURGEONS IN TAVI

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Interventional cardiology is a field of medicine between surgery and cardiology. The last decades, as the use of transcatheter procedures is growing rapidly, the limits between the two specialties is turning vague. Cardiology nowadays tightens the noose around the neck of cardiac surgery and more complex cardiac surgery procedures are recently performed by the interventional cardiology, both adult and pediatric.

Transcatheter aortic valve implantation is a challenging procedure performed both by cardiac surgeons and interventional cardiologists. European guidelines clearly recommend performing transcatheter aortic valve implantation (TAVI) within a multidisciplinary heart team. However, there is a strong conflict between the two specialities regarding the "first operator".

The aim of this study was to clarify the role of the cardiac surgeon in trancatheter aortic valve implantation. In our center since 2018 we have implanted more than 380 transcatheter aortic valves. These procedures were performed both by cardiac surgeons and interventional cardiologists providing a clear insight into the role of cardiac surgeon in TAVI.

Cardiac surgeons following the evolution, have also started to move from the open surgical procedures to endovascular arterial and aortic interventions. Familiar to the wires and the C-arm machine, cardiac surgeons are more than qualified nowadays to act as interventional surgeons regarding the structural heart diseases. Their active enrollment as an interventionalist in the multidisciplinary heart team in the management of structural heart disease is an essential modification to all conventional cardiac surgery training programs to introduce the interventional surgeon.

It's time to embrace the new era for the cardiac surgery that has come introducing the interventional cardiac surgeon.

TRANSFUSION THERAPY IN CABG POPULATION – ECONOMIC CONSIDERATIONS

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Introduction:
Cardiac surgery predominates in transfusion requirements and consumes approximately 10% - 15% of all blood components transfused. Huge variability in transfusion practice exists even in group of patients who undergo less complex procedures such as coronary artery bypass grafting (CABG). In patients undergoing CABG, transfusion rate varies between different cardiac surgery centers in range from 7.8% to 92.8%. Such a wide range in transfusion practice raises the question of the amount of unnecessary transfusions, reflecting the amount of possible savings.

Material and Methods:
The patients were divided into two groups and transfusion costs were analyzed in each group. Predictors for postoperative excessive bleeding were defined (age, body mass index, chronic renal failure, clopidogrel exposure, calcium channel blockers, ACE inhibitors, red blood cell count, fibrinogen level, ASPI Multiplate aggregometry test) and multivariable logistic regression analysis and risk modeling were performed.

Results:
We developed our own model to stratify CABG patients according to bleeding risk and to identify a subgroup of CABG patients at low risk of bleeding in whom transfusion could completely be avoided. The performance of the model was evaluated using receiver operating curve analysis (ROC analysis AUC 72.3%, $p<0.001$).

Conclusion:
Stratification of patients according to the risk of bleeding may help identify the subgroup of patients at low risk of bleeding where complete transfusion avoidance may be considered resulting in clinical and economic benefits.

SHORT-TERM OUTCOMES OF ALCAPA REPAIR BY TRANSLOCATION – OUR EXPERIENCE

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Introduction:
The anomalous origin of the left coronary artery from the pulmonary artery (ALCAPA) is the most common in congenital coronary artery anomalies, with an incidence of 0.25-0.50% in congenital heart defects. Being rare, the various methods have been proposed for surgical treatment.

Purpose:
To evaluate the immediate results of the coronary artery translocation into the ascending aorta in ALCAPA.

Material and Methods:
From December 2023 to May 2024, 4 patients with ALCAPA, aged of 2, 6, 7 and 10 years old (average 6.25, 2 female, 2 male), were operated on. Ejection fraction (EF): 70%, 44%, 63% and 40% respectively. All patients had grade 2-3 mitral valve regurgitation (MVR). Standard examination, as well as AngioCT and Coronary angiography, were performed. In 3 cases there was ALCAPA and in 1 case – an anomalous origin of the LAD from the pulmonary trunk. Under CPB conditions, the coronary artery was translocated into the ascending aorta. The pulmonary artery defect was closed with a xenopericardium patch. In 1 case mitral valve repair was performed.

Results:
There were no postoperative deaths. Positive dynamics of MR was noted in 2 cases (one after anuloplasty). In case of reduced EF one patient had weakly positive dynamics, and the second (oldest) had no dynamics. All patients were discharged in satisfactory condition.

Conclusion:
Surgical treatment of ALCAPA can be performed in children at different ages with satisfactory results. The dynamics of MVR and EF require further monitoring.

ENDOVASCULAR EXCLUSION OF AORTOBRONCHIAL FISTULA AND ANEURYSM POST-AORTOPLASTY FOR COARCTATION – A HYBRID SOLUTION

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The treatment of choice for aortic coarctation in adults remains open surgery. Aortobronchial fistula is a rare but potentially fatal late sequela of surgical correction of isthmic aortic coarctation by interposition of a graft. We report a case of a 40-year-old man with known congenital heart malformations, aortic coarctation and bicuspid aortic valve surgically corrected in two separate operative times.

An aortoplasty with Dacron conduct for repair of coarctation of the isthmic aorta was performed seventeen years prior to admission to our department for recurrent episodes of hemoptysis and epistaxis. The computed tomographic scan performed at admission showed an aneurysm of the descending thoracic aorta at the level of the isthmoplasty of up to 44 mm and a length of 60 mm, with two small saccular aneurysmal dilatations located at the level of the distal anastomosis that developed posteriorly and eroded into the adjacent bronchi. We decided on a hybrid approach in two stages of the same operative time: the total debranching of two of the three epiaortic vessels and the endovascular implantation of a stent graft at the level of the lesion, through median laparotomy, for the complete exclusion of the aneurysm.

We decided on a hybrid approach in two stages of the same operating time: total debranching of two of the three epiaortic vessels, since the landing area of the stent-graft occluded the ostium of the left carotid artery and the left subclavicular artery, revascularization through an extraanatomical bypass with a Dacron conduit number 8 carotid-carotid-subclavicular, and endovascular implantation of a stent graft at the level of the lesion, through median laparotomy, for the complete exclusion of the aneurysm. We opted for a trans-aortic approach, because hypoplasia of the ilio-femoral arterial axis was found during the pre-operative imaging examination. Postoperative evolution of the patient was uneventful after stent-graft placement.

WHEN ALL HOPE IS LOST IN CRITICAL LIMB ISCHEMIA: REBUILDING THE ARTERIAL SYSTEM

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Background:
Peripheral arterial disease (PAD) affects approximately 230 million individuals globally, with a prevalence of around 15% in those aged ≥70 years. Despite its commonality, PAD remains underdiagnosed, leading to critical limb ischemia (CLI) in many cases. Atherosclerosis, characterized by endothelial dysfunction and lipid accumulation, is the predominant causative factor.

Case Presentation:
We present a case of a 76-year-old male referred for management of right leg rest pain, persisting for 3 weeks, accompanied by cyanotic changes in the dorsal forefoot. Diagnostic angiography revealed patent common and deep femoral arteries, but occlusion of the superficial femoral and popliteal arteries, with no continuous arterial vessels below the knee.

Objective:
The primary goal of CLI management is to alleviate rest pain, promote wound healing, and preserve limb integrity by restoring blood flow through endovascular or surgical interventions. Notably, 14%-20% of CLI patients may lack suitable crural or pedal arteries for reconstruction, leading to a major amputation rate of 10% to 40% within 6 months.

Conclusion:
In this context, venous arterialization (VA) emerges as a promising alternative technique for limb salvage in patients classified as no-option CLI. This case underscores the potential of VA in improving outcomes and preserving limbs in complex PAD scenarios. Further research is warranted to validate VA's efficacy and broaden its application in critical limb ischemia management.

TRANSCATHETER TRICUSPID VALVE-IN-VALVE IMPLANTATION FOR THE TREATMENT OF DYSFUNCTIONAL BIOPROSTHETIC VALVES

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Introduction:
Generally, the failure or dysfunction of bioprosthetic heart valves is managed by replacement surgery. In the case of tricuspid valve dysfunction, a reintervention is rarely attempted because of the critically high risk of intraoperative mortality. Hence, transcatheter tricuspid repair or replacement procedures are preferred. More recently, transcatheter valve-in-valve treatments have gained importance, especially for patients with prior surgeries.

Material and Methods:
We present the case of a 56-year-old male, with previous hypertension and diabetes, presented with progressive dyspnea, edema and palpitations. Fourteen years ago, he was submitted to a triple valve replacement due to rheumatic disease with a mechanical prosthesis in aortic position, a mechanical prosthesis in mitral position and a bioprosthetic one in the tricuspid position. Now the patient has a dysfunctional tricuspid bioprosthesis and because of the high surgical risk, the conventional open surgery was ruled out and he underwent transcatheter valve implantation in the tricuspid position through the valve-in-valve procedure, with transjugular access.

Results:
The patient was submitted to our hospital for transcatheter replacement of the dysfunctional tricuspid prosthesis. Percutaneous tricuspid valve (MyVal prosthesis no. 32) implantation was performed under general anesthesia with fluoroscopic and transesophageal echocardiographic guidance. The procedure was susscessful and uncomplicated, with significant clinical and hemodynamic improvement.

Keywords: Myval transcatheter heart valve; balloon expandable heart valves; bioprosthetic heart valve; tricuspid valve; valve-in-valve procedure; valvular heart disease; Meril Life Sciences; transjugular access.

ORAL PRESENTATIONS

SURGICAL EXPLANTATION AFTER TRANSCATHETER AORTIC VALVE IMPLANTATION

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Transcatheter aortic valve implantation (TAVI) in patients with aortic valve disease is often preferred over traditional surgical valve replacement as it is less invasive and does not require cardiopulmonary bypass. Surgical explantation after transcatheter aortic valve implantation is a rare condition that may occur due to paravalvular aortic regurgitation or most frequently due to infective endocarditis. Not much has been reported in the literature about explantation of the aortic valve after TAVI. Special surgical skills are required due to the rarity and the lack of experience regarding the pathology of the interactions occurred between the implanted aortic valve and the native tissue.

Since every one of the TAVI valves in the market differ from the other regarding not only their shape and size but also their materials, with nitilol being the most frequent in use, we may expect difference in the pathophysiological interaction among each valve. Neoendothelialization and incorporation of the valve's cage into the native aortic wall is likely to occur leading to major surgical difficulties during the explantation process. Explantation can be easily performed with careful endarterectomy but in complex cases it may require even a simultaneous root replacement. The feasibility of late surgical explantation was previously unknown.

Nowadays, as the use of TAVI is more common, surgical explantation of TAVI is a surgery not as rare as we thought. Surgical explantation of TAVI can be performed from experienced surgeons after a meticulous study of the implanted aortic valve and the literature references.

IS THERE PLACE FOR CONSERVATIVE TREATMENT IN TYPE A AORTIC DISSECTIONS

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Acute aortic dissection type A is an acute aortic pathology in which the luminal layers of the vessel progressively separate due to a tear in the tunica interna. The treatment of choice for type A aortic dissection (TAAD) is emergent surgical intervention. However, surgical management may be contraindicated in older patients and in those with severe comorbidities. Patients with a history of open-heart surgery, history of cancer, patients with dementia or chronic severe neurological comorbidities constitute a special patient population which should be carefully studied regarding the benefits and pitfalls of such intervention. For these patients, surgery may be associated with significant risk, in part due to the general surgical challenges, but also due to their comorbidities. What is more, both patients and their families should realize and be prepared for the case of a difficult postoperative course with complications such as bleeding, stroke, pneumonia, tracheostomy, being bedridden and death. Conservative medical treatment represents an alternative approach to patients for whom surgery is deemed high-risk, but studies in this field remains scant. Recent reports have shown acceptable outcomes after conservative treatment for this patient population. In our department we have treated several patients conservatively with excellent results.

The aim of this study was to assess and compare outcomes after surgical or conservative treatment for acute type AAD in special patient population by evaluating frailty, surgical risk, age and comorbidities such as history of open-heart surgery, history of cancer, chronic neurological diseases.

We concluded that patient-specific and dissection-related factors should be well studied when choosing the optimal treatment in acute type A aortic dissection. The surgical approach does not always achieve a significant survival advantage over conservative treatment and may not always be a reasonable treatment of choice for selected patients. Conservative treatment for acute type AAD may be a good alternative treatment with acceptable outcomes in carefully selected patients, particularly in octogenarians, patients with a history of open heart surgery, cancer or severe neurological comorbidities and in those with preoperative clinical frailty scores higher than 4.

12-YEARS EXPERIENCE WITH PERCEVAL SUTURELESS VALVE

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Aortic stenosis has traditionally been addressed with surgical aortic valve replacement (AVR). In recent years, the Perceval (LivaNova, London, UK) is a sutureless valve that has been used in clinical practice for over 10 years. Since 2011, in our Hospital we have implanted more than 600 Perceval aortic valves, developing a worldwide expertise with this technology. In this article, we provide an overview of our clinical data from our 12 years experience and discuss the lessons we have learned from the use of the Perceval prosthesis. A total of 612 patients treated in our Hospital with the implantation of the Perceval aortic valve have been identified and included in our study. Thirty-day mortality and 5-year survival rates were the primary end points of our study. Cross-clamp and cardiopulmonary bypass times, and the effect of a postoperative permanent pacemaker implantation requirement were all secondary outcome measures. Sutureless implantation of the Perceval valve was associated with shorter cross-clamp and cardiopulmonary bypass times and optimal clinical outcomes regarding survival rates. A trend toward increased rates of permanent pacemaker implantation was also identified in our study. The Perceval valve has shown safe clinical and hemodynamic outcomes. Our outcomes support its continued usage and potential expansion.

THE INTRACARDIAC AORTA – RIGHT ATRIAL TUNNEL AND THE NEED FOR TIMELY INTERVENTION

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Introduction:
Aorto-atrial fistulas are rare and complex clinical entities, exhibiting acquired or congenital etiologies. The imperative need for timely intervention is emphasized by the potential for significant complications, even in asymptomatic patients or those with hemodynamically insignificant shunts. This paper delineates the clinical presentation of a patient admitted to our institution exhibiting this uncommon pathology.

Case Presentation:
We present the case of a 26-years-old male, initially diagnosed with atrial septal defect and patent ductus arteriosus. The echocardiographic and angiographic computed tomography assessment revealed a 2 cm fistulous tract originating from the left coronary aortic sinus. This tract traversed the left atrium, ultimately draining into the right atrium. The pathology was addressed surgically. The patient was treated by resecting the tunnel from the aortic sinus and reconstructing it with a Dacron Patch, closing of the aortic end of the fistula, and closing of the right atrium opening and atrial septum defect, as well. The left coronary artery was widely mobilized and reimplanted.

Discussion:
Most of these structures are extracardiac. Our case deviates from this pattern, presenting a trajectory that is partially intracardiac. Given the high risk of complications associated with aortic-arterial fistulas, prompt therapeutic intervention become imperative. Surgical or transcatheter closure of the aorta-atrial tunnel has been recommended as the main therapeutic option. Each time the origin of the coronary artery is involved, surgical treatment should be chosen.

Conclusion:
We emphasize the importance of early surgical closure of such defects as a crucial measure to impede the progression to serious complications.

AORTIC VALVE REPAIR – MID AND LONG-TERM OUTCOMES OF A SINGLE CENTRE

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Introduction:
Over the last decade the significance of preserving the native valve has become increasingly apparent. As a result, aortic valve repair procedures and valve-sparing root replacement procedures, including the reimplantation or remodeling technique, have been steadily gaining popularity. This summary outlines the experience of our single-center in aortic valve repair procedures, focusing on both medium and long-term outcomes.

Materials and Methods:
We recruited all adults (≥ 18 years old) patients who underwent aortic valve repair with or without aortic root replacement between january 2015 and march 2024 in our center. All patients were studied with clinical assessment and echocardiography.
Survival rates, freedom from valve reintervention, and freedom from recurrent regurgitation, were analyzed with the Kaplan-Meier method.

Results:
A total of 70 patients were included in this analysis. The survival rate was 98,2% after a mean follow-up time of 4 years. Freedom from aortic valve reoperation within the same 4-year timeframe was also 98.2%. Patients with bicuspid aortic valves with poor quality leaflets were more likely to require late reoperations. Freedom from bleeding events was 98.1%, and freedom from cerebrovascular events was 100%. Additionally, 5,7% of patients developed postoperative atrial fibrillation as a complication.

Conclusion:
The data from our study supports aortic valve repair as a safe and effective procedure with favorable outcomes that enhance life expectancy.
We advocate for considering repair in all suitable valve cases, emphasizing the necessity of a tailored approach for each patient given the complexities of the repair process.

THE FIRST RESULTS IN MINIMALLY INVASIVE CARDIAC SURGERY – OUR EXPERIENCE

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Introduction:
Evaluation of the start period of setting up the minimally-invasive cardiac surgery (MICS) program in a multiprofile hospital and emphasising the most important challenges we faced, to be taken into account.

Material and Methods:
Team building was based on tight cooperation between surgeons, anesthetists-intensivists, administrative staff, nurses, perfusionists, cardiologists-imagists. Acquisition of skills by team-members was due exchange programme with experienced in MICS European centers.
All operations were performed with peripheral femoral cannulation under TEE visualization.

Results:
After rigorous selection, 70 patients patients with acquired, congenital heart diseases and tumors, operated during the debut period, could be divided in five categories:
I: Patients with isolated Mitral pathology -33 cases (plasty/valve replacement).
II: Patients with Mitral-Tricuspid pathology -12 cases (plasty/valve replacement).
III: Aortic patients -16 cases of valve replacement: 7 mechanical and 9 biological prosthetics.
IV: Patients with cardiac myxoma (6 cases).
V: Congenital heart disease – 3 patients (bicuspid aorta, atrial septal defect concomitant tricuspid valve regurgitation).

Of the total cases of valvular correction in this debute period, minimally invasive operations (MICS) represented 18%. Conversion from MICS to Sternotomy was required for 2 patient (1,4%) without further complications. Mean patients' stay in ICU was 15h, mean overall stay in hospital was 6-8 days.

Conclusion:
The minimally-invasive technique is applicable in a range of heart valvular pathologies, tumours, congenital defects. Clinical results of the debut period showed increased benefits (reduction of operative trauma, minimal pain, rapid recovery, reduced infectious risk) in all patients.

CHALLENGING CLINICAL SCENARIO – ILIAC ARTERY STENTING AND FEMORO-POPLITEAL CROSSOVER BYPASS IN A PATIENT WITH CHRONIC LIMB-THREATENING ISCHEMIA AND MULTIPLE COMORBIDITIES

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Introduction/Motivation:
Chronic limb-threatening ischemia (CLTI) represents the most severe form of peripheral arterial disease (PAD), often leading to limb loss without prompt and effective treatment.

Case Presentation:
The patient, a 57-year-old male smoker with a history of type 2 diabetes mellitus, hypertension, and chronic coronary artery disease, presented with severe rest pain in the left lower limb and an infrainguinal ischemic wound on the left. Previously, an attempt at lower limb revascularization was made at another medical institution but was unsuccessful. AngioCT revealed: critical, segmented stenoses of the common and external iliac arteries on the right. Occlusion of the common and external iliac arteries on the left. Occlusion of the common, profunda, and superficial femoral arteries on the left. The treatment plan included stenting of the iliac artery using a self-expanding stent, followed by a right-to-left femoro-popliteal crossover bypass with an autologous vein graft. To prevent in-stent thrombosis and ensure continuous blood flow to the right lower limb, a temporary shunt using a Pruitt F3 carotid shunt was utilized.

Discussion:
The specialized literature indicates that managing CLTI in patients with multiple comorbidities is challenging, often requiring a personalized approach. The combination of endovascular and surgical techniques, as illustrated in this case, along with the use of temporary shunting during surgery, offers a viable solution for complete revascularization.

Conclusion:
The singularity of this clinical case lies in the complex combination of iliac stenting and femoro-popliteal crossover bypass, along with the use of a temporary carotid shunt, a rarely encountered approach.

ADDRESSING ASCENDING AORTA PSEUDOANEURYSM – STRATEGIC APPROACHES

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Introduction:
The pseudoaneurysm of the ascending aorta is defined as an abnormal dilation of the aortic wall resulting from the accumulation of blood within a space formed between the arterial layers. This condition may lead to severe complications, including rupture that may lead to aortic dissection.

Clinical Case Presentation:
We have a 74-year-old patient known for hypertension, dyslipidemia and multiple chronic cardiovascular pathologies. In 2013 the patient had a surgical intervention to repair the ascending aorta aneurysm by replacing the affected segment with a Vascutek duck number 28 and aortic valve's commissures resuspension. 9 years later the patient is admitted to our clinic accusing dyspnea, exhaustion, palpitations and anginal pain which don't ameliorate after using nitroglycerine. The Angio-ct examination showed 2 proximal pseudoaneurysms and a periprosthetic liquid pouch formation after which the patient followed the surgical procedure of pseudoaneurysm resection, drainage of the periprosthetic collection, aortic valve replacement with a biological prosthetic size 21 by using the Wheet procedure and ascending aortic replacement with a Dacron duct nr 28.

Discussion:
One of the ascending aorta post-surgical side effects may include hemodynamic instability. In our case we kept the sternum open in order to monitor the patient, the surgical wound was closed after some days.
Singularity of the Case:
The case's particularity is given by the complications caused by the ascending aorta pseudoaneurysm, the options we can choose to treat it and how do we choose the best option.

SIMULTANEOUS SURGERY OF CARDIAC MYXOMA AND THYROIDECTOMY – SHORT VIEW

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Introduction:
The presence of cardiac and non-cardiac surgical diseases at the same time is not a common situation. The practice of simultaneous cardiac and non-cardiac surgery is still debated today. We will present a case of urgent myxoma resection and simultaneous surgery for multinodular thyroid gland hypertrophy. In our knowledge, there is no description in the literature of the simultaneous intervention of myxoma and thyroidectomy. We will also provide a brief overview of the current literature about the management strategies for patients who need both cardiac and non-cardiac surgeries.

Case Presentation:
Our patient is a 73 -year-old lady who came to the emergency department with a two-week history of dispnea. The echocardiography revealed a hyperechogenic intracardiac mass in the left atrium, probably myxoma, measuring approximately 3 x 4 cm with regular contours. A large mass was found on the anterior neck during physical examination. The CT scan revealed a hypertrophic multinodular thyroid gland with numerous hypodense nodules, some of which are calcified and retrostenal. We consulted with the general surgeon and decided to perform simultaneous surgeries starting with total thyroidectomy and continuing with in the same stage with myxoma was. The patient had a very good postoperative course.

Discussion:
The argument was to perform or not in the same stage both surgeries. Most published meta-analyses and studies, recommend to perform cardiac and non-cardiac interventions simultaneously.

Conclusion:
The simultaneous surgery of cardiac myxoma and thyroidectomy can be performed safely. The literature refer very good results of simultaneous cardiac and non-cardiac surgeries.

Keywords: myxoma, thyroidectomy, simultaneous cardiac surgery

MINIMALLY INVASIVE AORTIC VALVE SURGERY – ONE TEAM STANDARD APPROACH

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Introduction:
The use of minimally invasive techniques in heart valve surgery is becoming everyday more popular. We are going to report the early results of one team experience using mini sternotomy during aortic valve and/or ascending aorta replacement.

Materials and Methods:
It is a retrospective and prospective study. We used either a "J" dexter or inverted "T" hemi sternotomy in 53 patients. The data were collected from hospital follow-up and presented as mean values with standard deviation. Endpoints included early mortality, perioperative major complications, physiological impact and quality of recovery related with the mini-incision.

Results:
Our study comprised 53 patients, including 29 males and 24 females, with a mean age of 64 years old presenting mainly with aortic valve stenosis. There was one hospital death, two patient did postoperative atrial fibrillation and one patient was re-explored for bleeding and one patient did superficial wound infection and one patients did mediastinitis that was the cause of death. Cardiopulmonary by-pass, cross clamp were respectively 92.1 ±16.6 min, 67 ±17.3 min Respiratory assistance, intensive care unit stay and postoperative hospital times, 7 ± 3.6 hour, 40±5.6 hour and 8 ±9 days respectively. No cases of patient-prosthesis mismatch were observed.

Conclusion:
The minimal invasive aortic valve surgery technique can be routinely used during aortic valve surgery with very good results. Patients reported higher satisfaction level and the recovery period was notably improved compared to traditional approaches.

Keywords: Aortic valve, Minimal invasive, Hemi-sternotomy assistance.

PATIENT-PROSTHESIS MISMATCH IN AORTIC VALVE REPLACEMENT WITH PROSTHESIS NO-19 – IMPACT ON EARLY AND LATE OUTCOMES

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Introduction:
Patient-prosthesis mismatch (PPM) continues to be a crucial topic of discussion regarding its influence on the aortic valve surgery results. The aim of our study is to evaluate the incidence of mismatch and its influence on early and late results in aortic valve replacement using prothesis No 19.

Methods:
A cohort of 175 patients underwent aortic valve replacement with prosthesis No-19 and was followed for up to ten years. PPM was defined according indexed effective orifice valve area (EOAi). Early results are evaluated through the hospital mortality and the date were collected from hospital recordings while long term follow up is realized by contacting the patients by phone and the endpoints were mortality and the clinical status assessed by NYHA class change after intervention. The statistical program used was IBM SPSS Statistics for Windows, Version 21.0.

Results:
The incidence of overall and severe mismatch is 74% and 30% respectively. Overall hospital mortality is 3.4%. The standardized base model for the independent factors age and sex shows that the presence of severe mismatch (P=0.057) and the continuing values of indexed effective orifice area (P=0.079) does not effect the early mortality. Severe mismatch and indexed effective orifice area was associated with less postoperative improvement of NYHA functional class ($p < 0.015$) in long term, independently from other predictors.

Conclusion:
Severe mismatch and small indexed orifice area does not effect early and late mortality but they are related importantly with less symptomatic improvement in the long-term.

DIABETIC FOOT – CONSIDERATIONS AND IMPLICATIONS

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The diabetic foot ulcer is a disabling and severe manifestation of uncontrolled and prolonged diabetes mellitus, usually located on the plantar side of the foot.
Almost 30-40% of people with diabetes will eventually develop the following pathological changes of the feet, and 14%-24% of them will require amputation of the ulcerated leg. The pathological mechanisms underlying the diabetic foot include a triad of: peripheral neuropathy, diabetic angiopathy, and infection. Regular feet care, combined with various vascular surgical approaches, will achieve the best outcome and pave the way for reducing morbidity, lowering amputation rates, and preventing mortality caused by diabetic foot.

The purpose of the paper: to assess the effectiveness of vascular and endovascular surgical interventions in combination with conventional treatment methods for those with the respective pathology. In this paper is represented the review of the Surgical Clinic of the Municipal Clinical Hospital "St. Archanghel Michael" RM, Chișinău, experience in diagnosis and treatment of diabetic foot in 463 patients on period from 2015 to 2024, aged 30-80 years, with an average age of approximately 58.8 years. In the studied group, there were 254 women [55%] and 209 men [45%], with a female/male ratio of 1.3/1. The following treatment methods were used: 48 patients were treated endovascularly; 13 patients were treated with conventional vascular surgery; 148 patients underwent minor amputations; 19 patients underwent major amputations; 68 patients had drainage of phlegmon; and 167 patients underwent seriate necrectomies.

As a result of using endovascular and vascular surgical interventions, no complications were identified. Out of 61 patients who underwent the respective interventions, 7 patients had minor amputations performed.

Conclusion:
The combination of vascular and endovascular methods with the standard treatment of the diabetic foot reduces the number of lower limb amputations and, as a result, improves the quality of life for patients.

Keywords: diabetic foot, vascular and endovascular surgery, minor amputations, major amputations.

PROSTHESIS MIGRATION IN THE ASCENDING AORTA WITH MYOCARDIAL ISCHEMIA – A RARE TAVI COMPLICATION

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Introduction:
Degenerative aortic valve stenosis is one of the most common cardiovascular conditions in predominantly elderly patients. In recent years, transcatheter aortic valve implantation (TAVI) has become a preferred therapeutic option for high-risk surgical patients, offering a minimally invasive alternative to traditional valve replacement. This procedure has shown favorable results in reducing symptoms and improving quality of life. However, complications such as post-TAVI valve migration, although rare – estimated to occur in less than 1% to 5% of cases – can occur and may require urgent additional interventions to prevent serious consequences.

Case Presentation:
A 74-year-old female patient presented with symptoms of dyspnea on mild exertion and fatigue, known to have severe degenerative aortic valve stenosis indicated for valve replacement. Following aortic valve replacement via the TAVI procedure using a Navitor II valve size 27, the patient's condition abruptly deteriorated on the third postoperative day, presenting with reduced antegrade aortic flow, grade III-IV aortic insufficiency, and a pericardium without fluid. An angio-CT scan of the chest revealed the migration of the aortic prosthesis.

Results:
An urgent excision of the migrated TAVI valve and native aortic valve was performed, along with decalcification of the aortic annulus and replacement of the aortic valve with a Medtronic Hancock II biological prosthesis size 21.

Conclusion:
Aortic valve replacement via the TAVI procedure represents a viable and minimally invasive option for patients with degenerative aortic valve stenosis, significantly improving symptoms and quality of life. However, post-TAVI valve migration, although rare, highlights the need for careful patient evaluation and surgical technique. The postoperative evolution was favorable, with no complications, and the patient was discharged on the 20th postoperative day.

GENETIC AORTOPATHIES – A SHORT REVIEW OF THE 2024 GUIDELINES

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Aneurismal aortic pathology has a silent initial clinical evolution, but it associates a high risk of morbidity and mortality with the evolution towards an acute aortic event. The existence of a genetic substrate for this kind of pathology represents a theme of interest for clinical research and the European guidelines for aortic pathology were updated this year as to incorporate the latest of research results.

Up until this year, genetic aortic pathology was covered by the 2014 ESC Guidelines on the diagnosis and treatment of aortic diseases and the 2020 iteration of the ESC Guidelines for the management of adult congenital heart disease with regard to Marfan patients.

The year of 2024 came with the apparition of not one, but two new guidelines approaching the theme of genetic aortopathies: the EACTS/STS Guidelines for diagnosing and treating acute and chronic syndromes of the aortic organ – February 2024 and the , 2024 ESC Guidelines for the management of peripheral arterial and aortic diseases – September 2024.

The presentation covers the new indications for surveillance and prophylactic surgery as per the new guidelines.

RARE CASE OF FISTULA BETWEEN TWO CORONARY ARTERIES (LAD, RCA) AND THE MAIN PULMONARY TRUNK

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Introduction:
A coronary artery-to-pulmonary artery fistula represents a rare disorder which implies an abnormal vascular connection between the coronary and pulmonary arteries. Most patients remain asymptomatic, but some may develop myocardial ischemia, heart failure, or even sudden cardiac death.

Clinical Case Presentation:
A 72-year-old woman presented with chest pain and heart failure symptoms which have debuted 20 years ago. A coronary angiogram revealed a fistula between both RCA, LAD and the main pulmonary trunk and the images suggested the occlusion of the proximal LAD. Echocardiography showed a LVEF of 45% with a PA systolic pressure of 30 mmHg. Preoperative chest X-ray exposed enhanced interstitial-hilar vascular pattern.

During surgery, two main fistulas were identified: one between the LAD and the pulmonary trunk and another between the conus artery and the pulmonary trunk, along with several smaller fistula-like vessels. During the procedure, because the lack of possibility to assess the presence of a significant lesion of the LAD, an aortocoronary bypass using a SVG was performed. Postoperative control cardioplegia confirmed successful fistula excision. The patient had a favorable outcome, with resolution of all cardiac symptoms.

Discussion:
Given the patient's age, symptom onset, and history of four pregnancies, a congenital fistula is considered likely. This fistula likely enlarged over time, leading to heart failure and angina.

Singularity of the Case:
The particularity of this case is the fact that both the RCA and LAD artery were communicating with the pulmonary artery main trunk via the same orifice with pulmonary artery wall.

EPICARDIAL CYST

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Pericardial cysts are reported to be rare, but epicardial cysts are extremely rare.
Classically, a pericardial cyst is considered a congenital anomaly whereby incomplete fusion in embryogenesis leads to herniation or weakness in the pericardial sac, forming a diverticulum. Most patients are diagnosed via incidental findings on routine chest imaging. Rarely, they can become symptomatic and require treatment or intervention.

We report one case of an epicardial cyst that was symptomatic and required intervention. The patient had chest pain and dyspnea and came to the emergency room from the regional hospital with acute coronary syndrome and positive troponin. He underwent a computerized tomography (CT) angiogram, which shows several pericardial cystic formations, the largest measuring 4.5x2.4 cm, compressing the medio-distal tract of the LAD. Coronary angiography shows significant stenosis in the medial part of the LAD.

Conclusion:
In our patient, excision was complicated because the cyst was located over the LAD. Furthermore, adhesions over the epicardium made it difficult for us to see the LAD. It was challenging to avoid injury to the LAD, we decided to operate with the patient under cardiopulmonary bypass. But in other cases, surgeons have to take into account off-pump surgical procedure as an opportunity to video- assisted thoracoscopic surgery.

ARTERIAL REVASCULARISATION – PROS & CONS

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Objectives:
Coronary artery disease remain the main cause of death. Surgical treatment (CABG) remain the best methode and arterial grafts are the ideal solution for the long term success of the intervention. Although arterial revascularization intervention represent surgicaly technical difficulties it remain an objectif and a main solution for the surgical treatment of the coronary desease in every center. This is reflected by the big number of studies, arterial grafts and diferent techniques.

Methods:
The first arterial intervention with double mamary artery is done in 10 march 2006. We have performed 127 intervention with double mamary arteries. Average age of the patients is 52.9 ± 10 years. 104 patients presented triple vessels disease. Average number of grafts for patients was 3.07 ± 0.9. Right mamary artery was used in situ in 98 cases, in 27 cases Y graft with the left mamary and in 2 cases the right mamary was used as a free graft. In 18 cases radial artery was used as the third graft – 16 june 2006 first "totaly arterial revascularization". In the rest of the cases vena saphena magma was used.

Results:
Patients had a good post operative period and were discharged after 9.6 ± 2 days. The follow up from three months to one year didn't present serious problems. Two deaths, one releated to cerebrovascular accident and the other from acut pancreatitis.

Conclusion:
Although the risk and surgicaly dificulties arterial revaskularization can be a successfull procedure and should be the choise in young patients.

AORTIC DISSECTION IN A 15-YEAR-OLD PATIENT

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Introduction:
Aortic dissection occurs in adults and is rare in children and adolescents but poses a high risk to life. International aortic dissection register (2,4), taking into account data from 12 hospitals in 6 countries, demonstrated that out of a total of 951 patients with aortic dissection only 68, (7%) were under the age of 40, and only 9 (0.76%) under the age of 21. Other studies with large groups of patients demonstrate that about 3.5% of cases with aortic dissection occur in patients younger than 19 years of age.

Case Presentation:
A 15-year-old boy shows up complaining of chest pain which spread to the back and between the shoulders since two days. He had a great body development for the age of 180 cm and 100 kg. On cardiac echo a normal heart with normal functioning was observed, without congenital defects. Enlargement of the ascending aorta with rupture of its wall along the entire length of the ascending aorta was observed. Aortic angio CT confirmed ultrasound. The replacement of the aortic root and the ascending aorta up to the level of the aortic arch was performed according to the modified Bentall procedure. The patient was extubated without deficit after 6 hours. He stayed in ICU for three days and in the ward for 6 days.

Conclusion:
Aortic dissection is fortunately in children and young agges it is something rare. Particular care should be taken in diagnosing and evaluating patients complaints by not underestimating this infrequent but very serious diagnosis.

THROUGH MEDIAN MINISTERNOTOMY REPLACEMENT OF THE ASCENDING AORTA AND AORTIC VALVE REPAIR WITH PETAL PATCH TECHNIQUE IN A PATIENT WITH STANFORD TYPE A AORTIC DISSECTION

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Patient A.B., a 38-year-old male presented to the emergency department of University Hospital "Mother Tereza" with severe chest pain. The patient was known to have ascending aorta dilatation (50 mm) from 4 years. CT angiography shows a dissection of the aorta, Stanford type A, and in the echocardiogram the aortic valve results with moderate to severe regurgitation, with an indication for emergency intervention. We decided to perform the surgical procedure with median ministernotomy, taking into consideration the young age of the patient as well as faster post-surgical recuperation and less trauma.

Femoral artery and double stage cannulation of the appendage of the right atrium was performed to enter the extracorporal circulation. The aortic valve was tricuspid with very good morphology. We performed replacement of the ascending aorta to the arch level with Albograft tube nr. 32 using the petal patch technique to replace the right coronary sinus. After that, we implanted the right coronary ostium in the petal patch. The procedure was successful. The patient was extubated the next day and was discharged 7 days after the intervention with no major complications. The post operative echocardiogram (performed one week and thrre months after the intervention) showed no aortic regurgitation, with normal aortic gradient.

Even the most difficult procedures can bee performed with minimally invasive techniques.

SURGICAL TREATMENT OF RENAL CELL CARCINOMA EXTENDING TO THE INFERIOR VENA CAVA AND RIGHT ATRIUM

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Introduction:
Renal carcinoma extending into the cava and the atrium presents a surgical challenge.
There are several methods for treating these tumors, but due to the small number of patients and the lack of distant results the surgical solution remains controversial.

Materials:
The first case, a 61-year-old man who had lost 14 kg ni 1.5 months.
Computed tomography found a mass measuring 7-5.7 cm in the right kidney, which also extended to the right renal vein and the inferior vena cava.
The second case, a 54-year-old woman without concomitant disease presents in the emergency room with low back pain, weight loss and peripheral edema. Computed tomography found a mass of 8.2-7.6 cm that completely occupied the right kidney.

Methods:
Through median sternotomy and subhepatic shoulder incision in the first case and continued sternotomy with median incision in the second case, the right kidney and VCI were isolated and the kidney removed.

Results:
In both cases there was no complication, tumor growth or gas embolism.
After 8 and 9 days in the ward they were discharged from the hospital.

Conclusion:
The finding of renal cell carcinoma is random as it presents no clinical signs. The sudden appearance of a mass in the right atrium should make us suspect this tumor. Treatment of this tumor with extension to the VCI and right atrium presents high risk, but with a careful preparation of the patient, clear strategy, team spirit between different specialties and special care in the postoperative period excellent results can be achieved.

THE NEED AND USE OF DUAL SOURCE CT AND DUAL ENERGY CT IN CARDIAC AND VASCULAR EXAMINATIONS

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The paper has an initial part detailing the techniques and a summary of the literature in the field and a second part with the experience from the last year of their use in the daily activity at the Scanexpert clinics.

Dual Source is a technique developed by Siemens to improve temporal and spatial resolution mainly for cardiac imaging by building a system with two radiation tubes and two rows of detectors that are approximately 90 degrees apart; the two systems can acquire data simultaneously on a patient at the same anatomical level and thus the temporal resolution is a fourth of the rotation time for cardiac, cardiothoracic and pediatric imaging. In the case of coronary artery imaging, these systems provide high quality images at a variable ventricular rhytm as well as at a high ventricular allure. Dual Source systems can scan with twice the spiral pitch of single source systems resulting in higher table speed which is helpful in pediatric imaging and angiography – especially lower extremity angiographic scanning.

Thanks to the two tubes that can be used with different potentials (different kV), dual energy data can be acquired and specific applications such as mono-energy imaging and spectral separation can be generated.

SURGERY FOR TYPE A AORTIC DISSECTION IN ALBANIA

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Type A acute aortic dissection is the most common acute aortic condition requiring urgent surgical therapy. Despite improvement in diagnosis and in surgical techniques, early mortality remains high, from 15% to 30%, and has been constant during the decades.

There is no doubt that aggressive surgical treatment of type A acute aortic dissection has spared a large number of lives compared with medical therapy only. More recent data, however, reveal a different prognosis, suggesting that optimized medical management may be considered acceptable in certain high-risk groups.

Improved care, earlier recognition of dissection using improved imaging modalities, development of vascular grafts of better quality, more effective hemostatic agents, and improvements in the safety of cardiopulmonary bypass are responsible for the increased quality of surgical results.

Treatment of acute type A aortic dissection is surgically challenging and is associated with high morbidity and mortality. We used to perform this type of surgery only from the last decade. We have operated around 180 patients with a hospital mortality of 20%. During the last years we have a steady number of 30 patients per year and a declining mortality from 30% to 20%, and this is because of the increasing experience of the surgical team. Surgery for acute dissection of the ascending aorta and aortic arch can be performed with promising results in Albania. Surgical techniques include all the spectrum of the routine procedures applied nowadays widely. Experience is necessary to improve the results in emergency surgery for acute aortic dissection.

THE ROLE OF MYOCARDIAL VIABILITY ASSESSMENT BY CARDIAC MAGNETIC RESONANCE IN THE CURRENT CLINICAL LANDSCAPE

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Background and Objectives:
Cardiovascular Magnetic Resonance (CMR) represents a radiation-free imaging technique that is increasingly utilized in the diagnosis of various cardiovascular pathologies.
While echocardiography remains the first-line imaging method for evaluating cardiac structure and function, CMR provides superior anatomical and functional data that can significantly influence management strategies in cardiac surgery.

Assessing myocardial viability remains a critical aspect of managing patients with coronary artery disease, especially those being considered for revascularization and CMR, particularly with late gadolinium enhancement (LGE), is highly effective in differentiating viable from non-viable myocardium.
Nonetheless, the utility of assessing myocardial viability remains highly controversial as some studies suggest that viability testing does not impact the patient's outcome whereas others advance the statement that in certain patients, aggressive medical therapy could provide similar benefits to revascularization.

In this presentation we will assess the contemporary role of testing myocardial viability in the decision-making process prior to coronary artery revascularization by comparing results from existing studies.

Methodology:
We will introduce the concept of myocardial viability and its importance to ischemic heart disease, the role of myocardial revascularization. We will further mention available modalities for viability testing emphasizing the characteristics of CMR-LGE. We will review critical data from key studies and highlight the contemporary debates. Moreover, we will discuss the practical implications and future directions of testing viability.

Conclusion:
While CMR is a powerful tool for assessing myocardial viability, its role in guiding revascularization remains controversial. The benefit of revascularization in patients identified with viable myocardium through CMR is not universally agreed upon, and decisions should be individualized, taking into account the broader clinical context and patient-specific factors.

SUTURING RIGHT PLEURA (SURGICAL INTEGRITY) AFFECTS EARLY RESPIRATORY FUNCTIONS IN BILATERAL INTERNAL MAMMARY ARTERY USED IN CABG OPERATIONS

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Bilateral internal mammary artery (BIMA) grafting strategy is widely used as a choice of multi vessel coronary artery disease. The preservation of pleural integrity during artery bypass grafting (CABG) operations improve pulmonary function and post-operative clinical outcomes. While it extends operation time during harvesting BIMA as preserved pleura, the use of BIMA is not optimal all over the world. We designed this retrospective study to evaluate early postoperative pulmonary functions as a suturing of right pleura versus opened pleura in patients who receive bilateral internal mammary artery grafts.

84 selected patients undergoing elective on-pump CABG between March 2018 and June 2023 were included in the present study. The patients were divided into Either 2 groups: those who underwent BIMA harvesting with bilateral opened pleura (OP) (n=44) or with one side pleural integrity by suturing the right pleura (SP) (n=40). Postoperative respiratory functions were compared between two groups by chest x-ray, arterial blood gas analyses and respiratory function tests.

The incidence of atelectasis and pleural effusion were significant higher in the OP group ($p<0.01$). Respiratory functions and arterial blood gas analysis were both better in SP group. Moreover the duration of hospital stay were markedly higher in OP group than in the CP group.

We demonstrate that Suturing the right pleura by making surgical pleural integrity in BIMA used bilateral opened pleura patients has beneficial effects on early respiratory functions. During the harvesting BIMA, opened bilateral pleura make surgeon comfortable area as shortening operation time as well.

SHORT TERM RESULTS FROM NOVEL ALLEGRA TRANSCATHETER AORTIC VALVE

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The ALLEGRA aortic valve is a self-expanding aortic valve with bovine pericardial tissue that has been used for transcatheter aortic valve implantation in clinical practice for the last 7 years. In this article, we provide an overview of our clinical data from our experience and discuss the lessons we have learned from the use of the Allegra valve. The last year in our center we have implanted 16 Allegra transcatheter aortic valves. Its unique design was developed to provide low prosthesis gradients. We studied patients receiving Allegra transcatheter aortic valve. Since 2023 that we have started using Allegra valves, we have implanted 16 valves for treatment of aortic valve stenosis or degenerated valve prosthesis.

Hemodynamic results and clinical outcome according to the Valve Aca-demic Research Consortium-2 consensus criteria were evaluated at discharge and one-month post implantation. Sex, age, Euroscore II and previous valve surgery were clinical characteristics evaluated before the implantation procedure.
In hospital and 30-day mortality rates and successful implantation were the primary outcomes of our study. Post procedural requirement of permanent pacemaker, bleeding, major vascular complications, strokes, and duration of hospitalization, were all secondary outcomes.

We concluded that Allegra aortic valve provides excellent hemodynamic results and a good safety profile with a low complication rate for patients in need of transcatheter aortic valve implantation.

A RARE CASE OF MEDIASTINAL TUMOR WITH SUPERIOR VENA CAVA INVASION

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Introduction:
Mediastinal tumors are infrequent growths located in the mediastinum space between the lungs. They are classified as benign or malignant. Benign tumors generally have excellent survival rates, while malignant tumors show varied survival rates depending on type and stage, highlighting the importance of early diagnosis and treatment.

Clinical Case Presentation:
Here we report an unusual case of mediastinal tumor with superior vena cava invasion. A 45 year old patient, known with important cardiovascular pathologies (deep vein thrombosis, reemitted superior vena cava syndrome, reemitted liquid pericarditis), oncological (neuroendocrine big cell carcinoma) got admitted to our clinic after the imagistic results proved the existence of a mediastinal tumor that invaded the venous brachiocephalic branch, right subclavian vein, right superior cava vein (which resulted in its occlusion) and the right pericardium pleura. In this case we performed the surgical intervention of resecting the mediastinal tumor that affected the superior cava vein and the brachiocephalic branch bifurcation. We did a reconstruction of superior cava vein and right brachiocephalic vein using a 24/13 Dacron duct as a prosthesis. The post-surgical evolution was favorable.

Discussion:
Mediastinal malignant tumors grow rapidly, potentially metastasizing and causing severe symptoms such as respiratory complications and circulatory occlusion. In our case the post-surgical evolution was favorable for the patient which started the radiotherapy cure.

Singularity of the Case:
The case's particularity is given by how much damage a mediastinal tumor can cause, invading and occluding vital parts of the circulatory system.

CHALLENGES IN THE MANAGEMENT OF A PATIENT WITH SEVERE MITRAL REGURGITATIONS

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We present the case of a 56-year-old patient, diagnosed with severe mitral regurgitation 6 months previously, with multiple rehospitalizations for heart failure, with marked fatigability and dyspnea at mild exertion.

On admission, the patient had a BP of 91/64 mmHg, HR 83/min, systolic murmur at the apex, slight bilateral edema, abolished vesicular murmur in the lower half of the left lung and crepitants on the right.
The pathological biologic findings were represented by NT- proBNP 19140 pg/ml, normochromic normocytic anemia (Hb = 9.97 g/dl), hypokalemia (K = 3.2 mmol/l), hyperuricemia (uric acid = 11.4 mg/dl), CRP = 25 mg/dl, and renal dysfunction (creatinine 1.51 mg/dl, eGFR = 50 ml/min/1.73 m2).

The electrocardiogram showed sinus rhythm, 100/min, QRS axis = 30°, 2 premature ventricular contractions, no repolarization changes.

The transthoracic echocardiography showed a dilated, non- hypertrophied left ventricle with preserved LVEF, significant LA dilatation, bilateral pleural effusion, more important on the left side. Transesophageal echocardiography revealed a posterior mitral cusp flail with chordal rupture, grade 4 mitral regurgitation with eccentric jet, 17 mm coaptation deficit, with a regurgitant volume of 90 ml, regurgitant orifice area 0.8 cm2 (possibly underestimated due to jet eccentricity) and a tricuspid annulus of 49 mm.

The angiography showed coronary arteries without lesions. The patient required thoracocentesis of the left hemithorax, depletion with intravenous furosemide under inotropic support with dobutamine and preoperative workup during the admission on the Cardiology Clinic.

In the same hospitalization the patient was transferred to the Cardiovascular Surgery Clinic, where he underwent a mitral valve replacement with Fitline mechanical prosthesis no. 31 and tricuspid annuloplasty with CG Future 32 ring. The postoperative evolution was marked by postoperative atrial fibrillation, prolonged chest drainage and worsening of renal dysfunction with favorable evolution. The patient benefited from a cardiac rehabilitation program.

LATE MEDIASTINAL TUMOR AFTER MITRAL VALVE PLASTY

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Introduction:
Mediastinal tumors are relatively rare. Their prevalence is around 5% of all thoracic masses.

Case Summary:
We present the case of 72-year-old woman with a complex cardiac history that was admitted in the Cardiology Department for dyspnoea at mild effort (NYHA class III) and lower limb edema.

The patient underwent in 2015 a mitral valve annuloplasty for severe mitral rheumatic regurgitation followed by PCI with drug-eluting stent (DES) implantation for significant RCA stenosis in 2021. At the present time of admission, a routine echocardiography showed a large pericardial mass with compression on the right atrium. Angio CT and MRI confirmed the mediastinal location of the tumor, with features suggesting a hydatid cyst. Coronary angiography was also performed, which showed the patency of the coronary stent, without further stenosis. The patient was started on albendazole 400 mg for 3 months to treat the suspected hydatid cyst. The cyst, which caused severe compression on the right atrium, was surgically removed. Intraoperatively, it was confirmed to be an inflammatory cyst. The postoperative evolution was favorable, the patient being discharged 7 days postoperatively.

Conclusion:
The case highlights an unusual presentation of a mediastinal inflammatory cyst causing cardiac compression after cardiac surgery. The preoperative diagnosis was challanging despite the vailability of state of the art multimodal imaging (echocardiography, CT, MRI).

Keywords: pericardial tumor, inflamatory cyst, hidatic cyst.

TREATMENT STRATEGIES FOR VENTRICULAR FREE-WALL RUPTURE AFTER ACUTE MYOCARDIAL INFARCTION CASE REPORT /MINISERIES

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Background:
Free wall ventricular rupture after acute myocardial infarction is a rare complication (less than 1% of whole acute infarction patients), but with high mortality in the absence of emergency cardiac surgery. We present a miniseries of three patients that were consecutively treated in our department, over the period of 1 year.

Case Summary:
All cases presenting with cardiogenic shock after acute myocardial infarction were admitted as cardiovascular emergencies in our clinic.

Case nr. 1: a 69 year-old female patient, with free wall right ventricle rupture after right coronary artery occlusion, was treated surgically without cardiopulmonary bypass initial gluing with bioglue and heterologous pericardium patch, later due to complete rupture through isolated sutures reinforced with felt pledgets. The patient was discharged 30 days afterwards.

Case nr. 2: a 68 year-old male patient, with circumflex artery occlusion and rupture of the left ventricular wall, which required surgical haemostasis through suturing of a heterologous pericardium patch. Although the patient was hemodynamically stable, following surgery he developed tetraplegia with neurological complications and died 30 days later due to pulmonary infection.

Case nr. 3 a patient with occlusion of the right coronary artery and left ventricle inferior wall hematoma after late at 48 hour PTCA. Due to drug treatment with ticagrelor, the case was temporised for 48 hours, during which the size of the pericardial effusion diminished. For this reason, conservative treatment was applied, with favourable outcome and discharge of the patient 14 days later.

Conclusion:
Despite advancements in therapy and modern cardiac surgery techniques, the mortality in patients with myocardial rupture remains high and the best suited management should be individualized case by case.

HYBRID MANAGEMENT OF TYPE A AORTIC DISSECTION WITH MESENTERIC ISCHEMIA

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Introduction:
Acute aortic dissection is a surgical emergency, with a high mortality rate that approaches 50% within 48 hours from the onset of symptoms. It is a rare condition, with an incidence of 5 to 30 cases per 1 million people per year. Type A dissections are considered major emergencies due to the risk of catastrophic complications. One of the complications of aortic dissection is mesenteric ischemia.

Case History:
M, 58 years old, transferred with severe, sudden-onset pain following intense physical exertion, localized in the interscapular and abdominal regions, radiating to the lower limbs, accompanied by paresthesia and postural instability, as well as diarrhea. Hemodynamically and respiratorily stable. Following an angio-CT scan, the diagnosis was established as: Type A pan-aortic dissection, superior mesenteric artery thrombosis, mesenteric ischemia.

Results:
The resolution of this case was divided into two stages: 1. Balloon transluminal angioplasty and implantation of two stents in the superior mesenteric artery. 2. Sealing of the dissection flaps with bioglue, reinforcement of the anastomoses with Teflon felt, replacement of the ascending aorta with a Dacron graft, size 30.

Conclusion:
Following the successful resolution of this case, we can highlight that the patient's hemodynamic stability allowed for the management of the complications that arose. The postoperative evolution was favorable, with no manifestations of mesenteric malperfusion. On postoperative day 26, the patient was discharged.

HYBRID APPROACH FOR ENDOVASCULAR CLOSURE OF AN AORTOBRONCHIAL FISTULA AND ANEURYSM AFTER AORTOPLASTY FOR AORTIC COARCTATION

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The treatment of choice for aortic coarctation in adults remains open surgery. Aortobronchial fistula is a rare but potentially fatal late sequela of surgical correction of isthmic aortic coarctation by interposition of a graft.

We report a case of a 40-year-old man with known congenital heart malformations,aortic coarctation and bicuspid aortic valve surgically corrected in two separate operative times. A aortoplasty with Dacron conduct for repair of coarctation of the isthmic aorta was performed seventeen years prior to admission to our department for recurrent episodes of hemoptysis and epistaxis. The computed tomographic scan performed at admission showed an aneurysm of the descending thoracic aorta at the level of the isthmoplasty of up to 44 mm and a length of 60 mm, with two small saccular aneurysmal dilatations located at the level of the distal anastomosis that developed posteriorly and eroded into the adjacent bronchi. We decided on a hybrid approach in two stages of the same operative time: the total debranching of two of the three epiaortic vessels and the endovascular implantation of a stent graft at the level of the lesion, through median laparotomy, for the complete exclusion of the aneurysm.

We decided on a hybrid approach in two stages of the same operating time: total debranching of two of the three epiaortic vessels, since the landing area of the stent-graft occluded the ostium of the left carotid artery and the left subclavicular artery, revascularization through an extraanatomical bypass with a Dacron conduit number 8 carotid-carotid-subclavicular, and endovascular implantation of a stent graft at the level of the lesion, through median laparotomy, for the complete exclusion of the aneurysm. We opted for a trans-aortic approach, because hypoplasia of the ilio-femoral arterial axis was found during the pre-operative imaging examination.

Postoperative evolution of the patient was uneventful after stent-graft placement.

DEBRANCHING AORTO-VISCERO-BIRENAL AND AORTO-BIFEMORAL ACCOMPANIED BY TEVAR

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Thoracoabdominal aortic aneurysms (TAAA) represent a significant challenge in vascular surgery due to their anatomical complexity and the risks associated with surgical procedures. Recently, hybrid techniques that combine open surgical interventions with endovascular procedures have become an attractive option, offering a less invasive yet effective solution. The main aim of this study is to evaluate the feasibility of the procedures, perioperative complications, and survival rates following hybrid treatment.

Clinical Case:
Patient X, 68 years old, diagnosed with a thoracoabdominal aneurysm associated with bilateral iliac artery aneurysms, underwent a hybrid intervention for TAAA. The patient underwent a hybrid TEVAR procedure, with the debranching of visceral arteries through bilateral prosthetic-renal bypasses, prosthetic-mesenteric bypass, and aorto-bifemoral bypass, using a hybrid graft.

Postoperative Results:
No endoleaks were detected, and the patient was discharged on the 15th postoperative day. Dual antiplatelet therapy with Aspirin 75 mg and Clopidogrel 75 mg was administered for 12 months. Treatment of complex aortic pathology, mainly arch and TAAAs still represents a major challenge, surrounded by controversy and with a great disparity of the results inside the different therapeutic modalities. Debranching techniques for both pathological conditions are procedures whose complexity should not be underestimated, demanding careful planning and surgical expertise in order to reduce mortality and complications.

Singularity of the Case:
In this particular clinical case, the singularity lies in the comprehensive and multifaceted approach to treating an extensive thoracoabdominal aortic aneurysm. This case is exceptional due to the simultaneous execution of aorto-viscero-birenal and aorto-bifemoral debranching procedures accompanied by TEVAR.

TREATMENT OPTIONS IN MESENTERIC ISCHEMIA

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Introduction:
Mesenteric ischemia is an underdiagnosed condition with high in-hospital mortality rates. Recently, endovascular and hybrid approaches have been increasingly used in treating these patients.

Case Presentation:
We present the case of a 57-year-old woman diagnosed with subacute mesenteric ischemia associated with Takayasu arteritis. Her medical history includes multiple surgical revascularization interventions in various arterial territories. Given her complex history and imaging data, a hybrid intervention for revascularization of the superior mesenteric artery was chosen. Procedures included direct and indirect thrombectomy from the superior mesenteric artery, open retrograde mesenteric stenting (ROMS), and patch angioplasty with an autologous vein graft. Intraoperatively, due to difficulties passing the endograft retrogradely, the brachial artery was punctured, and the lesion was negotiated anterograde and retrograde. Postoperative angiography showed restored anterograde flow in the superior mesenteric artery with good perfusion. Upon abdominal revision, the liver (right lobe) and the entire intestine were viable. Following resumption of the patient's diet, preoperative symptoms disappeared, and intestinal transit was preserved. A 6 mounth follow-up confirmed stent patency. The patient was discharged home in satisfactory condition with Clopidogrel 75 mg and Rivaroxaban 5 mg.

Discussion:
Mesenteric ischemia is a serious condition requiring prompt diagnosis and treatment. Hybrid revascularization of the superior mesenteric artery is a safe and effective treatment option for this pathology. This case is unique due to the combination of subacute mesenteric ischemia with Takayasu arteritis and the successful application of a hybrid intervention.

Keywords: Mesenteric ischemia, hybrid intervention, ROMS.

SURGICAL APPROACH IN PATIENTS WITH RENAL CANCER WITH METASTATIC THROMBUS IN THE INFERIOR VENA CAVA – THE CLINIC'S EXPERIENCE

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Introduction:
Renal cancer is the 6th most commonly diagnosed worldwide, with a mortality rate of 4.4%. Extension of renal malignant tumors with tumor thrombus into the venous system occurs in 4-14% of diagnosed cases. It is necessary to emphasize the importance of surgical treatment for renal cancer with metastatic thrombus in major vessels and to optimize the surgical techniques used.

Materials and Methods:
The study is based on a retrospective analysis of medical records of 40 patients. Surgical approaches included xiphopubic laparotomy in 24 (60%) cases, Leclerc laparotomy in 12 (30%) cases, sternolaparotomy in 3 (7.5%) cases, and sternolaparotomy in 1 (2.5%) case.

Results:
The average duration of surgical interventions was 240 ± 18.7 minutes. Mean intraoperative bleeding was 1200 ± 158 ml. The average duration of postoperative hospitalization was 10 ± 2.1 days. There were 2 (5%) perioperative deaths recorded. Early postoperative period was uncomplicated in 36 cases, while 4 (10%) cases required reoperation for hemostasis. Histologically confirmed invasion of tumor cells into the wall of the inferior vena cava (IVC).

Conclusion:
The advantages of liver mobilization include: reducing the volume of bleeding from the IVC; controlling the cranial pole of the metastatic thrombus; adequate retrohepatic lymph node dissection.

STUDENTS' PRESENTATIONS

NAVIGATING SURGICAL STRATEGIES FOR AORTIC ROOT PATHOLOGY – SPARING OR REPLACING THE VALVE?

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Introduction:
In times dominated by cardiovascular mortality, developing surgical solutions for aortic root diseases caused by aneurysmal degeneration was critical. For decades, the composite valve graft (CVG) described by Bentall and De Bono was the sole option. The valve-sparing root reimplantation (VSRR) by David and Feindel revolutionized the surgical field as it allowed the retainment of the native valve in appropriate patients. This review aims to assess the choice between procedures.

Material and Methods:
A comprehensive literature search across multiple databases such as PubMed, Cochrane, and Scopus was conducted, selecting studies published from 2016 to 2024. Keywords included "Bentall procedure", "David procedure", "valve-sparing procedure", and "composite valve graft procedure", identifying 244 articles out of which only 18 were included in this study. We excluded articles on pediatrics, limited only to specific pathologies like Marfan Syndrome or only to reintervention outcomes.

Results:
Patient population consistently influenced choosing the VSRR technique as the primary choice for younger patients, with lower operative risk and less severe valve pathology. Early procedure outcomes associate the CVG with increased rates of in-hospital mortality, prolonged ventilation, and major adverse cardiovascular events. A similar result was noticed in freedom from reintervention on the aortic valve (94.7% versus 98.3%), aortic insufficiency being the most common cause after both procedures.

Conclusion:
Patients requiring surgery for aortic root disease require individualized treatment, as valve sparing should be considered when the morphology is favorable, taking into account that associated risks with both the CVG and VSRR procedure lower when choosing the appropriate candidate.

Keywords: Aortic root surgery; composite valve graft (CVG) procedure; valve-sparing root reimplantation (VSRR) procedure.

ACUTE AORTIC DISSECTION IN BICUSPID VALVE DISEASE – NAVIGATING SEVERE POSTOPERATIVE COMPLICATIONS

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Introduction/Motivation:
Bicuspid aortic valve (BAV), a common congenital heart defect affecting 1-2% of the population, is associated with complications such as aortic dilation, regurgitation, and dissection. Acute aortic dissection, particularly Stanford Type A, is life-threatening and requires immediate intervention. This case highlights the predisposition of BAV patients to severe aortic pathology and the complex postoperative course that can ensue.

Clinical Case Presentation:
We report a 63-year-old hypertensive male presenting with acute precordial pain radiating to the back. Angio-CT confirmed Stanford Type A aortic dissection, and subsequent echocardiography revealed a previously undiagnosed bicuspid aortic valve. Urgent surgery was performed, including aortic valve replacement with a Medtronic Hancock II bioprosthesis and ascending aorta replacement with a Dacron graft. Postoperatively, the patient developed hemopericardium, tamponade, acute renal failure requiring hemodialysis, respiratory infections, and sepsis. Despite these challenges, the patient recovered with multidisciplinary care.

Discussion:
BAV significantly increases the risk of aortic dissection due to abnormal hemodynamic stress on the aortic wall. Early surgical intervention is critical in such cases and improves survival. This case emphasizes the importance of comprehensive postoperative management in BAV patients to address the wide range of potential complications.

Singularity of the Case:
This case is unique due to the combination of acute aortic dissection in a BAV patient and the severe postoperative complications encountered. The extended recovery, involving multi-organ dysfunction, underscores the need for early recognition and aggressive treatment in similar cases.

MITOCHONDRIAL MODULATION IN CARDIAC THERAPY – UNVEILING THE POTENTIAL OF PARTIAL RESPIRATORY CHAIN INHIBITION

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The respiratory chain, an essential part of mitochondrial function, is key in generating cellular energy. Reduced activity of this pathway has become a hopeful treatment approach for different medical conditions, especially in heart disease. This review thoroughly explores the current research on drugs that partially inhibit the respiratory chain, emphasizing their mechanisms, potential for treatment, and impact on heart health. We examine how interventions impact mitochondrial function, oxidative stress, and cardioprotection,highlighting their importance in reducing ischemia-reperfusion injury and heart failure.

Metformin and amobarbital are two pharmacological agents discussed for their unique mechanisms of action and therapeutic profiles, with metformin being a commonly used anti-diabetic drug and amobarbital being a less utilized agent nowadays. Metformin's capacity to regulate mitochondrial respiration and decrease oxidative stress is contrasted with the impact of amobarbital, which also is well known for blocking Complex I of the respiratory chain and has documented protective effects on the heart.

The review ends with a suggestion that metformin, with its widely accepted clinical safety record and wide range of cardiometabolic advantages, presents a good prevention drug for patients with a high risk of cardiovascular events. Future research should focus on conducting clinical trials to better understand the long-term advantages of metformin in heart patients and investigating the possibility of combining these complex I inhibitors with already used medications to improve heart protection.

BROKEN HEART SYNDROME – THE CROSSROADS OF EMOTIONAL STRESS AND CARDIAC DYSFUNCTION

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Introduction:
Takotsubo cardiomyopathy (TTS), known as the Broken Heart Syndrome, is a controversial pathology triggered by an intense emotion or physical stress that imitates a heart attack. Its uniqueness arises from the symptomatic similarity to Acute Coronary Syndrome (ACS). The aim of this review is to provide evidence of its severity, the pathophysiology and its particularities compared to ACS.

Materials and Methods:
This review is based on articles, reviews and original studies, published on PubMed, American Heart Association Journals and The New England Journal of Medicine between 2015-2023. The studies focused on a group of patients who experienced emotional, physical triggers or neither of these. The exclusion criteria are patients diagnosed with cardiac, neurological and psychiatric conditions.

Results:
Among 2074 patients, 89.9% were postmenopausal women who suffered from emotional stress. The remaining group included men who experienced physical stress, patients who faced both or neither of emotional/physical triggers. All patients were initially diagnosed with ACS but if on angiography was no coronary blockage, the diagnosis was TTS. The pathophysiology involves high levels of catecholamines in the blood, resulting in myocardial toxicity. Estrogen deficiency in postmenopausal women contributes to elevated levels of catecholamines and endothelial dysfunction.

Conclusion:
Nowadays, TTS is easily distinguished from ACS and has a favorable prognosis for the patients, with a low mortality rate of 1-5%. It is crucial to understand its pathophysiology and particularities to give an accurate diagnosis.

Keywords: catecholamines, ACS, postmenopausal women.

UNDERSTANDING MAY-THURNER SYNDROME – BENIGN CONDITION OR POSSIBLE KILLER?

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Introduction:
May-Thurner Syndrome (MTS) is a rare condition caused by the compression of the left common iliac vein by the right common iliac artery and the fifth lumbar vertebra (L5). A higher incidence among women is noted, and though mostly asymptomatic it can lead to complications like deep vein thrombosis (DVT) or Phlegmasia cerulea dolens (PCD). This study aims to assess the most reliable imaging and treatment options.

Materials and Methods:
This review is based on 10 studies published on PubMed between 2010-2024. Different imaging techniques such as intravenous ultrasound (IVUS), magnetic resonance venogram (MRV), catheter-based venography (CBV), and contrast-enhanced computed tomography (CECT) were compared. Included studies followed endovascular therapy combined with anticoagulant administration, patient outcomes at 5 years, and recurrence rates.

Results:
The diagnosis for MTS remains difficult to set due to unspecific symptoms such as swelling, venous ulcerations, or hyperpigmentation. Although several attempts have been made to develop and standardize anatomic criteria for MTS, there is still a lack of diagnostic guidance. Most common diagnostic modalities used are CECT (44.8%), CBV (38.7%), IVUS (8.8%), and MRV (6.6%). Best results were achieved using a combination of endovascular therapy for primary management with localized fibrinolytic therapy, and long-term administration of anticoagulants, representing the standard of care in the nonpregnant population, even in the case of limb-threatening disease. At 5-year follow-up, stent patency was 82%, with improvement rates of pain and swelling at 78% and 55%, respectively 45% in patients with thrombotic MTS, the reported thrombosis recurrence rate ranges from 4% to 11%. Nonetheless, 81-92% of patients achieve complete or partial symptomatic relief of their lower extremity edema.

Conclusion:
MTS is an underrecognized etiology contributing to thromboembolic disease in pregnant and postpartum patients. Clinical outcomes are variable and depend on patient and anatomic factors, as well as symptom chronicity at presentation.

Keywords: May-Thurner Syndrome, patient outcomes, imaging, endovascular therapy, recurrence rates.

MANAGING ASCENDING AORTIC ANEURYSM IN A MORBIDLY OBESE PATIENT – THE ROLE OF THE TIRONE DAVID PROCEDURE

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Introduction/Motivation:
Ascending aortic aneurysm is a serious cardiovascular condition requiring prompt intervention to prevent fatal outcomes. In patients with multiple comorbidities, such as morbid obesity and heart failure, surgical management is particularly complex. This case exemplifies the successful use of the Tirone David procedure in a high-risk patient, highlighting the challenges of perioperative care.

Clinical Case Presentation:
The patient, with a history of morbid obesity, hypertension, and chronic heart failure (NYHA Class II), presented with progressive dyspnea and fatigue. Echocardiography and angio-CT revealed a 57 mm ascending aortic aneurysm with moderate aortic insufficiency and mild mitral regurgitation. Given the risk of rupture, elective surgery was performed using the Tirone David procedure. The ascending aorta was replaced with a 32 mm Dacron graft while preserving the native aortic valve. Postoperatively, the patient's recovery was uneventful, and he was discharged with stable cardiac function and no major complications.

Discussion:
The Tirone David procedure is recognized for its effectiveness in treating aortic aneurysms while preserving valve function. In this case, despite the patient's morbid obesity and cardiovascular risks, the surgery was successful. Literature supports the use of this approach in high-risk patients, emphasizing the importance of tailored perioperative management to reduce complications.

Singularity of the Case:
This case is notable for the successful application of the Tirone David procedure in a morbidly obese patient with significant comorbidities. The positive outcome underscores the importance of individualized care and demonstrates the procedure's viability in managing complex cases.

ANTEGRADE MIGRATION OF TRANS-AORTIC VALVE PROSTHESIS: A RARE SURGICAL EMERGENCY

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Introduction:
Trans-aortic valve insertion (TAVI) has become an increasingly used technique in treating severe symptomatic aortic stenosis in high-risk patients. Even though TAVI is considered a safe and well-accepted procedure, severe, life-threatening complications such as valve migration can occur in less than 1% of the patients and require emergent cardiac surgery.

Clinical Case Presentation:
A 74 year old woman is admitted electively for the surgical treatment of her severe aortic stenosis. She had a known history of congestive heart failure NYHA class III with moderate ejection fraction, grade III hypertension, atrial fibrillation and dislipidemia. Her health profile and imaging test results qualified her for a TAVI procedure. The initial post operative echocardiogram showed improved cardiac function, but two days into her recovery she suffered a heart attack. As the contrast coronary angiography showed, her prosthetic valve migrated into the ascending aorta, causing a shift in the native aortic valve leaflets towards the wall of the aortic root, occluding the coronary ostia. She underwent emergency surgery for the prosthetic valve excision and the replacement of the damaged valve, without needing ascending aorta grafting. The recovery was favourable and she was kept under observation for another two weeks.

Discussion:
As of now, the majority of TAVI procedures are performed without major risks. Even so, individual patient characteristics play a significant role in procedural outcomes.

Singularity of the Case:
Valve migration is very rare, so the etiology, measures and treatment strategies are not yet well defined, allowing room for improvement in managing possible complications that may arise during or after the intervention.

Keywords: TAVI, prosthesis migration, emergency surgery, valve excision.

SURGICAL APPROACH OF A LEFT MAIN BRONCHUS TYPICAL CARCINOID TUMOR WITH INFRACENTIMETRIC PULMONARY NODULES

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Introduction:
Pulmonary carcinoid tumors are rare neuroendocrine neoplasms, constituting less than 5% of all pulmonary tumors. These tumors exhibit a spectrum of malignant potential and are frequently underrecognized in clinical practice.

Case Presentation:
A 73-year-old male patient presented for evaluation after a fibrobronchoscopy revealed an endoluminal mass in the left main bronchus with an irregular surface and a wide implantation base. Initial CT imaging showed a 13 mm solid pulmonary nodule in the lateral segment of the left lower lobe, with homogeneous contrast uptake. Additional findings included bilateral apical pleuroseptal thickening, calcified pulmonary nodules, and infracentimetric nodules, the largest measuring 5 mm. The bronchial biopsy confirmed a typical pulmonary carcinoid with low mitotic activity and absent necrosis.

During intubation, the tumor's base could not be visualized due to its intense vascularization and susceptibility to bleeding, therefore, an electroresection was deemed unsuitable. The patient subsequently underwent a left anterolateral thoracotomy, which involved resection of the affected portion of the left main bronchus and primary anastomosis.

Discussion:
Typical pulmonary carcinoid tumors are generally slow-growing with low metastatic potential but can present significant challenges in diagnosis and management, particularly when associated with additional pulmonary nodules.

Case Singularity:
This case is notable for the presentation of a typical carcinoid in the left main bronchus in conjunction with multiple bilateral pulmonary nodules, making it a significant contribution to the understanding of rare pulmonary neoplasms. The intense vascularization and bleeding risk posed challenges in both diagnosis and surgical management.

HYPERTROPHIC OBSTRUCTIVE CARDIOMYOPATHY – SURGICAL MYECTOMY AND SEPTAL ABLATION

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Hypertrophic cardiomyopathy (HCM) is the most common inheritable heart disease, often leading to left ventricular hypertrophy and potential progression to left ventricular outflow tract (LVOT) obstruction (HOCM), elevating the risk of all-cause mortality. This review assesses the efficacy of two invasive treatments, septal myectomy (SM) and alcohol septal ablation (ASA), typically used when medical therapies are ineffective.

Based on 10 articles on PubMed and ClinicalKey (2015-2023), this review includes cohort studies, meta-analyses, and journals, covering 208 patients aged 18 and older who underwent SM or ASA, excluding cases with major concomitant cardiovascular procedures. In HCM, about 70% of cases are obstructive, presenting with symptoms like dyspnea and angina. SM, the gold standard for over 50 years, involves transaortic resection of the hypertrophied basal interventricular septum under cardiopulmonary bypass. ASA, a less invasive catheter-based procedure, injects alcohol into the coronary artery supplying the hypertrophied area, gaining popularity since the 1990s due to perceived lower operative risk.

Both treatments show favorable survival outcomes. SM is highly effective, with over 90% long-term symptom improvement, no myocardial scarring, and a lower LVOT gradient compared to ASA (94.5% vs. 82.4%), though it may carry a higher operative risk. ASA offers a lower risk of peri-procedural complications and quicker recovery but is less effective for thicker septa and carries a higher risk of re-interventions and pacemaker implantations. Mortality risks for both HOCM treatments are comparable, with surgical outcomes potentially influenced by unmeasured patient characteristics and other risk factors.

CATHETER ABLATION AS AN ALTERNATIVE TO IMPLANTABLE CARDIOVERTER DEFIBRILLATORS – TREAT THE CAUSE, NOT THE SYMPTOMS

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Background:
Since its first human implantation at the Johns Hopkins Hospital (Baltimore, Md) in 1980, the implantable cardioverter defibrillator (ICD) has seen significant improvements in its design and efficiency, being increasingly prevalent in patients at risk of sudden cardiac death (SCD). Still, the ICD alone cannot prevent the recurrence of electrical storms (ESs) and catheter ablation (CA) aims to address this issue.

Objective:
The main objective of this review is to show the potential benefits of CA in patients at risk of ESs and SCD.

Material and Methods:
A comprehensive literature search was conducted through the PubMed database and articles 2009 to 2022 were selected. Among them were two multicentre randomised controlled trials (MRCTs): The PAUSE-SCD and PARTITA Trial, both published in 2022. Animal trials were excluded.

Results:
The PARTITIA MRCT had 517 patients with ICD enrol in phase A, excluding patients with CA contraindication. The end point was the first appropriate ICD shock. Phase B had the patients randomly assigned in a 1:1 ratio in an ablation group and a control group. The end point of this phase was death or worsening heart failure hospitalisation (WHFH). In the end, 0 deaths and 1 WHFH were observed in the ablation group, while the control group had 8 deaths and 4 WHFHs. The PAUSE-SCD MRCT showed similar results.

Conclusion:
CA was found to reduce death or WHFH by reducing ICD shocks.

Keywords: Implantable Cardioverter Defibrillator, Catheter Ablation.

Euro-Asian Journal of Surgery and Medicine 2024; III(1):48-151

THE THREAT OF INFECTIVE ENDOCARDITIS IN PATIENTS WITH BICUSPID AORTIC VALVE

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Background:
William Osler first described infective endocarditis (IE) in 1885 as an inflammation of the endocardium caused by Staphylococcus aureus, Streptococcus viridans or Enterococcus. Bicuspid aortic valve (BAV) is the most common congenital cardiopathy associated with a higher risk of IE.

Objective:
This review aims to discuss the correlation between IE and BAV patients.

Material and Methods:
A comprehensive search of the PubMed and ResearchGate databases was conducted, selecting 6 articles, 2010 to 2023. All included studies followed the Modified Duke Criteria to definitively diagnose patients with IE.

Results:
One study looked at 210 IE patients that needed aortic valve replacement (AVR) at the University of Michigan. Because BAV patients usually presented with IE at a younger age (mean of 42 years) compared to tricuspid aortic valve (TAV) patients (mean of 54 years), they had fewer heart-related issues and thus lower all-cause mortality. A 2022 study of 338 patients revealed that up to 25% of IE patients had BAV (with a 0.5-2% BAV incidence in the general population). 85% of BAV patients had to undergo AVR compared to 46% in the TAV group, according to a 2017 study of 824 IE patients. IV drug use and poor oral hygiene were found to be the main risk factors for IE in both study groups.

Conclusion:
BAV patients are at higher risk of IE. They have better long-term survival after their first episode of IE, though likely due to them developing this infection earlier in life.

Keywords: Infective endocarditis, Bicuspid aortic valve.

DEXMEDETOMIDINE – SAFEGUARDING AGAINST POSTOPERATIVE DELIRIUM IN CARDIAC SURGERY

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Introduction:
Approximately 35% of older patients requiring cardiac surgery present postoperative delirium. This review seeks to validate the efficacy of dexmedetomidine in treating postoperative delirium in cardiac surgery for older patients while evaluating its tolerability and side effects.

Materials and Methods:
This review analyzed 12 articles, in which subjects eligible for the trials with dexmedetomidine were at least 60 years old, had coronary artery bypass graft (CABG) or valve replacement, and had normal preoperative cognitive function. The exclusion criteria were severe renal or liver dysfunction, allergy to dexmedetomidine, and emergency surgery. The patients were treated postoperatively with 0,4 µg/kg/h dexmedetomidine. The evaluation was assessed with the Confusion Assessment Method (CAM) postoperatively.

Results:
CAM score indicated a significant improvement in patients treated with dexmedetomidine 24 hours after the first dose. The side effects included mild hypotension, bradycardia, nausea, and vomiting, which were manageable. Nevertheless, the subjects under placebo treatment still had delirium on day 5 in the ICU, with adverse effects such as respiratory depression, atrial fibrillation, pain, and agitation. An improvement was observed for the trial subjects compared to placebo ones for the CAM items: Altered Level of Consciousness, Inattention, Disorganized Thinking, and Fluctuating Mental Status.

Conclusion:
Dexmedetomidine provides an advantage in rapid onset of effect and sustained efficacy. The evidence indicates a positive benefit-risk balance for dexmedetomidine as a novel therapeutic option for this condition of delirium.

Keywords: dexmedetomidine, cardiac surgery, delirium, postoperative.

THE IMPORTANCE OF MAINTAINING OPTIMAL INR VALUES IN PATIENTS UNDERGOING AORTIC VALVE REPLACEMENT SURGERY

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Introduction:
Bicuspid aortic valve (BAV) is one of the most common congenital cardiovascular abnormalities, predisposing patients to developing aortic valve disease or even infective endocarditis. In severe cases, Bentall procedure is an effective surgical treatment. However, the patient may develop life-threatening complications, including thrombotic issues.

Clinical Case Presentation:
We are presenting the case of a 29-year-old male patient diagnosed with BAV, accompanied by severe aortic regurgitation and an ascending aortic aneurysm. In 2018, he underwent a successful Bentall procedure. Consequently, oral anticoagulant treatment was initiated with a vitamin K inhibitor, with the recommendation to maintain INR values above 2.5. In September 2020, despite following an optimal oral anticoagulant treatment schedule, the patient suffered a middle cerebral artery ischemic stroke, in the context of subtherapeutic INR values. The patient admitted to having followed a diet rich in green leafy vegetables with high contents of vitamin K, which antagonized the anti-vitamin K anticoagulant. The patient was advised to undergo periodic INR measurements twice a month, with a target range of 3.0–3.5.

Discussion:
Certain patients' INR lability requires frequent monitoring and Acenocumarol dose adjustments. Several interactions ocurr in the case of anti-vitamin K medication, including with factors such as diet. As shown above, when INR levels fall too low, there is an increased risk of cardioembolic events, such as ischemic strokes.

Singularity of the Case:
The importance of this case is distinguished by the sequence and variety of complications, as well as the lability of INR, which is influenced by various factors, including diet. Given these challenges, optimal patient recommendations should be issued.

THE CROWN OF DEATH – A LITERATURE REVIEW OF THE ANATOMY, PREVALENCE, AND SURGICAL RISKS OF THE CORONA MORTIS

Nicolae-Florin Iftimie[1], Oana-Georgiana Briceanu[1], Mălina-Alexandra Bercu[1], Daria-Ioana Vreme[1], Alexandru-Ionuț Sănduleanu[1], Ionuț-Alexandru Ghicu[1], George-Vlad Jemna[1], Gabriel-Erich Ganea[1], Bogdan-Tudor Bugeac[1], Iuliana Vrăjitoru[1]
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Introduction:
The corona mortis is a vascular connection between the obturator and external iliac or inferior epigastric arteries. It is a critical anatomical variant due to its potential for severe hemorrhage during pelvic and vascular surgeries. This review aims to consolidate current knowledge on its anatomy, prevalence, and implications for surgical practice, highlighting its relevance in preventing surgical complications.

Materials and Methods:
A systematic review was performed using databases such as PubMed, Scopus, and Web of Science. Search terms included "corona mortis" and "prevalence". Inclusion criteria were studies providing anatomical details or documenting surgical outcomes related to the corona mortis, published from 2018 to 2024. Excluded were studies not focusing on this vascular variant or unrelated vascular issues. A total of 11 studies were reviewed, with data selected based on relevance and quality of reporting.

Results:
Prevalence estimates of the corona mortis ranged from 20% to 70%. Surgical complications associated with this anatomical variant included significant hemorrhage, particularly during pelvic surgeries and hernia repairs. The risk of bias was assessed, with several studies showing potential biases in surgical reporting and anatomical identification. Improved imaging techniques have been highlighted as a key factor in reducing complications.

Conclusion:
The corona mortis presents a significant risk in surgeries involving the pelvic and vascular regions. Understanding its prevalence and anatomical variations can help mitigate surgical risks. Enhanced preoperative imaging and surgical planning are essential to avoid complications.

DONOR-RELATED PERSONALITY CHANGES FOLLOWING HEART TRANSPLANTATION – EVALUATING SCIENTIFIC EVIDENCE AND SUBJECTIVE REPORTS

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Introduction:
Heart transplant (HT) is a revolutionary procedure performed for the first time in 1967. This review explores the psychological aspects of heart transplant recipients, aiming to identify lifestyle and behavioral changes post-procedure and assess whether these changes may be linked to the donor's characteristics.

Material and Methods:
A review of the relevant scientific literature was performed, using PubMed and ScienceDirect to determine reported personality changes in HT patients. We included studies in which HT patients were interviewed postoperative by WHOQOL questionnaires, phenomenological approach, or visual methodology. For comparison, we also included data from studies focusing on liver, kidney, or lung transplant patients. Studies in which participants were diagnosed with schizophrenia or other delusional disorders were excluded.

Results:
We analyzed 13 articles that fit our inclusion and exclusion criteria. Quantitative studies showed no significant donor-related influences, attributing post-transplant personality shifts to psychological or medication-related factors. However, some case reports described unexplained changes in preferences or behaviors, aligning with donor characteristics. These reports were often framed in terms of the recipients gaining an unexplained familiarity with particular foods, hobbies, or behavioral tendencies they had never experienced before the surgery.

Conclusion:
While subjective reports of personality changes following heart transplantation offer intriguing insights, current scientific evidence does not support a direct transfer of personality traits from donor to recipient. The gap between anecdotal claims and empirical findings underscores the need for further research to explore potential connections more thoroughly.

Keywords: Heart Transplant, Personality, Donor traits.

UNMASKING THE HIDDEN OBSTACLE – AVOIDING A DEBILITATING RESULT IN POPLITEAL ARTERY ENTRAPMENT SYNDROME

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Introduction:
Popliteal artery entrapment syndrome (PAES) is a rare condition affecting about 0.17% of the population, caused by abnormal anatomical structures in the popliteal fossa compressing the artery. Symptoms commonly include intermittent pain during exercise in the calf or foot. PAES can severely impact the lower limb through partial or total thrombosis of the popliteal artery or arterial aneurysm.

Case Presentation:
This case report describes a 19-year-old female admitted to the Vascular Surgery Department at "St. Spiridon" Hospital Iași for right distal lower limb paresthesia and intermittent calf pain during exercise, present for about two months. Angio-CT revealed popliteal artery compression due to abnormal insertion of the gastrocnemius muscle. The patient underwent an open surgical procedure involving partial muscle removal, embolectomy, and popliteal artery angioplasty. The outcome was favorable, with symptom resolution confirmed by control angio-MRI.

Conclusion:
Although PAES is rare, its impact can be profound, especially for young, active individuals. The condition can severely impair daily activities and mobility, making it particularly debilitating for those with an active lifestyle. The rare obstruction due to atypical muscle insertion adds to the diagnostic challenge. Early diagnosis and treatment are crucial to avoid significant complications. This case highlights the need for thorough diagnostic evaluation and timely intervention to improve outcomes and reduce long-term disability, ultimately restoring quality of life for affected patients.

Keywords: Popliteal artery entrapment syndrome (PAES), Abnormal insertion of the gastrocnemius muscle, Embolectomy, Popliteal artery angioplasty.

STEM CELL THERAPY FOR CONGENITAL HEART DISEASE – BRIDGING THE GAP BETWEEN PROMISE AND PRACTICE

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Introduction:
Congenital heart disease (CHD) remains the most common birth defect globally, despite advances in diagnosis and survival. Traditional surgeries face growing complications, prompting interest in cardiac regeneration. Stem cell therapy, successful in adults, is now being explored as a promising treatment for children with CHD.

Material and Methods:
This review is based on articles found on the PubMed database using the search-terms "heart regeneration therapy", "congenital heart disease" and "stem cell" that have been published within the last decade.

Results:
Previous research in adults with cardiovascular disease indicates that the therapeutic effects of stem cell therapy are likely mediated through paracrine mechanisms rather than direct differentiation into cardiomyocytes. Nonetheless, challenges such as poor cell retention and survival remain significant. Recent developments in molecular imaging, immunosuppressive strategies, and tissue engineering hold promise for overcoming these limitations. However, translating these findings to pediatric patients with congenital heart disease (CHD) warrants caution due to differences in stem cell biology, potential tumorigenicity, and risks of arrhythmogenesis. Additionally, considerations regarding delivery methods, as well as ethical and economic implications, are critical.

Conclusion:
Initial case reports and trials in children show that stem cell therapy can be safe and potentially beneficial, improving heart function in some cases. However, these studies often involve small sample sizes and lack long-term follow-up, making it difficult to draw definitive Conclusion. Larger trials and long-term studies are needed to fully assess the safety and efficacy of stem cell therapies for CHD before they can become standard practice.

VASCULAR EHLERS-DANLOS SYNDROME – STRATEGIES FOR PREVENTION AND SURGICAL MANAGEMENT OF RARE ANEURYSMS

Alexandru-Ionuț Sănduleanu[1], Miruna-Olguța Ciobanu[1], Daria-Ioana Vreme[1], Miruna Harter-Radu[1], Maria Manole[1], Iuliana Vrăjitoru[1], Ioana Adumitresei[1], Nicolae-Florin Iftimie[1], Gabriel-Erich Ganea[1]
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Introduction:
Vascular Ehlers-Danlos Syndrome (vEDS) is a rare autosomal dominant connective tissue disorder (1/150.000 patients), implying abnormal friability of structures containing pathological variants of the COL3A1 gene product, especially the blood vessels. Aneurysms in this type of patients are unpredictable. This review aims to analyze the means of preventing an aneurysmal lesion and the surgical management when necessary.

Materials and Methods:
We conducted research on PubMed, ClinicalKey, and ScienceDirect databases, cumulating 23 literary articles (case reports, cohort studies, systematic reviews), no older than 2016. We included studies focusing on the treatment of aneurysms caused by EDS, confirmed by genetic or histopathological examination, whereas patients with similar abnormalities (aortic dissection; unknown-cause ruptures) and non-human studies were excluded.

Results:
Aneurysms in vEDS are frequent (abdominal aorta: 25-30%), with past median survival rates of around 50 years. Studies indicated that chronic medication with Celiprolol reduces the side effects of typical β-blockers, strengthening blood vessel integrity and lowering the chances of aneurysmal rupture, offering a life expectancy of ~73 years. Discussing treatment, there is a debate whether the operating team should intervene upon diagnosis or wait for a possible rupture. Several studies revealed that after thorough genotype analysis, imaging, and exploring unaffected arteries, elective endovascular or open-repair is recommended, the first implying shorter hospital stay and fewer complications.

Conclusion:
Vascular EDS is a rare disorder, often diagnosed accidentally when aneurysm symptoms create distress. Nowadays, this condition is better understood and managed, with a focus on preventing aneurysmal lesions (Celiprolol) and upgrading surgical techniques, demonstrating a "genotype-surgical phenotype" correlation.

LIFTING A WEIGHT OFF YOUR CHEST: REMOVAL OF A GIANT ASYMPTOMATIC RIGHT ATRIAL MYXOMA

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Introduction:
Myxomas are benign primary intracardiac tumors that usually form in the left atrium and rarely in other heart chambers. Many are asymptomatic in adults, making diagnosis difficult. The risk of developing fatal complications, such as congestive heart failure and embolic events, rises as the tumor grows.
Clinical case presentation:
We present the case of a seventy-four-year-old female patient diagnosed fortuitously with a right atrial myxoma after complaining of palpitations and dyspnea during a routine check-up. A transthoracic echocardiography revealed a mass measuring 3x2,8x4cm in the right atrium, attached to the interatrial septum, causing tricuspid regurgitation. The tumor was excised, and the site of resection was repaired with an autologous pericardium patch. A De Vega tricuspid plasty was performed to prevent further regurgitation. The patient had an uneventful recovery and was discharged on the seventh postoperative day.
Discussion:
According to current literature the estimated incidence of myxomas is 0.0017-0.19%, of which 15-20% occur in the right atrium. Diagnosis can be elusive; most are asymptomatic or linked to a wide range of nonspecific clinical manifestations. Various complications can develop, morbidity being associated with intracardiac obstruction and embolization. Echocardiography has proven to be a valuable diagnostic procedure. Currently there are no effective medical treatment options, surgical excision being necessary. Resection of myxomas carries low operative risk and provides excellent results, recurrence being rare.
Singularity of the case:
Myxomas rarely develop in the right atrium and timely diagnosis is challenging. Detailed echocardiographic evaluation is essential for objectifying such tumors. Surgical excision should be performed immediately after identification to prevent fatal cardiovascular events.

FROM A VENTRICULAR EXTRASYSTOLE TO MINOCA – CASE STUDY

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Introduction:
Fibrosis following myocardial necrosis creates a substrate that predisposes to ventricular arrhythmias (in a structurally abnormal heart) through abnormal automatism or slow conduction and the facilitation of reentry circuits.

Clinical Case Presentation:
The presented case involves a 60-year-old female patient, a smoker with dyslipidemia, grade III essential hypertension (stage II), stable effort-induced angina pectoris with coronary arteries having insignificant lesions in 2020, and non-sustained ventricular tachycardia (on treatment with Sotalol). She presented with angina-like chest pain, elevated blood pressure (following changes in her previous therapeutic regimen), and palpitations during moderate exertion. Transthoracic echocardiography did not reveal any regional kinetic changes or valvulopathies; the electrocardiogram captured a basal left anteroseptal ventricular extrasystole (under antiarrhythmic treatment). Holter monitoring showed a significant reduction in ventricular extrasystoles under Sotalol, without QTc prolongation (transitioning from non-sustained ventricular tachycardia to unsystematized extrasystoles). Neither the electrocardiogram nor coronary angiography evidenced an ischemic substrate in this case. Cardiac magnetic resonance imaging identified basal anteroseptal subendocardial myocardial fibrosis, confirming a myocardial infarction with non-significant coronary artery lesions (MINOCA). The fibrotic area corresponds to the site of the organized ventricular extrasystoles, with myocardial necrosis occurring in the absence of significant coronary lesions.

Discussion:
Fibrosis constitutes an important substrate in ischemic-related arrhythmias. Integrating electrocardiographic data with the presence or absence of coronary lesions in patients with angina pectoris is crucial for the accurate diagnosis and appropriate treatment of arrhythmic complications, contributing to the improvement of prognosis and quality of life.

Singularity of the Case:
The patient presents a smoking habit, dyslipidemia, grade III essential hypertension (stage II), stable effort-induced angina pectoris with coronary arteries having insignificant lesions in 2020, and non-sustained ventricular tachycardia. Transthoracic echocardiography did not reveal any regional kinetic changes or valvulopathies; the electrocardiogram captured a basal left anteroseptal ventricular extrasystole.

VITREOUS HEMORRHAGE AS A SIDE EFFECT OF POSTOPERATIVE ANTICOAGULATION AFTER MECHANICAL VALVE REPLACEMENT

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Introduction:
Patients with mechanical valve replacement require lifelong anticoagulation therapy for stroke and systemic embolism prevention. However, this treatment predisposes patients to various types of bleeding. The aim of this narrative review is to comprehensively explore the postoperative side effect of anticoagulation therapy (AT) in vitreous hemorrhage (VH).

Material and Methods:
A PubMed database search of articles published between 2015 and 2023 was carried out. Various combinations of the following terms were used: vitreous hemorrhage, mechanical valve replacement, postoperative anticoagulation. Only articles published in English with available full text were considered, including only articles compromising cases of patients presenting VH after postoperative AT.

Results:
A number of 19 articles were identified according to the inclusion criteria. VH is a common
cause of sudden vision loss in adults and has been widely studied. Its causes are complex, including blood disorders or other diseases associated with thrombocyte counts. A key finding is the risk of ocular bleeding in patients with mechanical valve replacements, especially those on anticoagulants. The incidence of bleeding while on warfarin has been estimated at 15–20% per year, while the use of the direct oral anticoagulants, has been associated with lower rates and a reduction in intracranial hemorrhage. Understanding the relationship between anticoagulants and systemic conditions is crucial to managing VH and preventing complications.

Conclusion:
Inappropriate bleeding is a major concern after anticoagulation following mechanical valve replacement. These topics collectively underscore the need for effective VH management strategies and strong communication among healthcare teams in evaluating and treating affected patients.

Keywords: vitreous hemorrhage, mechanical valve replacement, postoperative anticoagulation.

FROM PIXELS TO PULSES – THE JOURNEY OF 3D BIOPRINTED HEART VALVES

Daria-Ioana Vreme[1], Miruna-Olguța Ciobanu[1], Alexandru-Ionuț Sănduleanu[1], Ioana Adumitresei[1], Nicolae-Florin Iftimie[1], Gabriel-Erich Ganea[1], Iuliana Vrăjitoru[1], Mălina-Alexandra Bercu[1], Ionuț-Alexandru Ghicu[1], George-Vlad Jemna[1]
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Introduction:
3D bioprinting is revolutionizing regenerative medicine by providing cutting-edge solutions for heart valve replacement. This technology is set to transform patient care through its innovative approach. This review examines the significant progress and breakthroughs in 3D bioprinted heart valves and their substantial potential to enhance clinical outcomes.

Materials and Methods:
We conducted a comprehensive review of PubMed articles on 3D bioprinted heart valves published between 2018 and 2024. The review included studies involving patients with cardiovascular conditions such as congenital heart defects, severe aortic stenosis, and mitral valve regurgitation. We focused on studies that reported on various bioprinting techniques including extrusion-based, inkjet-based, and laser-assisted methods, as well as materials such as collagen, gelatin, and hydrogels, and clinical outcomes. Studies not centered on heart valve bioprinting or lacking substantial clinical data were excluded. The review covered bioprinting processes, scaffold fabrication, and performance evaluations in preclinical and clinical contexts.

Results:
The review highlights several advancements in 3D bioprinting technologies. Studies demonstrated statistically significant improvements in bioprinted heart valve functionality and biocompatibility, with values $p < 0.05$ reported in multiple studies. For instance, one study indicated $p < 0.01$ for the efficacy of different bio-inks, while another demonstrated confidence intervals excluding 1, highlighting the superior performance of bioprinted valves over traditional methods.

Conclusion:
The progress in 3D bioprinted heart valves underscores a transformative leap in regenerative medicine. Ongoing research aims to further refine these technologies, optimize bioprinting methods, validate long-term performance, and address regulatory considerations to facilitate broad clinical implementation.

Keywords: 3D Bioprinting, Heart Valves, Regenerative Medicine.

PREDICTING THE UNPREDICTABLE – AI IN THE PREVENTION OF CARDIOVASCULAR RISKS

Daria-Ioana Vreme[1], Miruna-Olguța Ciobanu[1], Alexandru-Ionuț Sănduleanu[1], Cosmin-Ștefan Velnic[1], Nicolae-Florin Iftimie[1], Gabriel-Erich Ganea[1], Iuliana Vrăjitoru[1], Mălina-Alexandra Bercu[1], Ionuț-Alexandru Ghicu[1], George-Vlad Jemna[1]
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Introduction:
The application of artificial intelligence (AI) in cardiovascular risk assessment represents a major leap forward in predictive medicine. AI systems are revolutionizing how we identify and manage cardiovascular risks, offering a transformative approach to early intervention and personalized care.

Materials and Methods:
We performed an extensive review of PubMed literature on AI applications in cardiovascular risk prediction, focusing on studies published from 2021 to 2024. Our review covered research involving various AI techniques, including machine learning and deep learning models, and their effectiveness in predicting cardiovascular events. Studies were selected based on their relevance to AI-based risk prediction, with exclusion criteria including non-AI studies and those with inadequate clinical data. The review analyzed different AI methodologies, such as supervised and unsupervised learning and their impact on risk evaluation.

Results:
Our review highlights significant advancements in AI-enhanced cardiovascular risk prediction. AI models have notably improved predictive accuracy for conditions such as atherosclerosis, hyperlipidemia, and coronary artery disease. For example, AI has shown enhanced effectiveness in assessing atherosclerosis and hyperlipidemia by analyzing biomarkers, resulting in more targeted interventions. Statistical analysis showed p-values below 0.05 and confidence intervals excluding 1, confirming AI's superior performance over traditional methods.

Conclusion:
The integration of AI into cardiovascular risk prediction offers notable benefits, including greater precision and earlier detection of risks. The reviewed studies highlight AI's potential to advance cardiovascular risk management. Future research should focus on refining AI algorithms, integrating them into clinical workflows, and addressing data quality and model adaptability issues.

Keywords: Artificial Intelligence, Cardiovascular Disease, Cardiovascular Risk Prediction

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