**Tuberous Sclerosis: Clinical Characteristics and MDT approach in management**

**Introduction:** Tuberous Sclerosis (TS) is a rare genetic disorder affecting multiple organ systems including kidneys, where it presents as angiomyolipoma (AML) and cysts. With the advent of mTOR inhibitors, the management of this condition has taken a new dimension. As our institution is a tertiary renal and neurological centre, we have a growing cohort of TS patients followed-up in our multi-speciality and multi-disciplinary team (MDT) TS clinic.

**Objectives:** To study the patient characteristics and explore the renal management strategies in our TS cohort.

**Methods:** A cross-sectional observational study of all patients registered in our TS database. Clinical characteristics and management strategies were analysed using SPSS.

**Results:** We currently have 25 TS patients under our MDT clinic follow-up**.** The MDT included nephrologist, neurologist and renal pharmacist.Mean age of our cohort was 40 with 14 males and 11 females**.** So far, 22/25 had some form of imaging (MR or CT Scan) of their abdomen/kidneys. Of these 22 patients, 13 (59%) had a size of AML >3cm and qualified for mTOR inhibitor therapy based on current international guidelines. 5 had AML size <3cm and 4 with no renal involvement. Mean eGFR of our sample was 74.6ml/min/1.73m2 with the mean haemoglobin 130mg/dl. A clear correlation was not observed between eGFR and the number of AMLs. A linear increasing trend was noted in the size of AMLs with age (Figure-1). Of the 13 eligible for mTOR inhibitor treatment, eight are on sirolimus, one on everolimus and rest under assessment. On review of neurological manifestations, 84% (16 of the available 19) had radiological evidence of cortical tubers in the brain, 11 had sub-ependymal nodules, 7 had SEGA (astrocytoma). Phenotypically, 14 of 25 had an intellectual disability, with 23 of the 25 patients having active epilepsy; generalised onset in 18 with co-existent focal onset in 17. The seizure type was unclassified in 5 patients. All 25 were on at least two antiepileptic medications.

**Conclusions:** Our study has given a better insight on TS patient characteristics and management strategies. Long term follow-up can better characterise the factors that can determine renal function decline. With expanding indications of the use of mTOR inhibitor a MDT approach would be an appropriate management strategy forward.

Figure-1: Association of age and AML Size

