



Blindness Associated with Dermal Filler protocol ** (6C's) : A stepwise systematic approach for acute retinal resuscitation**

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Step 1. Confirm Diagnosis

Cover the affected eye

Check counting finger to ensure this is normal

Cover the non-affected eye

- i) Check moving hand: if negative go to (iii): check light perception
- ii) Check counting fingers (finger one foot away from patient) : if negative go to (iii)
- iii) Check light perception (iphone torch/flashlight) : can you see the light
- iv) If negative light perception check pupillary reflex : Direct and Consensual

If negative to either i to iii of the above. Proceed with BAD protocol.

Record time of blindness

Keep calm (you and patient)

Optional step : To calm the patient (and some potential benefits) : Ocular massage

Gently perform ocular massage by pressing and release the affected eyeball every 1 -2 seconds if possible by the patient. (Place one finger on the closed lid globe, exert enough pressure to just indent the globe ,release and press every 2 seconds

If able to count fingers and read some text from a short distance: Do not have definitive Diagnosis !
Urgent Consult Ophthalmologist for the next step.



- **Step 2. Call for help *****

Initiate help and notify front office but stay with the patient at all time

- **Step 3. Carry out CNS and other assessment**

Carefully look for

- signs of skin ischaemia around the area of injection and
- signs of stroke (speech ,brief arm and leg strength)
 - squeeze both hands
 - raise both arms
 - raise both legs



- **Step 4. Carry out treatment**

1. Freshly prepare 3000 iu Hyaluronidase/HYALASE (2 ampoules)
With **3 ml Plain xylocaine in 3 ml syringe and 27 G 13mm needle.**
2. Patient lying supine or 30 deg reclined position.
3. Feel for orbital rim. Identify mid pupillary line on the superior orbital margin.
4. Identify and mark 3 points at the orbital margin. Point 1 at mid pupillary line, Point 2: 1 cm medial to point1 (1 finger breath medial to point 1) , Point 3: ~ 1 cm medial to point 2 (1 finger breath medial to the previous point).
5. With the thumb on the eyeball and index finger (stabilizing non-injecting hand) on the orbital margin. Insert the needle tip on the orbital margin, touching the bone and gently inject 1 ml of the Hyalase at orbital margin of the 3 points. (proceed to point 8)
6. **For those with advanced anatomical knowledge and competence, step 7 may be carried out.**
7. 1500 iu of Hyalase in 2 ml of **plain normal saline** (Not xylocaine) in 3ml syringe with with 27G 13mm needle. Advance the needle just beyond the orbital margin from point 2 above in a posterior and superior direction by 1 cm, constantly touching the bone of the roof of the orbit with the needle tip. Slowly inject the 2ml of Hyalase.
8. Gently massage the injected area for few seconds.
9. Gently perform ocular massage by pressing and release the affected eyeball every 1 -2 seconds if possible by the patient. (Place one finger on the closed lid globe, exert enough pressure to just indent the globe ,release and press every 2 seconds . Continue throughout Step 5 and Step 6)



- **Step 5. Carry out further treatment**

Freshly prepare 1500iu Hyaluronidase/HYALASE

With **5 ml Plain xylocaine in 5 ml syringe and 27 G 13mm needle or cannula**, flood the entire area showing signs of tissue ischaemia (blotchy, livedo reticularis)

- **Step 6. Carriage the patient to the nearest eye hospital or eye specialist**

1. Patient assisted and accompanied by walking/ wheelchair to a private car/ cab/uber
2. Injector equipped with the B.A.D emergency kit ***
3. Patient to continue ocular massage
4. Hand over to the specialist care with B.A.D emergency kit.

*** Front desk/ Non clinical staff to notify nearest Eye hospital emergency or closed by Ophthalmologist.

- Inform incident and patient transfer in 15 minutes.

*** B.A.D emergency kit

- 2 ampoules of Hyalase, 2 ampoules of N/S or Water, 3ml syringe and 27 G needles

**** **Acknowledgement:** B.A.D is a stepwise practical management protocol based on the cumulative works of Humzah etal, Walker etal, Loh etal , Goodman etal., Danks and potential others which may not have been made aware by the authors.

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