Early drainage of macula-involving massive suprachoroidal haemorrhage assisted with recombinant tissue plasminogen activator may lead to better visual prognosis

Mostafa Khalil , Eric Feron, Shohista Saidkasimova

Tennent Institute of Ophthalmology, Greater Glasgow & Clyde

Conventional Management

- Conventional management is to observe for 7-14 days to allow the clot to liquify before considering surgical drainage.
- However, permanent structural changes can occur in the retina within this timeframe
- This approach results in poor visual outcome in previous studies

Proposed intervention

- Suprachoroidal injection of recombinant tissue plasminogen activator may help to hasten clot breakdown and thus aid early surgical drainage.
- We present a case series of macula-involving massive SCH treated with early drainage aided by r-tPA

Method

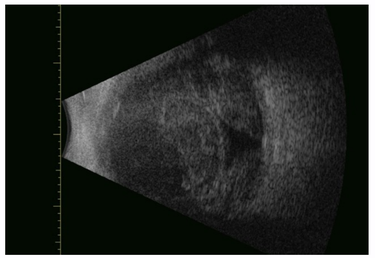
- Retrospective cross-sectional study of three patients with macula involving massive SCH.
- Treated with suprachoroidal injection of 100mcg of recombinant tissue plasminogen activator pre-operatively 24-48 hours prior to surgical drainage of SCH to hasten clot breakdown
- Early drainage of SCH no later than 48 hours post r-tPA injection, combined with vitrectomy and tamponade.

Results

- Early drainage was successful in all cases. Visual improvement was seen in all patients.
- **Case 1 –** 55-year-old female with aniridia, SCH following blunt trauma resulting in globe rupture. BCVA improved from HM to CF at final post-op visit.
- **Case 2 –** 22-year-old male, previous repair of penetrating injury, presented with SCH following intoxication and vomiting. BCVA improved from HM to 6/36 at final post-op visit.
- **Case 3 –** 89-year-old male, presented with SCH following XEN gel stent implant for POAG. BCVA improved from POL to 6/15 at final post-op visit.

Pre-op

B-USS of the Pre-operative appearance of case 1 demonstrating large macular haemorrhage, choroidal effusions of kissing configuration



Discussion

- The technique of r-tPA assisted early drainage of SCH is safe and has promising potential to restore visual function
- 100µg/0.4ml of r-tPA injected within 24 hours of bleed allows surgical drainage of suprachoroidal haemorrhage as early as day 2 post initial injury.
- Larger studies are required to confirm our findings

Post-op

Fundus photograph of post-operative appearance of case 1, demonstrating flat retina with complete resolution of haemorrhage

