

## Abstracts

### 4 - The PAUL Glaucoma Implant: Early results in a paediatric cohort

#### Mr Kenneth Yau

Drysdale E, Mohindra R, Vallabh NA, Fenerty CE  
*Manchester Royal Eye Hospital, Manchester, UK*

Correspondence: [Kenneth.Yau@mft.nhs.uk](mailto:Kenneth.Yau@mft.nhs.uk)

**Background:** The PAUL Glaucoma Implant (PGI) is a novel glaucoma drainage device, which has been demonstrated to reduce intraocular pressure (IOP) in an adult population. The efficacy and utility of PGI with an intraluminal prolene stent in paediatric glaucoma management has not been previously reported.

**Aims:** To evaluate the safety and effectiveness of the PGI for glaucoma management in a paediatric population (age 6 months to 16 years).

**Methods:** This is a retrospective evaluation of 25 cases of paediatric PGI surgery performed at Manchester Royal Eye Hospital between September 2019 and October 2020. The primary outcome measures were IOP and number of pressure-lowering medications following surgery.

**Results:** Mean preop IOP was  $29.8 \pm 6.0$  mmHg ( $n=25$ ), falling to  $11.3 \pm 4.0$  mmHg at week 1 post-operatively, then  $12.5 \pm 7.7$  at 1 month. At 3 months, mean IOP was  $18.3 \pm 7.8$  mmHg and  $13.9 \pm 4.8$  mmHg at 6 months ( $n=16$ ). This demonstrates persistently lower pressures compared with preop IOP following surgery. The number of medications preop was 4+ medications in all cases (mean  $4.16 \pm 0.9$  ( $n=25$ )). On day 7, one patient was on medical management (mean  $0.07 \pm 0.4$ ). Medications increased to a mean of  $0.36 \pm 1.0$  at one month,  $1.53 \pm 1.1$  at 3 months and  $1.38 \pm 1.4$  at 6 months ( $n=16$ ). Six patients required removal of the intraluminal prolene stent from the PGI for further pressure lowering. Two cases of hypotony were reported following removal of the intraluminal prolene stent. One case required re-stenting of the PGI.

**Conclusions:** These preliminary results demonstrate paediatric PGI surgery is effective at reducing IOP and the need for glaucoma medical therapy.