

**UK Paediatric Glaucoma Society (UKPGS) Annual Meeting**  
**Saturday 23<sup>rd</sup> January 2021, 10:30 – 16:35 GMT**

Approved CPD 6 points (Royal College of Ophthalmologists)

## Abstracts

### 23 - Childhood glaucoma in Down syndrome

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**Introduction:** The clinical characteristics of children with glaucoma and Down syndrome are described.

**Methods:** Retrospective review of 18,084 paediatric patients at a major USA academic practice over 10 years with 11 providers.

**Results:** 54 (0.3%) patients had primary congenital glaucoma (PCG). 225 (1.24%) patients had Down syndrome. 6 (2.7%) of Down patients had glaucoma, all bilateral: 1 (0.4%) "aphakic glaucoma" (AG) at 10 years-old; 5 (2.2%) "congenital glaucoma" (DCG) in infancy. DCG cases presented with: 5 (100%) corneal haze, 3 (60%) Haab's striae, 5 (100%) axial buphthalmos. DCG cases required: 5 (100%) angle surgery, 3 (60%) supplementary ocular hypotensive drops and 1 (20%) subsequent endoscopic cyclophotocoagulation. Only partial cannulation of the canal of Schlemm was possible in 4 (80%) patients. Axial lengths (mm) at 4-7 months-old in 5 DCG patients vs 25 Primary Congenital Glaucoma (PCG) patients were not significantly different on presentation for the longest eyes: 23.03 vs 22.14 (p=0.33).

**Discussion:** 2.2% [95% CI=(0.8%, 5.4%)] rate of DCG is larger than rates of PCG: 0.3% in our practice, 0.00146% in a nearby regional population study, 1/10,000 - 1/30,000 in Western countries (p<0.0001). DCG and PCG patients had similar axial lengths at presentation. Angle surgery was more challenging and likely less to be successful for DCG compared to PCG. This largest case series of DCG in the USA supports that DCG is a distinct entity from PCG and is the first to describe axial lengths and modern angle surgery techniques in these patients.