RETINOPATHY OF PREMATURITY SCREENING: THE EXPERIENCE OF BIRMINGHAM WOMEN'S HOSPITAL

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Background and Aims

Retinopathy of prematurity (ROP) is a disease of the developing retinal blood vessels in low gestational age and low birth weight infants. Screening is required to identify patients who require treatment to prevent the development of a potentially blinding disease. All babies <32 weeks and / or <1500g should be screened as per our Network Guidelines, which is based on American Academy of Paediatrics guidelines. We undertook an audit of the screening process within a level 3 neonatal unit to assess network guideline adherence and screening patterns.

Methods

Eligible babies between January 2017 and January 2018 were identified. This included babies born locally, and those from within the wider network. Each record was reviewed to collect birth weight, gestational age, corrected gestational age, number of screens, stage of ROP at each screen and treatment requirement.

Results

Data was collected on 146 babies (total eligible = 233). Adherence to local guidelines was overall good; all babies were screened except two due to parental refusal.

We had an incidence of ROP requiring treatment of 3% (published UK estimate 4%¹). Earlier gestation and low birth weight are associated with a worse grade of ROP, as shown by Figures 1 & 2 below. 7/146 babies required treatment with laser therapy or anti-VEGF therapy after a mean of 4.7 screens (range 3-7 screens). The earliest CGA requiring treatment was 33 weeks. There were no adverse anatomical outcomes 1 month post-treatment.

Conclusions

All babies who needed treatment were born at a gestational age of 25 weeks or less and weighed < 1000g. We suggest considering customised screening criteria informed by local audit given the morbidity associated with eye examinations.

Figure 1: Worst Grade of ROP by Birth Gestation

Figure 2: Maximum Grade of ROP by Birth Weight

Reference: 1. Adams G., Bunce C., Xing W., Butler L., Long V., Reddy A., Dahlmann-Noor A. Treatment trends for retinopathy of prematurity in the UK: active surveillance study of infants at risk. BMJ Open 2017;7:e013366

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