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Editorials

Premature infants—how long to follow up?

Understanding the natural history of a disease is essential to assess effective treatment and allocate resources. In a recent commentary in the *BJO* Hitchings¹ decried the absence of a natural history of glaucoma and thus a control group against which to measure treatment. Fortunately, other medical problems, such as retinopathy of prematurity (ROP), have been subject to study before it became unethical to withhold treatment.^{2–3} Possession of this information, however, may pose more questions than answers.

The paper by Darlow *et al* in this issue of the *BJO* (p 935) further illuminates the ophthalmic sequelae of pre-term birth. This prospective population based study avoids the bias associated with unit based reports. The standardised ophthalmic examination with excellent (91%) follow up at 7–8 years gives a clear picture of the eye problems to be expected in children who had been born prematurely. This and other studies^{3–8} indicate that premature infants who have not developed ROP or in whom it has regressed without cicatricial changes are still at greater risk of strabismus, myopia, astigmatism, anisometropia, and reduced vision. These findings are not new but the prevalence of these disorders is far greater than reported in the general paediatric population. Should screening of premature infants therefore be routinely extended to identify these problems as suggested by the authors? If so to whom, by whom, and when?

The populations of infants who appear to be most at risk of later eye problems are the most premature,⁹ those with the worst acute ROP,^{3–7–8} and those with neurological disease such as intraventricular haemorrhage⁷ or cerebral palsy.⁹ Children with cicatricial disease are also at risk of later problems such as glaucoma, cataract, and corneal opacification.¹⁰ In children without cicatricial disease reduced vision, strabismus, anisometropia, and astigma-

tism associated with prematurity are all detectable from 6 months⁸ but may increase at least until 2 years of age⁷ (although longitudinal data are not readily available).

Armed with this information guidelines could be introduced for the detection of later eye problems in this high risk group. This laudable aim is, however, difficult to achieve. There is no precise definition of what constitutes a visual defect in a child clinically sufficient to justify screening after the acute stage. Until then it would seem appropriate, as recommended by Darlow *et al*, to review all infants who develop any ROP at 1 and 2 years of age in addition to any children who have neurological problems or cicatricial disease.

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