Screening Examination of Premature Infants for Retinopathy of Prematurity

A Joint Statement of the American Academy of Pediatrics, the American Association for Pediatric Ophthalmology and Strabismus, and the American Academy of Ophthalmology

ABBREVIATION. ROP, retinopathy of prematurity.

Progressive retinopathy of prematurity (ROP) was once considered an untreatable condition leading to blindness. The results of the Cryotherapy for Retinopathy of Prematurity Trial indicated that treatment was associated with an approximately 50% reduction in the occurrence of posterior retinal traction folds and/or detachments. An accompanying editorial stated that “a new standard of care is evolving [requiring] careful retinal examination beginning 4 to 6 weeks after birth by an ophthalmologist experienced in looking at retinas in premature infants.”

This statement outlines the principles upon which a screening program to detect ROP in infants at risk might be based. It is to be emphasized at the outset that any screening program set up to implement an evolving standard of care suffers from inherent defects such as overreferral or underreferral and cannot, by its very nature, duplicate the precision and rigor of a scientifically based, randomized, prospective clinical trial. With that in mind, and based on the information published thus far, the sponsoring organizations involved in the trial study suggest the following guidelines:

1. Infants with a birth weight of less than or equal to 1500 g or with a gestational age of 28 weeks or less as well as those infants more than 1500 g with an unstable clinical course felt to be at high risk by their attending pediatrician or neonatologist should have a dilated indirect ophthalmoscopic examination to detect ROP.

2. This examination should be carried out by an ophthalmologist with experience in the examination of preterm infants.

3. Examination should be performed between 4 and 6 weeks’ chronological age or between 31 and 33 weeks’ postconceptional age as determined by the infant’s attending pediatrician or neonatologist. (Postconceptional age is defined as gestational age at birth plus chronological age.)

4. Scheduling of follow-up examinations are best determined by the findings at the first examination using the International Classification of Retinopathy of Prematurity, (eg, if the retinal vasculature is immature and in Zone II but no disease is present, follow-up examination should be planned at approximately 2- to 4-week intervals until vascularization proceeds to Zone III).

5. Infants with ROP or immature vessels detected in Zone I should be seen at least every 1 to 2 weeks until normal vascularization proceeds to Zone III or the risk of attaining threshold conditions is passed.

6. Infants with threshold disease (stage 3 ROP, Zone I, or II in 5 or more continuous clock hours or 8 cumulative clock hours with the presence of “plus disease”) should be considered candidates for ablative therapy of at least one eye within 72 hours of diagnosis.

7. The attending pediatrician or neonatologist should refer the infants who fit the examination criteria for initial examination to the ophthalmologist and indicate which infants are medically able to be examined. If a transfer to another neonatal unit or hospital occurs, the infant’s new primary care physician should ascertain the current ophthalmologic examination status of the infant from the record or through communication with the transferring physician, so that any necessary ophthalmologic examinations can be arranged.

These recommendations are evolving and, as more long-term ROP outcomes are known, may have to be modified.

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REFERENCES


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