

Editorial

Retinopathy of Prematurity

It has been estimated that each year 50,000 newborns born prematurely and underweight; and are candidates to have retinopathy of prematurity (ROP).¹ In the developing countries where we see most of the blind children, ROP is accused to be one of the essential causes of blindness.² ROP and its consequences (impaired vision and blindness) could be prevented in most cases by an early ocular examination (before 9 weeks of infantile age) and prompt therapy by laser or cryopexy before the disease progresses to advanced stages (Stages 4 or 5), where therapy could be hardly successful. In this issue of Iranian Journal of Ophthalmology (IrJO) three important articles concerning ROP are presented. Since new steps in detection, treatment, and education of physicians and parents are being taken in our country, focusing on such subject seems essential.

In the article "Screening for Retinopathy of Prematurity: The Role of Educating the Parents"³ Mousavi et al (pages: 13-18) have presented 605 newborns, suspected to have ROP. The mean gestational age (GA) and birth weight (BW) in these infants were 31.4 (SD 2.3) weeks and 1,562 (SD 443) g, respectively. 443 (73.2%) parents had received simple recommendation concerning early ophthalmic examination (group A) and 162 (26.8%) parents had been given written and also had been informed orally about the outcomes of the disease in case of late consultation (group B). 81.2% of the infants in group A were examined before 9 weeks of infantile age vs. 95.5% of group B. They have indicated that the incidence of stage 4 and 5 of ROP was significantly higher in group A. The authors particularly emphasize on the importance of informing and educating the parents about the undesired consequences of late consultation and its sight threatening results.

In another presentation in this issue of the journal, Mousavi et al⁴ (pages: 19-24) have reviewed the "Characteristics of Advanced Stages of Retinopathy of Prematurity in Iran". The investigation has been done during the years 2003-2007 at the same referral center (Farabi Eye Hospital, Tehran). During those years 1,053 premature infants suspected to have ROP were examined and 380 infants (36.1%) had ROP and 91 of them (8.6%) presented with advanced ROP. Forty patients had bilateral stage-5 ROP. 74.7% of infants with advanced ROP had been examined after 9 weeks of post-natal age.

In this investigation; low GA was considered the only significant risk factor for development of advanced ROP ($P \leq 0.001$). Roohipoor et al⁵ from the Farabi Eye Hospital (Pediatric Vitreoretinal Section) (pages: 25-31) report "Anatomical Outcome of 25-gauge Vitrectomy Associated with Scleral Buckling in Stage 5 Retinopathy of Prematurity: A Case Series Study". Twenty-one eyes with stage-5 ROP were vitrectomized with 25 gauge probe and had scleral buckling. The end anatomical success rate (complete reattachment) is reported to be only 38%. They have not used internal tamponades explaining that a complete removal of the tractions and membranes with a fine 25 gauge probes would allow them to remove all the posterior tractions and the anterior buckling would reduce the remaining peripheral tractions and protect the retina to be attached. The technique is open to many discussions.

These three presentations emphasize the importance of early detection and treatment of ROP and as it was indicated late examination of the newborns (after 9 weeks) and late treatments would result in undesired outcomes. It is now evident that ROP can be detected and treated successfully in most cases, and this is being done in the developed countries, in most cases. In a report from New Zealand⁶ only one out of 85 premature newborns developed stage-4 ROP who was examined at eleventh weeks of birth.

Fortunately, during the recent few years, thanks to our colleagues, neonatologists, pediatric vitreoretinal ophthalmologists this burden of blind infants caused by ROP has been reduced to its minimum and most of our ophthalmic centers under the guidance of the ministry of Health and Education are consciously taking care of these infants. But, still in Iran and other developing countries more extensive programs are needed to overcome the social and economic burden of this disease.

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References

1. Saugstad OD. Oxygen and retinopathy of prematurity. J Perinatol 2006;26(Suppl 1):S46-50.
2. Clemett R, Darlow B. Results of screening low-birth-weight infants for retinopathy of prematurity. Curr Opin Ophthalmol 1999;10(3):155-63.
3. Mousavi SZ, Karkhaneh R, Riazi Esfahani M, et al. Screening for retinopathy of prematurity:the role of educating the parents. Iranian Journal of Ophthalmology 2010;22(2):13-8.
4. Mousavi SZ, Riazi Esfahani M, Roohipoor R ,et al. Characteristics of advanced stages of retinopathy of prematurity in Iran. Iranian Journal of Ophthalmology 2010;22(2):19-24.
5. Roohipoor R, Riazi Esfahani M, Karkhaneh R, et al. Anatomical outcome of 25-gauge vitrectomy associated with scleral buckling in stage 5 retinopathy of prematurity: A case series study. Iranian Journal of Ophthalmology 2010;22(2):25-31.
6. Darlow BA, Clemett RS. Retinopathy of prematurity: screening and optimal use of the ophthalmologist's time. Aust N Z J Ophthalmol 1990;18(1):41-6.