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PREVENTION OF AMBLYOPIA IN CHILDHOOD TRAUMATIC CATARACT WITH INTRAOCULAR LENS IMPLANTATION: A CASE REPORT*

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Traumatic cataract is one of the most important reasons for amblyopia in young children. It is well known that ophthalmologists have usually been unsuccessful in preventing amblyopia in children aged three to seven years, who have sustained traumatic cataract. In spite of successful cataract removal and diligent contact lens wear, these eyes usually become amblyopic. The use of an intraocular lens in this situation has been studied widely[1].

We report herein a case of the youngest patient in which an intraocular lens had been implanted in Turkey to prevent amblyopia.

Case Report

A five-year-old boy was referred to our department with a trauma to his right eye caused by the penetration of chestnut prickles in April, 1985. There were many prickles in the cornea and some of them had entered the anterior chamber. The depth of the anterior chamber was normal but the anterior capsule of the lens had been ruptured by these prickles and most of the lens had become cataractous. The patient presented with pain and visual acuity of hand motion in the right eye. His left eye was uninjured. He was hospitalized, and under general anesthesia, with the use of an operating microscope, the prickles were extirpated with fine-tipped instruments. During the operation the depth of the anterior chamber did not change. Seven days after the operation the patient was discharged and was prescribed atropin sulfate and corticosteriod eye drops to be used two times a day. One month postoperatively, the swollen cataract showed signs of reabsorption, and three months after the injury eighty percent of the lens material

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had disappeared. At that time a linear extraction operation was deemed unnecessary. With his parents' permission, the Dubroff Model 44 (11.5 mm) flexible anterior chamber intraocular lens was implanted under general anesthesia. The power of the lens was +19.0 diopters.

The surgery and the postoperative course were uneventful. The anterior segment remained clear and quiet. Four weeks postoperatively, uncorrected visual acuity in the right eye was 0.1. The pupil was round. The intraocular lens appeared to be well-centered and no iris distortion was noted clinically. Then a Neodymium:YAG laser posterior capsulotomy was performed. The remaining lens material and opaque posterior capsule ruptured easily. The laser used in this case was the Sharplan Q-switched Nd:YAG laser which was mounted on a Heig-Streit slit lamp. The pulse energies were 1.4 and 3.4 mJ. The total number of pulses required for the capsulotomy was six. Post-laser atropin sulfate and corticosteriod eye drops were applied for a week. No detectable damage to the intraocular lens nor a rise in intraocular pressure were observed in the patient. Uncorrected visual acuity increased to 0.7. The patient was followed for a period of 18 months. Figs. 1-2 show the final condition of the patient.

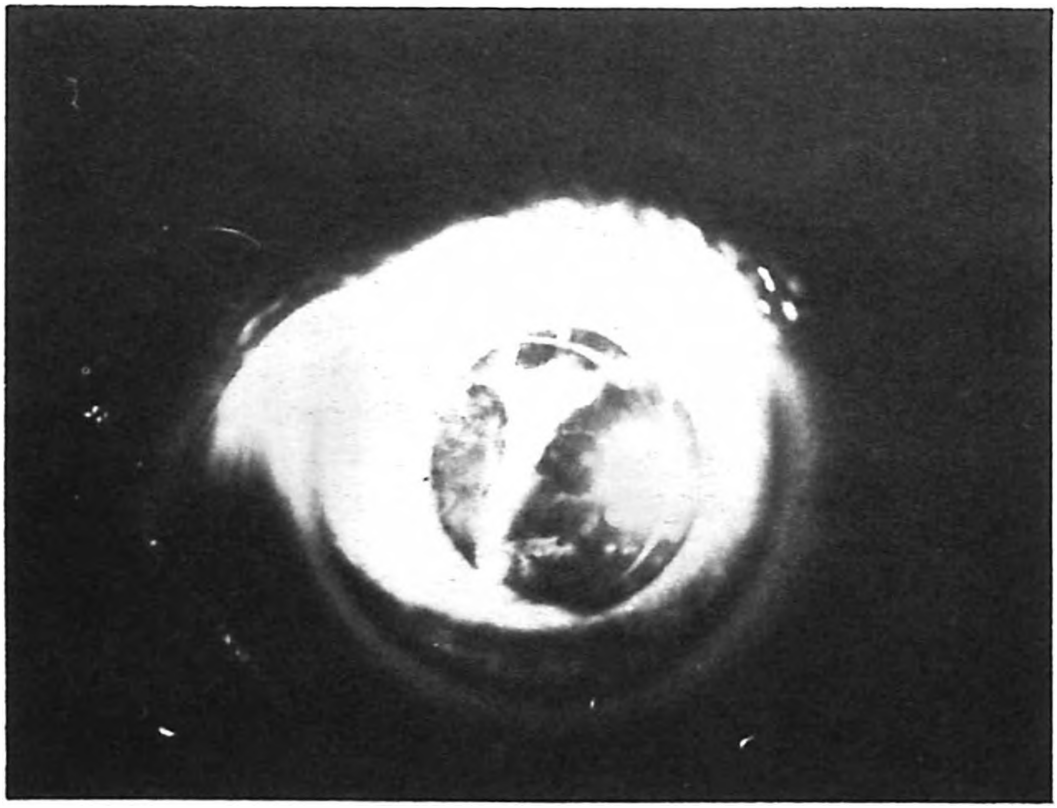

Fig. 1 : Flexible anterior chamber intraocular lens implantation in situ.

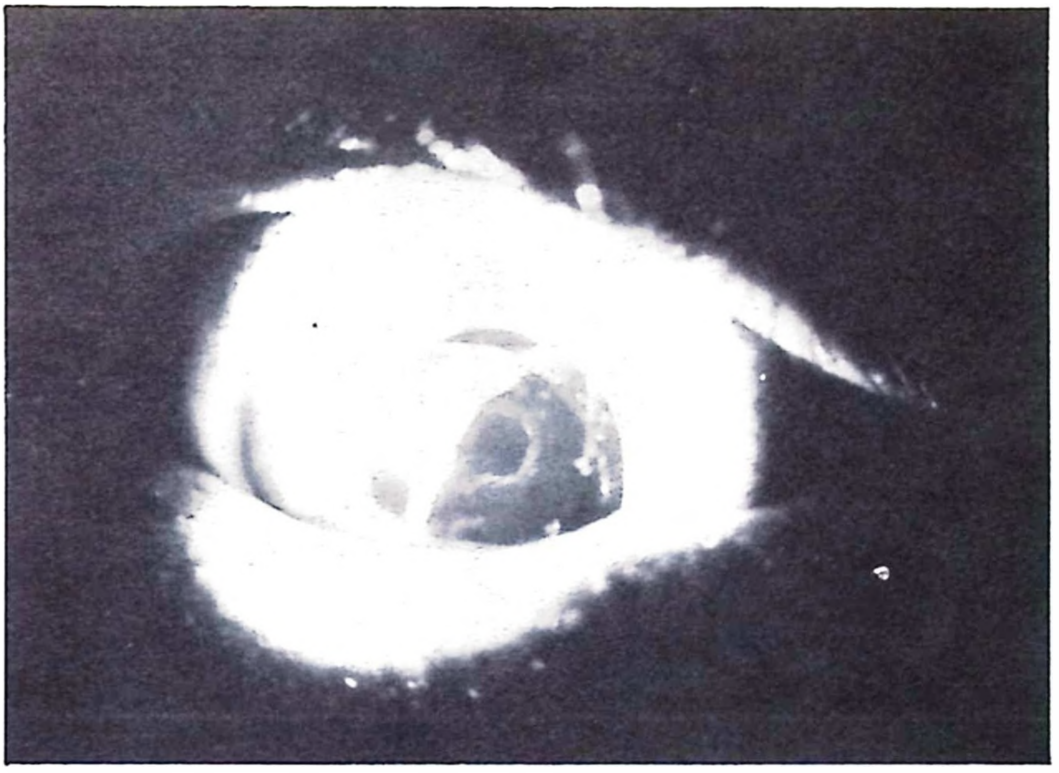

Fig. 2: Central part of the opaque posterior capsule cleared by the Nd:Yag laser in the presence of the anterior chamber lens.

Discussion

The possibility of amblyopia developing in young children who suffer a traumatic cataract is high. In children aged 2-6 years it is extremely difficult to employ contact lenses following removal of the traumatic cataract. Studies have shown that results have not been very successful since suppression and diplopia developed in most of the cases[2-3]. We recently reported some successfully treated cases with extended-wear soft contact lenses[4], but we believe that contact lens treatment for the prevention of amblyopia in childhood traumatic cataract is expensive and unpractical.

The use of an intraocular lens in this situation has been studied widely in the Netherlands and more successful results have been obtained than with other methods[1].

Intraocular lens implantation also includes some risk factors, but the alternative, amblyopia, is also harmful.

Applications of the Neodymium:YAG laser in pediatric ophthalmology are similar to that in adults. Currently one of the most practical uses of the Nd:YAG laser has been in the treatment of heavy lens material remaining after congenital or

traumatic cataract surgery. Considering the great propensity of the child's eye to reabsorb lens material, fewer sessions are required[5].

The patient described in this report is the youngest case of an intraocular lens implant in Turkey. Postoperative increased visual acuity and an uncomplicated course encourage us to continue with this procedure.

Summary

A five-year-old boy with traumatic cataract is presented who had undergone a combined anterior chamber lens implantation and the Nd:YAG laser posterior capsulotomy procedure. The patient was followed up for a period of 18 months. The young boy showed an improvement in visual acuity without any signs of complications. These results encourage further investigation into this procedure.

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