Abstract

The purpose of this study is to evaluate, based on 9 years follow-up visits, the safety and efficacy of Verisyse phakic intraocular lens (pIOL) implantation to correct high anisometropia in amblyopic children and children with high ametropia and neurobehavioral disorders who were non-compliant with traditional medical treatment including glasses or contact lenses.

The retrospective study was conducted on patients who underwent Verisyse pIOL implantation for anisometropic myopia (range: -11 to -19.5 D) in 38 eyes, anisometropic hyperopia (range: +7.25 to +10.5 D) in 11 eyes and bilateral high ametropia in children with neurobehavioral disorders. The patient ages at the time of implantation ranged from 5 to 16 years. Sixty-five eyes in 57 children were implanted with an anterior chamber, iris-fixated pIOL Verisyse. Visual acuity, manifest refractive spherical equivalent (MRSE) and endothelial cell counts were evaluated pre- and postoperatively.

The main findings were as follows: 83% of eyes (54/65) were corrected to within ±1 D of emetropia, the remaining 17% (11/65 eyes) were corrected to within ±2 D. Uncorrected visual acuity improved from 0.013 preoperatively to 0.33 postoperatively. Corrected visual acuity improved from 0.27 preoperatively to 0.61 postoperatively. Endothelial cell count was ≥3000 after surgery. One eye required an IOL exchange, no other clinically significant complications were encountered.

Verisyse phakic IOL implantation in children with anisometropic amblyopia showed a positive impact on visual acuity.

Keywords

anisometropia, children, phakic intraocular lens, Verisyse, refractive surgery