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CONGENITAL CATARACT

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One of the primary causes of blindness in infants and young children is congenital cataract. The World Health Organization (WHO) estimates that congenital cataract affects 14 million children worldwide. A study was conducted on on 82 infants who had congenital cataract surgery at the same ophthalmological center in Bucharest, Romania: 46 (56.1%) were males and 36 (43.9%) were females. 49 (59.76%) and 33 (40.24%) of the 82 patients had bilateral cataracts and unilateral cataracts, respectively. Clinically, cerulean, nuclear, lamellar, and complete cataracts were the most common. Depending on the type of intraocular lens (IOL) the patients had, nine different surgical techniques were used. Significant morphological alterations were detected at the anterior, posterior, and subcapsular levels.

A retrospective interventional study performed by the same surgeon at the Clinical Hospital of Ophthalmological Emergencies in Bucharest, Romania, between 2016 and 2020 on 103 eyes in 82 patients. The study included both male and female patients with cataracts, ranging in age from six months to eighteen years, who had either unilateral or bilateral. The authors also received clearance from the Clinical Hospital of Ophthalmological Emergencies' Board of Ethics in Bucharest. The pediatric inquiry involved a lot of detail, including the child's and parents' family histories to track down any possible genetic abnormalities, especially those involving bilateral cataracts. Preoperative investigation was performed on all patients, including examinations under anesthesia for extremely young patients and examinations under a slit lamp after consent. For every patient, cycloplegic and manifest combined, objective refraction was performed. A portable refractometer was used to test toddlers under the age of three while they were under general anesthesia. A regular auto-refractometer was used to test children who were older than three years old. Three topical administrations of 1% Cyclopentolate hydrochloride spaced ten minutes apart were used to induce cycloplegia. Following the initial drop, cycloplegic refractometry was performed 60 minutes later. The fundus examination was performed on all patients where the opacity permitted it, enabling the visualization of the macula, retinal veins, and optic nerve papilla. A and B modes To compare the two eyes' axial lengths, US was done on both of them. Using a range of formulas based on the patient's age, biometry was used to determine the implant's lens power. When possible, the anterior and posterior capsulorhexis were to be performed as part of the surgical strategy. The surgical procedure involved making an incision, coloring the anterior capsule to facilitate identification, injecting a viscoelastic material into the anterior chamber to keep it deep and stable, and shielding the corneal endothelium. Next, the anterior capsulorhexis was carried out with extreme caution, using a capsulorhexis forceps to carefully follow the shape of a plastic ring with a specific diameter that was customized for the intended implant and placed on the anterior capsule

Classification and analysis of congenital cataracts, i.e., an interventional study where capsules were obtained and examined histopathologically, demonstrating that the evaluation of capsular alterations accompanying lens opacities can only occur during surgery. In the anterior and posterior capsules, different HP alterations were observed in all types of congenital cataract that were examined. This discovery fully supports the use of the posterior capsulotomy per primam surgical technique in the treatment of congenital cataracts.