

## The final visual outcomes following cataract surgery at outreach camps in rural area in Timor-Leste

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**Backgrounds:** Timor-Leste is a newly formed country which got independence in 2002. Since then, cataract still remains the main cause of reversible blindness in Timor-Leste. Due to taboo and lack of education, majority of the patients do not opt for eye consultation. Because of which, surgical outreaches have been used as one of the tools by the Ophthalmology Department of Hospital Nacional Guido Valadares (HNGV) to reduce the number of blindness due to cataract.

**Aim:** The purpose of this study was to determine the final visual outcome of patients who undergo cataract surgery through outreach services in Timor-Leste.

**Methodology:** The study began with a week at the cataract surgical outreach in remote areas of six different locations of Timor-Leste. Data were collected from all patients who had cataract surgery during the program from July–December 2017. Patients were identified by the surgery sheets.

**Results:** A total of 215 (M: 56%, F: 44%) cataract surgeries were performed in outreach for a week, in six months period of time. Of these, 60% were right eye and 40% left eye. Of the total, 204 had uncomplicated cataract surgery, while 11 required anterior vitrectomy and ACIOL (anterior chamber intraocular lens) insertion. For accurate interpretation of the visual outcome, patients were divided into three groups depending on first day of post-operation. Vision of 6/18 or better was used to define acceptable post-operative vision. This group consisted of 86 (40%) patients; 6/18=12 (14%), 6/15=13 (15%), 6/12=26 (30%), 6/9=8 (9%), 6/7.5=10 (12%) and 6/6=17 (20%). Regular (6/24–6/60) and poor visual outcome (<1/60) were 78 (36%) and 51(24%), respectively. From 78 patients with regular outcome, 68 (87%) were due to corneal edema, 2 (3%) hyphema and the restair bubble and lens material retained with 3 (4%) and 5 (6%), respectively. The reasons for poor visual outcome secondary to comorbidities associated were 25 (50%) with macular degeneration, 8 (16%) with previous trauma + lens dislocation, 10 (20%) with glaucoma and 7 (14%) were uneducated. As data of ocular anatomy and disease dilated, thus did the approach to cataract surgery. whereas couching is usually thought to own been

the predominant technique of cataract treatment till the eighteenth century, ancient literature suggests that as early as 600 B.C., AN Indian doctor, named Sushruta, could are the primary to perform some variety of extracapsular cataract extraction (ECCE).<sup>6</sup> The procedure is termed “extracapsular” as a result of the membrane is left in situ. the primary true cataract extraction was performed in 1747, in Paris, by the French doctor Jacques Daviel. His procedure was more practical than couching, with AN overall success rate of fifty.<sup>7</sup> Daviel’s procedure primarily concerned creating an oversized tissue layer incision (more than ten mm), puncturing the membrane, expressing the nucleus, and so extracting the lens cortex by surgical operation. though this procedure depicted nice progress compared to couching, operative complications were extended, as well as poor wound healing, preserved lens remnants, posterior capsular action, and infection.

Despite the risks of Daviel’s procedure, it remained the accepted approach for cataract extraction for over a hundred years, till the nineteenth century, once intracapsular cataract extraction (ICCE) became, for a time, the popular technique of cataract removal. However, enhancements in operative strategies and surgical tools eventually light-emitting diode to the reemergence, within the Seventies, of ECCE because the most well-liked approach over ICCE, that fell out of favor due to high rates of glary complications. modern-day versions of ECCE and manual tiny incision cataract surgery (MSICS) square measure currently employed in several elements of the globe, as well as the us. Techniques for acting extracapsular cataract removal have dramatically improved over time, to the purpose wherever the general success rate is currently ninetieth to ninety fifth. In 1753, prophet Sharp performed the primary documented intracapsular cataract extraction (ICCE).<sup>9</sup> With ICCE, the complete lens, as well as the membrane, is removed through an oversized limbal incision. prophet Sharp used his thumb to expel the cataract from the attention. Fracturing the zonular fibers that suspend the lens to the attention was an important a part of the ICCE procedure. The mechanism by that the zonules were broken has evolved from the first use of extractor to car-

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ry the membrane and manually disrupt the zonules. In 1957 Joaquin Barraquer was the primary doctor to utilize the protein alpha-chymotrypsin to dissolve the lens zonules.<sup>10</sup> Cryoextraction additionally tested to be a prosperous technique for ICCE. With cryoextraction, a frozen probe is applied to the cataract, that adheres to the probe, and also the cataract is gently exhausted from the attention. The success of ICCE grew with the arrival of contemporary anesthetic and sterilization techniques, however its quality quickly declined as enhancements were created in ECCE techniques. the foremost drawbacks of ICCE square measure associated with removing the lens and membrane in its entirety. The membrane is a wall between the anterior and posterior structures of the attention. probably glary complications from ICCE, like visual impairment, macular hydrops, and tissue layer decompensation, square measure a lot of possible to occur once this wall isn't in situ to forestall the vitreous from prolapsing forward.

Conclusion: Cataract surgery outreach was successful and improved the vision of patients in rural area.

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