Service Priorities and Programmes

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Presumed amblyopia should not be a barrier to cataract surgery

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Introduction

Age-related cataract is a leading cause of visual impairment and an important health issue globally, and cataract surgery is the most commonly performed ophthalmic surgical procedure worldwide. It was estimated that about 3% of all cataract surgeries in adults were performed in eyes that have pre-existing amblyopia. There has been a long-standing belief that eyes with amblyopia have limited benefit from cataract extraction in the adult age. There is no consensus in timing and sequence of cataract surgery in this group of patients. Although there are devices available to estimate the visual potential, such as potential acuity meter and laser interferometer, studies have shown that these devices have limited predictability in visual outcome following cataract extraction, particularly with dense cataracts. Consequently, surgery in an amblyopic eye is often delayed until the cataract has already progressed to an advanced stage, which increases the overall surgery-associated risks This is particularly important in public hospital setting in which there is long waiting time for cataract operation because perceived visual prognosis could affect the decision of cataract extraction.

Objectives

In this study, we report the visual outcomes of cataract surgery with intraocular lens implantation in eyes with high myopia and presumed anisometropic amblyopia in a public hospital setting. These patients were often discouraged to receive cataract surgery, and surgeons were sometime reluctant to enlist these cases in view of the long waiting time for operation.

Methodology

A consecutive series of phacoemulsification in eyes with axial length ≥ 30.0 mm was analyzed. Eyes with an axial length difference of ≥ 2 mm compared to the contralateral eye were presumed to have anisometropic amblyopia (Group 1). Eyes with an axial length difference within 0.3 mm compared to the contralateral eye were used as controls (Group 2). Main outcome measures included corrected distance visual acuity (CDVA) at 6 months and latest follow-up

Result

Results: Overall, 79 eyes from 69 patients were included in this study. There were 39 eyes in Group 1, and 40 eyes in Group 2. The mean axial length was similar between the 2 groups ($p = 0.129$). The mean follow-up duration was 31.0 ± 12.2 months ($p = 0.961$). At the time of surgery, patients were older and the preoperative CDVA was poorer in Group 1 ($p < 0.001$). The postoperative CDVA at 6 months as well as the latest CDVA were similar between groups ($p > 0.149$). As compared to baseline CDVA, the change in CDVA at 6 months and change in latest CDVA were significantly higher for Group 1 after adjusting for difference in age and preoperative CDVA between the 2 groups ($p = 0.006$ and $p = 0.002$) Conclusions: This study showed the benefits of cataract surgery in adult patients with presumed anisometropic amblyopia and high myopia.