

ABSTARCT

Introduction

Although cataract surgery is a common procedure, performing it in a small pupil is not only challenging but is also associated with complications. Iris hook is a mechanical device use to expand the inadequately dilated pupil during surgery. Therefore, it is worthwhile to assess the outcomes of small pupil cataract surgery with iris hook.

Objective

To assess treatment outcomes of patients underwent small pupil cataract surgery with iris hook in Northampton General Hospital, United Kingdom.

Methods

A hospital-based cross sectional study was conducted at the Ophthalmology surgical ward of Northampton General Hospital, United Kingdom. Secondary data on patients who underwent small pupil cataract surgery were collected. Data were compared using t-values and Chi square values.

Results

A total of 50 patients were included in the study whose mean age was 68.78 years (SD=8.74). Nearly half of the sample (52%; n=26) had ocular diseases. Majority of the sample (84%) had comorbidities. Compared to pre-operative visual acuity, statistically significant difference was shown at one week ($p=0.001$), four weeks ($p<0.001$) and in 12 weeks ($p<0.001$) after surgery with iris hook. Improvement of intraocular pressure values were not significant.

Amongst the patients who had post-operative anterior chamber reaction (30%), majority had +1 reaction (28%; n=14). Pre-operative NSAIDs eye drops, and post-operative anterior chamber reaction were not

significantly associated ($X^2=1.438$; $df=1$; $p=0.23$). Half of the sample (46%; $n=23$) had post-operative complications with uveitis being the commonest ($n=12$), followed by high intra ocular pressure ($n=7$) and cystoid macular oedema ($n=7$). Cystoid macular oedema showed a statistically significant association with pre-operative NSAIDs eye drops ($X=3.861$; $df=1$; $p<0.05$). Having ocular disease like glaucoma or uveitis was not associated with the post-operative steroid regimens ($X=1.039$; $df=1$; $p=0.308$). Visual acuity was not associated with either gender ($X^2=0.023$; $df=1$; $p=0.879$) or age category ($X^2=1.163$; $df=3$; $p=0.762$). Gender was not associated with post-operative complications as well ($X^2=2.158$; $df=1$; $p=0.142$).

Conclusions and Recommendations

Small pupil cataract surgery with iris hook gives better outcomes in visual acuity. Further prospective studies are recommended to establish temporal associations and to identify the factors associated with outcomes of small pupil cataract surgery with iris hook.

Keywords: cataract, small pupil, surgical outcome, iris hook