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Improving Adherence to Initial Workup and Achieving Target Intraocular Pressure in Primary Open Angle Glaucoma Patients

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Introduction

Primary Open Angle Glaucoma (POAG) is the most prevalent form of glaucoma in Hong Kong, and a leading cause of blindness. Major risk factors for blindness include severity of disease at presentation and life expectancy. Initial investigations are therefore crucial to determine the severity and risk of disease progression. As intraocular pressure (IOP) is the major modifiable factor, setting and achieving a target IOP is prudent to halt progression in long run.

Objectives

To compare the adherence to standardized investigations before and after education of medical staff through seminar and intensive resident tutoring: (1) gonioscopy, (2) optic disc photography, (3) retinal nerve fibre layer imaging by optical coherence tomography, (4) central corneal thickness and (5) automated or manual perimetry. We benchmark the above tests to be performed within 6 months after establishing the diagnosis. To compare the percentage of patients where (1) ophthalmologists establishing the diagnosis set a target IOP and (2) IOP reduction reached $\geq 20\%$ from baseline after 6 months, before and after intervention.

Methodology

A pre- and post-intervention retrospective review of medical records is performed. 50 patients where POAG diagnosis was made before 2012 and 50 patients on or after June 2012 were analyzed. All patients were followed up for at least 6 months. Odds ratios were determined to compare the outcome parameters.

Result

There was improvement of performing the 5 baseline tests within 6 months, where optic disc photography, retinal nerve fibre layer imaging and central corneal thickness reached a statistically significant increase between study periods ($p < 0.05$). However, even after intervention, only 66% of patients received gonioscopy within 6 months and 26% of cases where doctors had documented an IOP reduction target. Even though

78% of patients had their IOP reduced by $\geq 20\%$ at 6 months, further reinforcements should be warranted in the above areas.