

## Abstract

### **Hemodynamic differences in Primary Open Angle and Primary Closed Angle Glaucoma: a cross sectional retrospective study**

Asifa Ahmed<sup>1</sup>, Shazia Micheal<sup>1</sup>, Farah Akhtar<sup>2</sup>, Muhammad Imran Khan<sup>1</sup>, Sajeela Yousaf<sup>1</sup>, Muhammad Bilal<sup>3</sup>, Felix Gill<sup>1, 4</sup>

**Purpose:** To determine whether or not there is an association of hemodynamic factors with Primary Closed Angle Glaucoma as well the comparison of these factors in Primary Closed Angle Glaucoma (PCAG) and primary open angle glaucoma (POAG).

**Study Deign:** A cross sectional retrospective study by medical record review was perused.

**Patients and Methods:** 170 POAG and 170 PCAG were identified from the record of patients presenting to Christian Eye Hospital, Taxila and different hemodynamic parameters were evaluated. Descriptive statistical analysis as well as logistic regression was performed to analyze the data.

**Results:** High Systolic Perfusion Pressure (SPP), Diastolic Perfusion Pressure (DPP), and Mean Perfusion Pressure (MPP) were more strongly associated with PCAG (p-value 0.0001) and Odd Ratios (OR) 3.65(CI 2.30, 5.78), 7.04(CI 4.22, 11.73) and 6.64(CI 3.31, 14.07) respectively. In patients with no systemic diseases, DPP and Mean Arterial Pressure (MAP) was significantly associated with PCAG (p-value 0.0001) whereas SPP (p-value 0.03) was associated with POAG.

**Conclusion:** We suggest that patients with PCAG have high values of systolic, diastolic and mean perfusion pressure and it can be attributed to disturbance at different levels of visual processing, whereas POAG are associated with low systolic perfusion pressure and high intraocular pressure. Al-Shifa Journal of Ophthalmology 2010; 6(1): 9-12 © Al-Shifa Trust Eye Hospital, Rawalpindi, Pakistan.