

INTRODUCTION

Glaucoma is one of the leading causes of blindness in the world and is characterized by the presence of chronic optic neuropathy combined with characteristic morphological changes at the optic nerve head and corresponding visual field defects (*European Glaucoma Society journal, 2003*). From the most basic standpoint, the eye offers a unique opportunity to study hemodynamics. It is the only location in the body where capillary blood flow may be observed in humans non-invasively. Over 100 years ago, Wagemann and Salzmann observed vascular sclerosis in many of their glaucoma patients. Through the years, numerous other researchers have uncovered pieces of the ocular blood flow puzzle: documenting reductions in the capillary beds, sclerosis of nutritional vessels, vascular lesions and degeneration, and other circulatory pathologies in many eye diseases including glaucoma. A century of observation and circumstantial evidence suggesting avascular component in the pathogenesis of glaucoma is now supported by direct experimental evidence. This transition from theory to fact took 100 years because the technology required to make such specialized measurements of hemodynamic function has only recently become available. Now that the link has been established, there has been a focus on ocular hemodynamics in

glaucoma and the effect of intraocular pressure (IOP)-reducing medications on ocular perfusion.(*Choplin, et al; 2007*).