INTRODUCTION

Ultrasound biomicroscopy (U B M), developed by Pavlin et al. in 1995, uses high frequency ultrasound (50 MHz) to produce in vivo image of the anterior segment with resolution as high as 50 um. It is possible to study in detail and to quantify precisely anatomic relations among the anterior segment structures ***(Pavlin et al., 2008).***

The advantages of UBM for glaucoma alongside OCT that the resolution is quite good with OCT, but because it uses optical waves, the big limitation is its ability to visualize what's happening behind the iris pigment epithelium. UBM's acoustic waves enable us to see behind the iris to get a complete anterior segment picture ***(Ahmed, 2011)***.

The advantages of UMB over OCT that UBM gives the ability to see the interior structure of the eye lesions included (iris nevi and iris cysts). Cyst walls and ciliary body cysts can be visualized much better with the UBM. OCT certainly delivers very good corneal and anterior chamber angle imaging, but UBM goes deeper ***(Ahmed, 2011)***.

Ultrasound biomicroscopy is used to study the functional anatomy of the filtering bleb using high frequency (50 MHz) probe, which provides high resolution of image of filtering blebs. It was possible to obtain longitudinal and transverse images of filtering blebs, to measure the height, to evaluate the reflectivity inside and to follow the route under the scleral flap, so a correlation between bleb shape and intraocular pressure could be evaluated in glaucomatous patients treated with trabeculectomy ***(Avitabile et al., 1998).***

Ultrasound biomicroscopy was used to examine the aqueous drainage route beneath the scleral flap. The thickness of the aqueous

drainage route beneath the scleral flap was found to be correlated with the development of a filtering bleb. The size of the bleb was correlated with the intraocular pressure. Thus, preservation of the aqueous drainage route beneath the scleral flap probably influenced by the development of a filtering bleb following trabeculectomy ***(Jinza et al., 2000).***

Trabeculectomy is performed as a treatment for many types of glaucoma in an attempt to lower the intra-ocular pressure. Mitomycin C is an antimetabolite applied between the sclera and conjunctiva during the initial stages of trabeculectomy to prevent excessive post-operative scarring and thus reduce the risk of failure. Intra-operative mitomycin C reoduces the risk of surgical failure in eyes that have undergone no pervious surgery and in eyes at high risk of failure e.g. uveitic, aphakic, pseudophakic and neovascular glaucomas ***(Wilkins et al., 2003).***

In a study performed by ***Okada et al., 2009,*** the MMC was reported to inhibit expression and effect of chymase and mast cells in the conjunctival scar after trabeculectomy.