

NEW MODELED ANTIGLAUCOMA SHUNT IN TESTING. PRECLINICAL STUDY

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Background: Glaucoma represents a significant public health concern as it is the second leading cause of blindness after cataracts [Thomas S, Hodge W. Malvankar-Mehta MPLoS One. 2015]. It is estimated that 57.5 million people worldwide are affected by primary open-angle glaucoma [Quigley HA, Br J Ophthalmol. 2006]. It is a multifactorial optic degenerative neuropathy characterized by the loss of retinal ganglion cells, being an irreversible process [Harasymowycz P, et al. J Ophthalmol. 2016.].

Aim: We report a case of filtration surgery treatment in experimentally induced ocular hypertension.

Case report: After obtained the induced ocular hypertension, by using a local subconjunctival injection of 0,7ml betamethasone suspension in one eye in New Zealand rabbit, it was performed the filtration surgery, in aseptic conditions, under general and local anesthesia. The filtration surgery was performed on 2 white rabbits, with the implantation of a new design model of antiglaucoma shunt. During the surgery, it was implemented and studied the methods and techniques of implantation of the filtering device. It was monitoring the IOP postoperative and the ocular status for a period of 6 months.

Conclusion: The surgical procedure of antiglaucomatous shunt with valve implantation is an efficient one in the induced ocular hypertension in rabbits, which opens new possibilities in glaucoma treatment research.