

R1 R2 R3 PG0 PG1 Estagiário Tecnólogo
PIBIC Last Name - Leite First Name - Mauro Middle - Toledo

Service (sector) Glaucoma N° CEP 01666/06

Concentration of Ascorbic Acid in Aqueous Humor of Glaucoma Patients

M.T. Leite, T.S. Prata, L.A.S. Melo Jr, D.V. Miranda, D.V. Rivelli, S.B.M. Barros

Purpose: To compare the concentration of ascorbic acid in the aqueous humor of glaucoma patients with senile cataract subjects.

Methods: Aqueous humor samples were obtained from glaucoma patients just before trabeculectomy for clinically uncontrolled primary open angle glaucoma. Aqueous humor (0.1 mL) was aspirated by inserting a 26-gauge needle into the anterior chamber. The same procedure was performed for non-glaucoma patients with senile cataract just before cataract surgery. Immediately after collection, the aqueous humor was stored at -80°C.

Results: A total of 18 patients with senile cataract, 16 glaucoma patients with primary aqueous humor (no previous intraocular surgery) and 11 glaucoma patients with secondary aqueous humor (previous intraocular surgery) were included in this study. The mean (standard deviation) concentration of ascorbic acid in the aqueous humor of cataract patients was 1049 μM (433), in the glaucomatous primary aqueous humor was 919 μM (427), and in the glaucomatous secondary aqueous humor was 504 μM (213) ($P=0.007$).

Conclusions: Glaucoma patients with secondary aqueous humor have about two-fold lower concentration of ascorbic acid in the aqueous humor in comparison to glaucoma patients with primary aqueous humor and cataract patients.