

R1 R2 R3 PG0 PG1 Estagiário Tecnólogo
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Service (sector) Glaucoma N° CEP

Total protein concentration in primary open angle glaucoma aqueous humor Prata T; Navajas, EV; Martins, JRM; Mello, LAS; Dietrich, CP; Nader, HB; Belfort, R

Purpose: To compare the total protein concentration in the aqueous humor of primary open angle glaucoma (POAG) and non-glaucomatous patients

Methods: Aqueous humor samples were obtained from 22 patients just before trabeculectomy for clinically uncontrolled POAG (POAG group). Aqueous humor (0.1 mL) was aspirated by inserting a 26-gauge needle into the anterior chamber. The same procedure was performed for 22 non-glaucomatous patients just before cataract surgery (control group). Immediately after collection, the aqueous humor was stored at -20 °C. Aqueous humor total protein concentration was determined using a colorimetric assay according to manufacturer's instructions (Protein Assay Kit from Bio-Rad Laboratories, CA, USA).

Results: The mean total protein concentration of the aqueous humor samples was 0.40 g/L (SD: 0.28 g/L; range 0.08–1.37 g/L) in the POAG group and 0.21 g/L (SD: 0.19 g/L; range 0.02–0.85 g/L) in the control group. The difference in aqueous humor protein concentration between groups was statistically significant ($P < 0.004$).

Conclusions: In conclusion, the total protein concentration in primary open angle glaucoma patients aqueous humor is higher than in non-glaucomatous subjects.