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Service (sector) Glaucoma N° CEP

SERUM HYALURONIC ACID DETERMINATION IN PRIMARY OPEN ANGLE GLAUCOMA PATIENTS USING ULTRASENSITIVE, NONCOMPETITIVE AND NONISOTOPIC FLUOROASSAY

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PURPOSE: To compare serum hyaluronic acid (HA) dosages between primary open angle glaucoma (POAG) patients and healthy individuals, using ultrasensitive, noncompetitive and nonisotopic fluoroassay.

METHODS: Patients: 10 POAG patients and 67 healthy individuals over 50 years old. Sample collection: a fasting blood sample was collected from each patient, centrifuged and the serum obtained was frozen and stored. HA dosage: determination was done by means of ultra sensitive, noncompetitive and non-isotopic fluoroassay. Statistical analysis: Mean and standard deviation were compared between the two groups using the t test (for age) and Mann-Whitney U test (for HA).

RESULTS: POAG group: ages ranging from 50 to 80 years, average 67.70 ± 9.74 , 5 male and 5 female; control group: ages ranging from 52 and 84 years, average 65.52 ± 10.37 , 25 male and 42 female. There was no statistically significant difference between groups regarding age ($p=0.53$). Serum HA in POAG group (19.55 ± 15.45 mg/L) was lower than control group (28.59 ± 21.14 mg/L), but the difference between the groups was not statistically significant ($p=0,24$). Post hoc analysis of power and sample size revealed that the study had 43.5% power for $p<0.05$ and with 42 subjects in the case group, power would be 80% for $p<0.05$.

CONCLUSIONS: Serum HA in POAG group (19.55 ± 15.45 mg/L) was lower than in the control group (28.59 ± 21.14 mg/L), but the difference between groups was not statistically significant ($p=0,24$). POAG group sample size must be 42 in order to increase the study power to 80%.