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Service (sector) Cataract N° CEP

**ANTIOXIDANT STATUS IN AQUEOUS HUMOR AND PLASMA IN PATIENTS WITH SENILE CATARACT: EFFECT OF ASCORBIC ACID AND URIC ACID.** F.H.C. Casanova, H.A.R. Silva, L.A.S. Melo Jr, C. Muccioli, R.Belfort Jr, S.B.M. Barros.

**Purpose:** The aim of this study was to evaluate the association of ascorbic acid and uric acid in aqueous humor and plasma with senile cataract.

**Methods:** A total of 55 patients were included, ranging in age from 51 to 87 years ( $69,5 \pm 8,6$  yrs). Ascorbic acid and uric acid levels in aqueous humor and plasma were measured as well as antioxidant capacity (AC) of aqueous humor. **Results:** The mean ascorbic acid concentration in aqueous humor was  $1447 \text{ mM} (\pm 398,17\text{mM})$  and in plasma was  $54,45 \text{ mM} (\pm 28,47\text{mM})$ , whereas the mean uric acid concentration in aqueous humor was  $81,11 \text{ mM} (\pm 30 \text{ mM})$  and in plasma was  $407,89 \text{ mM} (\pm 114,35\text{mM})$ , and AC of aqueous humor was  $71,76 \text{ min} (\pm 18,89\text{min})$ . There was no influence of associated systemic diseases. Considering all subjects, it was found a positive correlation between ascorbic acid levels in aqueous humor and plasma ( $r = 0.51$ ;  $p = 0,0001$ ), uric acid levels in aqueous humor and plasma ( $r = 0.52$ ;  $p = 0,0001$ ) and aqueous humor ascorbic acid and AC ( $r = 0.36$ ;  $p = 0,0225$ ). However, there was no correlation between aqueous humor ascorbic acid levels and cataract ( $r = 0.19$ ;  $p = 0,1815$ ). **Conclusions:** There is a strong correlation between ascorbic and uric acids in aqueous humor and plasma. However, it seems to there be no correlation between these substances and senile cataract.