



Antioxidant content and cytological examination of aqueous fluid from patients with age-related cataracts at different stages

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ABSTRACT. We investigated the antioxidant content and conducted a cytological examination of the aqueous fluid and lenses of patients with age-related cataracts at different stages. The levels of superoxide dismutase (SOD), catalase (CAT), and glutathione peroxidase (GSH-PX) in the aqueous fluid and lenses were determined by the xanthine oxidase method, the colorimetric method, and the improved reduced glutathione (GSH) depletion method, respectively. SOD, CAT, and GSH-PX content in the aqueous fluid and lenses decreased significantly with increasing lenticular nucleus hardness grading. However, the number of white blood cells, neutrophils, monocytes, lymphocytes, and eosinophils did not vary significantly with varying lenticular nucleus hardness. Antioxidant content examination is an important quantitative indicator for clinical diagnosis and treatment of age-related cataracts. Antioxidant content in the aqueous fluid and lenses decreased

significantly with increasing lenticular nucleus hardness grading. Lenses at hardness level V had the lowest content of antioxidants.

Key words: Age-related; Cataracts; Antioxidants; Cytology