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ASSESSMENT THE MORPHOLOGICAL STATE OF THE POSTERIOR CAPSULE IN POSTERIOR SUBCAPSULAR CATARACT USING ANTERIOR OCT

Oral

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Purpose:

to study the morphology of posterior capsule and cortex in posterior subscapular cataracts before the cataract surgery using anterior optical coherent tomography (anterior OCT).

Methods:

the investigation was conducted from 2020 to 2022 in the microsurgery eye department of Zaporizhzhia Regional Clinical Hospital, Ukraine. Among total number of eyes with age cataract (1780 eyes) posterior subcapsular cataract was revealed in 512 cases (28,8 %). All subjects underwent anterior segment OCT (RTVue XR Avanti, Optovue, Inc., Fremont, CA). An assessment of the posterior capsule, position of lens opacities, their relationship with the posterior capsule and state of retrolental space was carried out.

Results:

: Three types of changes were identified. The first type comprised 312 eyes (61%), was characterized by a clear posterior capsule line, hyporeflective space with inclusions of different reflexivity and homogeneous hyperreflective foci in the posterior cortical layers. The second type consisted of 185 eyes (36%), where the capsule line was of different reflectivity and thickness, but always clear from the retrolental space side. There were dense adherence of hyperreflective foci in posterior cortical layers to the posterior capsule. The third type was found in 15 eyes (3%) with posterior capsule protrusion towards the retrolental space.

Conclusions:

preoperative using of anterior OCT of the lens allows to assess posterior capsule and posterior lens opacity and to perform surgical planning in order to avoid intraoperative complications.