

Combined treatment of retinal pigment epithelium serous detachment in the macular region caused by age-related macular degeneration

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Advantages:

Combination of laser retinopuncture and 25G endovitreals surgery provides a possibility to obtain attachment of retinal pigment epithelium serous detachment (RPE SD), caused by ARMD, in the macular region in its combination with posterior hyaloid detachment.

Methods:

After limiting retinal lasercoagulation at the border of RPE SD YAG-laser retinopuncture is performed at the lower edge of the detachment. The parameters of laser irradiation are the following: wavelength 1064 nm, energy $2 \sim 4$ mJ, number of pulses 1-2 (till the flow of serous liquid appears). Next day intravitreal tamponade with C2F6 gas (expansion index 3.3) is performed in the operation room, using a microinvasive approach through one 25G port. With a vitreotome a channel is formed in the vitreous with dissection of the posterior hyaloid and penetration into the retrohyaloid space. Then through the same approach 100% C2F6 gas is injected in amount corresponding to the volume of removed vitreous. Gas is injected into the retrohyaloid space, the greater part of the vitreous remains intact. After the operation the patient is placed in prone position for 24 hours. Gas with maximal expansion within 3 days provides extrusion of subretinal fluid into the vitreous cavity through the retinopuncture and retinal attachment.

Effectiveness / Safety:

According to this technology 3 patients have been operated. In all the cases retinal attachment in the macular region was achieved, mean BCVA has improved from 0.02 to 0.15. The results are stable within a year of follow-up.

Take home message:

Combination of transpupillary laser retinopuncture and 25G endovitreals surgery is a perspective trend in vitreoretinal surgery.