Choroidal coloboma – a report of two cases

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Retinochoroidal coloboma, an ocular defect is caused by incomplete closure of the ocular embryonic fissure. Histologically, there is no normal choroid, retinal pigment epithelium, or retina overlying choroidal colobomas, the overlying tissue is an extension of the retina called the intercalary membrane (ICM). Studies of the margin of coloboma with optical coherence tomography revealed focal communications between the subretinal space and subintercalary membrane space in eyes with extra-colobomatous retinal detachments.

Case I

A 37 year-old-patient with visual acuity deterioration reported to emergency on 23.11.2007. She had noticed it after physical activity some days earlier. She was generally healthy. Ophthalmic examination: Vod=0,7cc-2,0Dsp, Smod=0,5sc, Vos=1,0cc-1,0Dsp, Snos=0,5sc. Intraocular pressure Toutr=12mmHg. Anterior segment without changes. RE eye fundus – optic disk with clear border; normal retinal vessels; circle lack of chroidea was present below the optic disk, which
diameter was 6DD, where sclera was seen; under this lesion intercalary membrane was spread with several holes and two bigger retinal vessels without stabilization. Retinal detachment was seen around choroidal lack and below it up to ora serrata; macula was risen by fluid; peripheral retina was normal, without any peripheral degeneration and tears. Vitreous hemorrhage was present. LE eye fundus was normal.

The patient didn’t agree to be operated. Laser fotocoagulations were performed, the first between detach retina and macula. After some days, when the patient was staying in a vertical position without moving and with topical administration to RE2x 1% Atropina (Polfa Warszawa), 4xLoteprednol (Lotemax, Bausch &Lomb) per os Cyclonamina 3x1tabl, Rutinoscorbin 3x2tabl; l detached retinal area was decreased and the following laser fotocoagulations were performed.
Case 1. RE fundus: retinochoroidal coloboma, and two lines of photocoagulation, which underline another boundary of attached retina during follow up. The black arrow - first photocoagulation, the blue arrow – last photocoagulation, surrounding coloboma’s boundary.

Examination on January 2010: Vod=5/6,5cc-2,0Dcylax160, Snod=0,5, Vos=5/5cc-1,0Dsph~1,0Dcylax150, Snos=0,5. Intraocular pressure Trour=14mmHg. Anterior segment of both eyes was normal. RE fundus: optic disk with clear border; normal retinal vessels; circle lack of chroidea was present below optic disk , 6DD diameter which was surrounded by laser spots; attached retina; under this lesion intercalary membrane was spread with holes bigger then earlier and two big retinal vessels without stabilization which were bended on lesions border. LE fundus was normal.
Case 1 RE fundus 2 years after retinal detachment. Reattached retina, choroidal coloboma is surrounded by photocoagulation spots

Case 1 OCT scan of the edge of coloboma: attached retina, no subretinal fluid and thin ICM are visible

Ultrasound imaging of reattached retina and thin ICM
Case II

A 54 year-old-patient reported to COL on 23.05.2009 with visual acuity deterioration which had been going for a few weeks. Generally healthy. Examination: Vod=5/5sc, Snod=0,5cc+1,5Dsph, Vos=5/6knp, Snos=0,5cc+1,5Dsph. Intraocular pressure 14mmHg. Beginning lenses opacifications of both eyes. Eyes fundus: optic disk with clear border, normal retinal vessels, attached retina; below optic disk circle lack of choroidea in RE diameter 0,5 DD, in LE 1,5 DD; laser fotocoagulation around lesions were performed. January 2010 examination: Voutr=5/5, Snoutr=0,5cc+1,5Dsph. Anterior segment of both eyes looked like earlier. Eyes fundus: retinal attachment with lesions surrounded by laser spots.

Case 2 LE fundus after surrounding coloboma with laser photocoagulations. Case 2. Ultrasound imaging LE

DISCUSSION

Glial atrophy, schisis, and hole formation in the intercalary membrane can disrupt barriers to fluid flow and set the stage for rhegmatogenous retinal detachment. That process is exacerbated by scleral ectasia, increasing vitreous traction at the
margin, and retinovascular ischemia within the intercalary membrane. In case of young patients there is thick intercalary membranes; in case of adult patients, ectatic and atrophic membranes with scleral thickening in the center of colobomas, where neural elements are replaced by connective tissue. Good anatomic and functional outcomes can be achieved with patients with combined vitrectomy with or without scleral buckling surgery. Endolaser retinopexy is effective over healthy RPE at the margin of the coloboma combined with either gas or oil internal tamponade. Vitrectomy, relaxing retinotomy inside the coloboma close to its edges resulted in successful reattachment of the retina. with internal tamponade using silicone oil or perfluoropropane gas.

CONCLUSIONS:

Retinal detachment secondary to choroidal coloboma can be treated successfully by scleral buckling or PPV with internal tamponade. Complete vitrectomy which uses the method to create chorioretinal adhesion around the coloboma and silicone oil tamponade provide an effective treatment for this complicated type of retinal detachment. Spontaneous retinal reattachment after being made to stay in a vertical position without being able to move causes a possibility for laser fotocoagulations being performed in some cases.

References