

Subretinal Surgery with the Combination RPE and Choroidal Transplantation for the Treatment of ARMD Related Visual Loss in a US Management Algorithm

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PURPOSE

To offer submacular surgery with combined RPE/choroid graft for patients that are ineligible for PDT and anti-VEGF agents for possible visual rehab.

METHODS

12 consecutive patients underwent submacular surgery with combined RPE/choroid graft as a prospective case control series. The patients had profound visual loss as a result of fibrosis in the subretinal space and choroid or atrophy of the choroid. Preoperatively patients underwent OCT and fluorescein and ICG angiography. Fibrosis extending into the neural retina, extreme neural retina thinning, and/or deep profound choroidal vessel atrophy were exclusion criteria. Postoperatively patients were evaluated with OCT, fluorescein, and ICG angiography. Follow-up was administered every two weeks for the first 2.5 months.

RESULTS

Eight out of 12 patients experienced improvement in vision from their baseline. Preoperative acuity ranged from CF to 20/400 and postoperative the acuity ranged from 20/400 to 20/70. Most were able to utilize low vision aids more efficiently. Most patients had vascularization of the graft by ICG with one month. One patient developed thrombocytopenia and hemorrhaged from the peripheral iridotomy 2 weeks postoperatively. One patient with atherosclerosis developed submacular hemorrhage that progressed early postoperatively secondary to valsalva. Two patients' vision remained the same.

CONCLUSION

Submacular surgery with RPE/choroidal graft placement is a reasonable alternative to the natural history of end-stage ARMD in selected patients. Patients may experience improved quality of life after surgery. Many patients may not be a candidate for PDT or anti-VEGF therapies for a variety of reasons.

PRE-OP.

Midphase angiogram in a patient with a presumed collapsed PED secondary ARMD. Visual acuity was counting fingers.

POST-OP.

Fundus photo 6 weeks after submacular removal of RPE, Bruch's membrane, and choriocapillaris with the placement of a free graft of RPE/choroid harvested from the periphery. Visual acuity is 20/100.