Spontaneous Closure of a Macular Hole After Vitrectomy for an Epiretinal Membrane

Spontaneous closure of full-thickness idiopathic macular holes is reported to occur in up to 6% of cases. Late reopening and spontaneous closure of previously repaired macular holes are uncommon, and to our best knowledge, only three cases have been reported. Spontaneous closure of macular holes after vitrectomy for other diseases is even more uncommon. We report a case of spontaneous closure of a macular hole that developed 7 months after vitrectomy for an epiretinal membrane.

Case Report

A 78-year-old woman had branch retinal vein occlusion OS and underwent photocoagulation at an eye clinic in 2003. In August 2007 she was referred to Shiga University of Medical Science Hospital with decreased vision OS of 2 months’ duration, at which time an epiretinal membrane was diagnosed (Figs. 1A, 2A). Her visual acuity (VA) at the first visit was 0.8 OD and 0.3 OS. She underwent pars plana vitrectomy and epiretinal membrane peeling combined with cataract surgery in her left eye in September 2007 (Fig. 1B). The internal limiting membrane (ILM) was deliberately not peeled during surgery. Two weeks later, VA improved to 0.7, and 6 months after surgery it further improved to 0.8. Seven months after surgery, an extrafoveal epiretinal membrane was observed and a macular hole developed. VA remained at 0.7 and optical coherence tomography (Cirrus HD-OCT, Carl Zeiss Meditec, Dublin, CA, USA) showed that a macular hole formed with a perifoveal cystoid space (Figs. 1C, 2B). Because her VA was relatively good, the patient was followed without intervention. The hole closed spontaneously 2 months later, and the VA improved to 0.8. The Watzke-Allen test was negative after the macular hole had closed. OCT showed macular hole closure with a residual foveal detachment (Fig. 1D). We performed OCT several times to prevent misdiagnosis. Closure of the macular hole was confirmed by a three-dimensional analysis with the Macular Cube 512 × 128 scan pattern in the spectral-domain OCT. The fovea became completely attached 3 months later (Figs. 1E, 2C).

References

Figure 1. A Optical coherence tomography (OCT) image showing an epiretinal membrane before vitrectomy. B OCT image showing the resolution of the epiretinal membrane after vitrectomy. C A macular hole developed with perifoveal cystoid degeneration 7 months after vitrectomy. D The hole closed spontaneously with a residual foveal detachment 2 months after it developed. E The hole closed completely 5 months after it had developed.

Figure 2. A Fundus photograph shows an epiretinal membrane observed by funduscopic examination and OCT. B A macular hole developed 7 months after vitrectomy for an epiretinal membrane. Extrafoveal epiretinal membrane formation was seen in the funduscopic examination. C The hole closed spontaneously 2 months after it had developed.