



Tractional lamellar hole: To operate or not to operate?

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PURPOSE: Traction-related lamellar macular hole is a condition characterized by the presence of an irregular foveal contour and the schisis-like separation of neurosensory retina, at the level between the outer nuclear and plexiform layers. It is also often associated with the presence of tractional epiretinal membranes. The advent of Optical Coherence Tomography (OCT) has helped ophthalmologists to gain a better understanding of this disease entity. Impressively, OCT images do not always correlate with the expected reduction in the patient's visual acuity, as there is no associated tissue loss in contrast with degenerative lamellar holes. We report a case of a patient with a tractional lamellar hole and mild symptoms, and we pose the question whether we should intervene surgically or not.

CASE PRESENTATION: A 71-year-old male was referred to our vitreoretinal department complaining of mild visual reduction in his left eye. There was no associated past medical history of note and previous ophthalmic history was unclear. Initial examination revealed a BCVA of 1,0 and 0,6 in the right and left eye respectively, and intraocular pressure was within normal limits. Slit-lamp biomicroscopy showed a left nuclear sclerotic cataract, and funduscopy demonstrated bilateral epiretinal membranes (ERM), and dry AMD without accompanying symptoms of metamorphopsia on Amsler grid testing. The left eye SD-OCT revealed the presence of a traction-related lamellar hole with ERM and a sharp-edged schisis-like appearance between the outer nuclear and outer plexiform layers. The ellipsoid zone was intact with no severe disorganization and there was no apparent loss of foveal tissue. After evaluation of the aforementioned findings, the patient's visual deterioration was attributed to lens sclerosis rather than to retinal pathology.



Figure 1. Near infrared imaging showing the epiretinal membrane and Age-related macular degeneration (A). Optical coherence tomography of the left eye at initial presentation before phaco surgery, which presents tractional lamellar macular hole, characterized by epiretinal membrane with sharp intraretinal split, and “schisis-like” appearance (B).



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CASE PRESENTATION (2): Subsequently, a few days later the patient underwent left successful phacoemulsification surgery. At his 1, 3, 6 and 10 month routine follow up appointments, the patient's visual acuity had improved to 1.0 and he denied having any symptoms of metamorphopsia. The SD-OCT images during follow up time precluded the presence of morphological changes.

CONCLUSION: Clinical data suggest that tractional lamellar macular holes seem to be a relatively stable macular condition, with a preserved photoreceptor layer and good visual acuity. Thus, observation is preferred in most cases. Vitrectomy should only be considered in the presence of gradual foveal thinning, or if there is a decline in the patient's visual acuity during the follow-up visits.

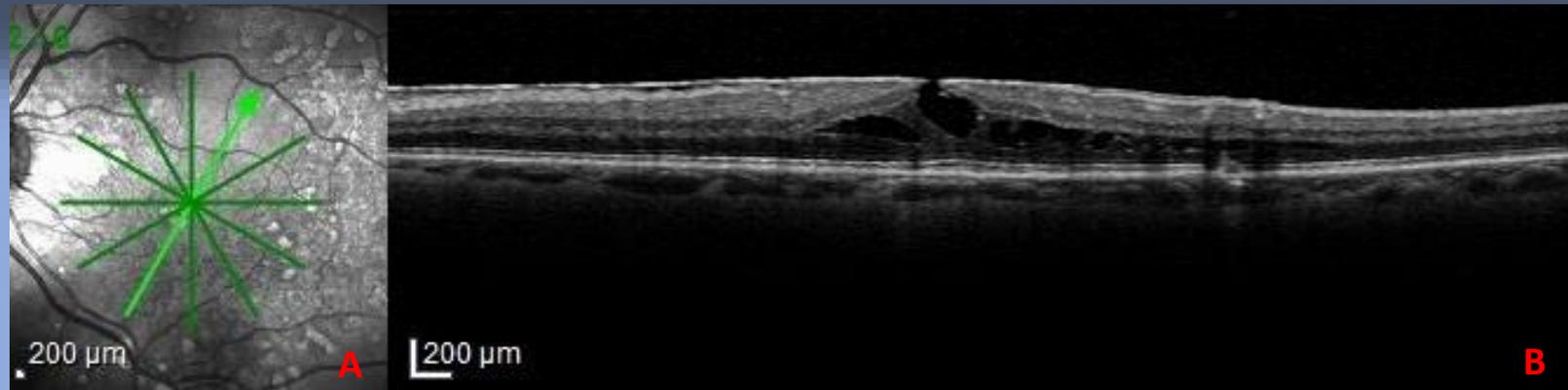


Figure 2. SD-OCT and NIR imaging of the left eye 10 months later, after phacoemulsification surgery, reveals no morphological changes (A,B).

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2. Bottoni F, Deiro AP, Giani A, Orini C, Cigada M, Staurenghi G. The natural history of lamellar macular holes: a spectral domain optical coherence tomography study. *Graefes Arch ClinExp Ophthalmol.*