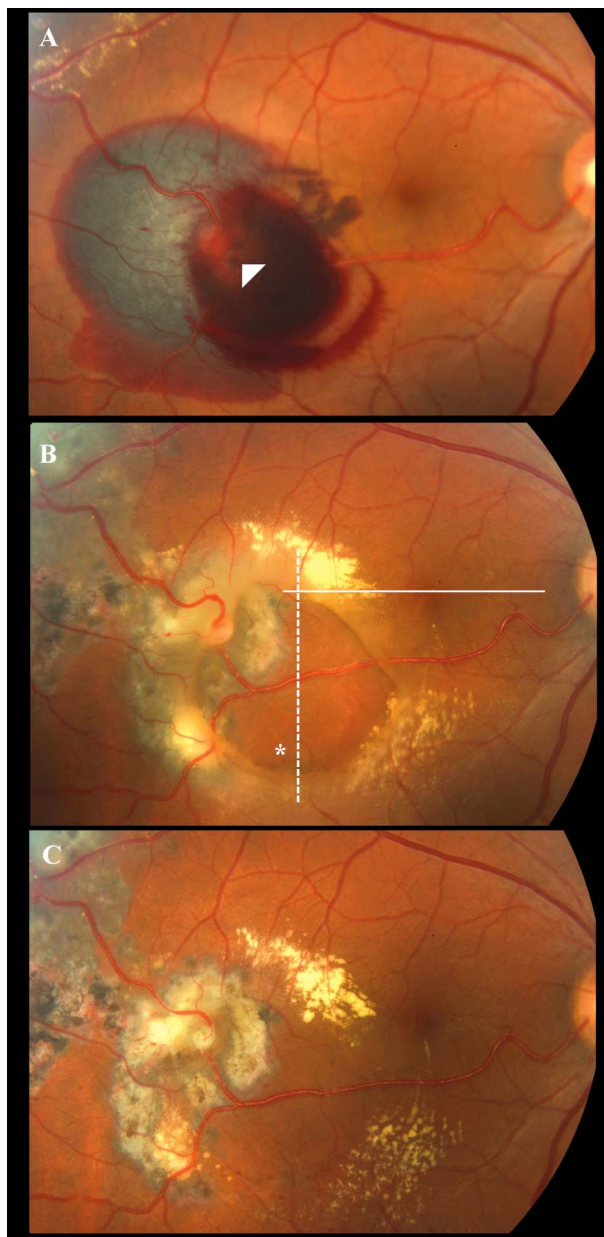


## Relief of Macular Traction After Laser Puncture for an Intraretinal Hemorrhagic Pseudocyst

A 44-year-old man complained of floaters in his right eye. The fundus examination revealed a large multilayered hemorrhage, adjacent to the macula, which was associated with an arterial macroaneurysm (Figure 1A). Hard exudates and aneurysms were also evident in midperiphery where angiography showed telangiectasia surrounded by the areas of capillary dropout. The left eye was normal. Clinical and angiographic features were consistent with the diagnosis of adult-onset Coats' disease.<sup>1,2</sup> Laser photocoagulation of vascular abnormalities was performed and retinal exudates were gradually reabsorbed. The large retinal hemorrhage spontaneously cleared in 4 months, leaving a dome-shaped pseudocystic lesion, filled with serous fluid (Figure 1B) and covered with a taut membrane, which strongly adhered to the vitreous cortex. Retinal traction from the edge of the cyst extended to the macula contributing, along with vascular leakage, to foveal distortion and thickening (Figure 2A). Because of persistent metamorphopsia, a neodymium-doped yttrium aluminum garnet (Nd:YAG) laser puncture, near the inferior edge of the dome-shaped lesion (4 bursts, 4 mJ), was performed.

Immediately after treatment, spectral domain optical coherence tomography showed bloodstained cyst fluid pouring into the vitreous cavity through an aperture on the cyst wall (Figure 2B). During the next days, there was an evident progressive flattening of the lesion, with the relief of traction on the macula that gradually recovered normal shape and thickness (Figures 1C and 2, C and D). As the cyst wall became less rigid, it appeared to be composed by 2 layers, the vitreous cortex and the internal limiting membrane (Figure 2D).

Superficial intraretinal hemorrhagic pseudocysts are an uncommon complication of Coats' disease. Although laser treatment of subhyaloidal hemorrhages has been previously reported,<sup>3,4</sup> we are original in

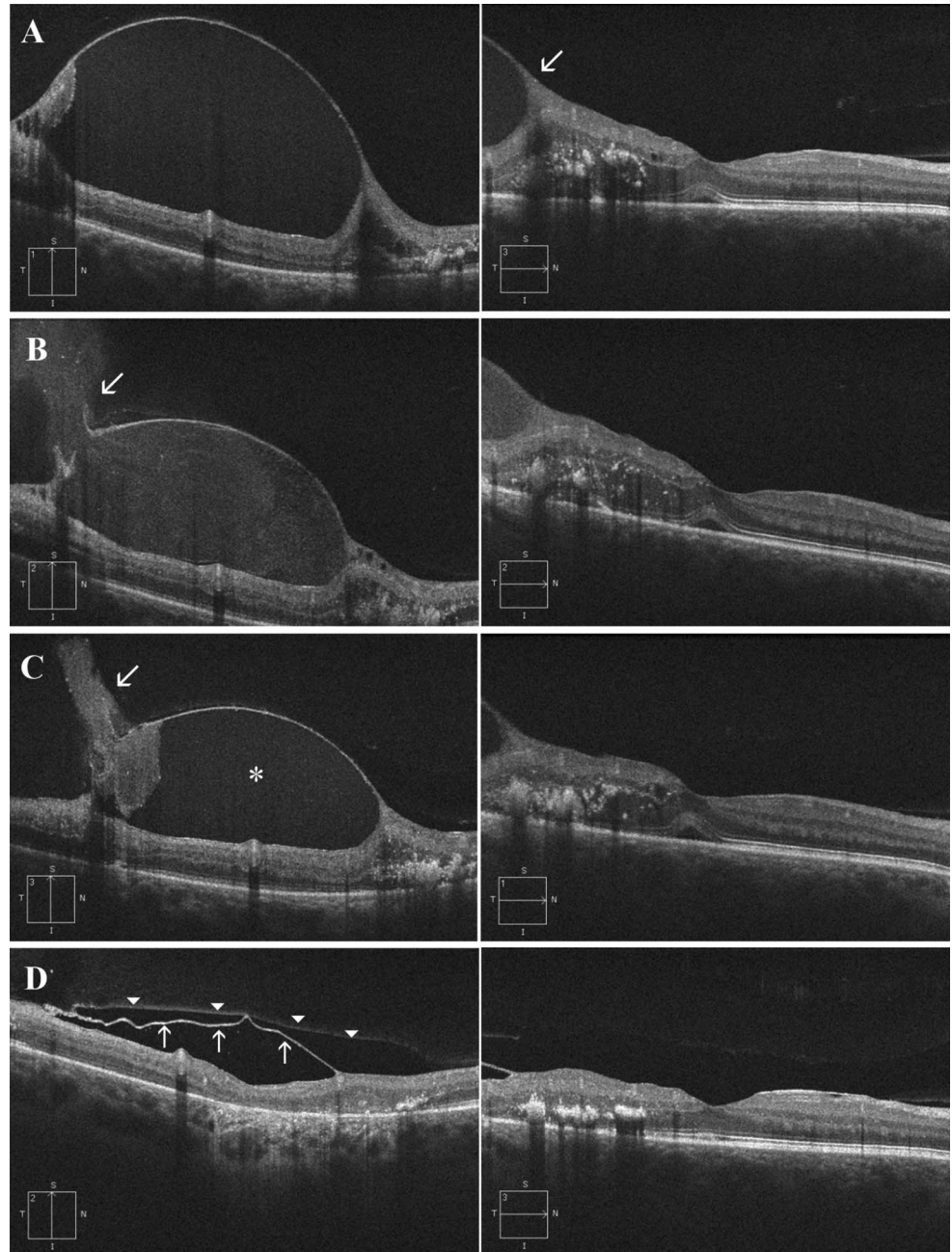


**Fig. 1.** A. Color fundus photography showing a multilayered hemorrhage, because of rupture of an arterial macroaneurysm (arrowhead). B. Four months after thermal laser, the reabsorption of the hemorrhage left a dome-shaped pseudocystic formation, filled with transparent fluid. The location of Nd:YAG laser puncture is indicated by asterisk. Dotted and continuous lines refer to the optical coherence tomography vertical scans of the cyst and the horizontal foveal scans, respectively. C. Two weeks after the last treatment, retinal pseudocyst appeared collapsed.

From the Department of Neurosciences, University of Padova, Padova, Italy.

None of the authors have any conflicting interests to disclose.

Reprint requests: Stefano Piermarocchi, MD, Department of Neurosciences, University of Padova, via Giustiniani 2, 35128 Padova, Italy; e-mail: stefano.piermarocchi@unipd.it



**Fig. 2.** Optical coherence tomography vertical (left column) and horizontal (right column) scans. **A.** The pseudocyst showed a reflective wall and a dense content. Macular traction (arrow) was also evident. Immediately after treatment (**B**) and 1 week later (**C**), optical coherence tomography documented the gradual pouring into the vitreous cavity of internal material (arrow), which was replaced by less dense fluid (asterisk). Macular scans showed the relief of traction and reduction of retinal thickness. **D.** After 2 weeks, the collapse of the pseudocyst allowed visualization of 2 layers in its wall: the vitreous cortex (arrowheads) and the internal limiting membrane (arrows).

documenting that the Nd:YAG laser puncture of a pseudocyst, bearing under the internal limiting membrane and stretching the surrounding neuroretina, could be a safe and effective method to collapse the cyst and release associated traction.

**Key words:** Coats' disease, laser puncture, spectral domain optical coherence tomography.

*STEFANO PIERMAROCCHI, MD*  
*STEFANIA MIOTTO, MD*

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