



ELSEVIER

Contents lists available at ScienceDirect

## Surgical Oncology

journal homepage: [www.elsevier.com/locate/suronc](http://www.elsevier.com/locate/suronc)

## Intravitreal air bubble during exoresection of an iris-ciliary body melanoma

María Isabel Relimpio-López<sup>a,c</sup>, Antonio Manuel Garrido-Hermosilla<sup>b,c,\*</sup><sup>a</sup> Retina and Ocular Oncology Units, Department of Ophthalmology, Virgen Macarena University Hospital, Seville, Spain<sup>b</sup> Oculoplastics-Orbit and Ocular Oncology Units, Department of Ophthalmology, Virgen Macarena University Hospital, Seville, Spain<sup>c</sup> RETICS OftaRed, Institute of Health Carlos III, Madrid, Spain

## ARTICLE INFO

## Keywords:

Iris-ciliary body melanoma  
Iridocyclectomy  
Sclerouvectomy

## ABSTRACT

In this manuscript, as members of a National Reference Unit in Ocular Oncology, we present succinctly our preferred surgical technique for iris-ciliary body melanomas. We attach a video describing the steps we usually follow [Video Clip 1], in which an impressive image of an intravitreal air bubble through the hyaloid membrane can be observed [Fig. 1].

We begin with the creation of a scleral flap, reaching the corneal endothelium to visualize the iris lesion and treating the margins with diode laser to control bleeding. We try to separate the nonpigmented ciliary epithelium, which continues into the neuroretina, from the hyaloid membrane, preventing vitreorrhage and retinal tears.

Once a cleavage plane is reached, we continue dissecting the melanoma gently with scissors and absorbing sponges until we visualize the Cionni ring previously placed. We prefer to perform cataract surgery at the beginning, using a Cionni capsular tension ring, in order to anticipate its likely development after iridocyclectomy/sclerouvectomy [1], usually avoiding the fixation of a ciliary sulcus lens as well as the risk of a future subluxation depending on zonular instability.

The air bubble inside the eye shows an intact hyaloid membrane. Then we cut the sclera at the limbus before removing the tumor, trying to maintain the spur undamaged. Hypotensive general anesthesia is used to control intraoperative bleeding. Before completing pars plana vitrectomy, we place dura mater and autologous scleral graft, trying to prevent a positive postoperative Seidel test.

Diode laser at retinal periphery, 5000cs silicone oil and adjuvant brachytherapy are finally applied. Brachytherapy could have a beneficial effect not only over neoplastic activity, but also over early choroidal detachments, because of its pro-fibrotic/hemostatic stimulus.

In our experience, we have checked it is essential to keep in mind the wide range of complications that can occur during these surgeries in order to anticipate them [2]. As a result, anatomical and functional prognosis will be positively influenced by.

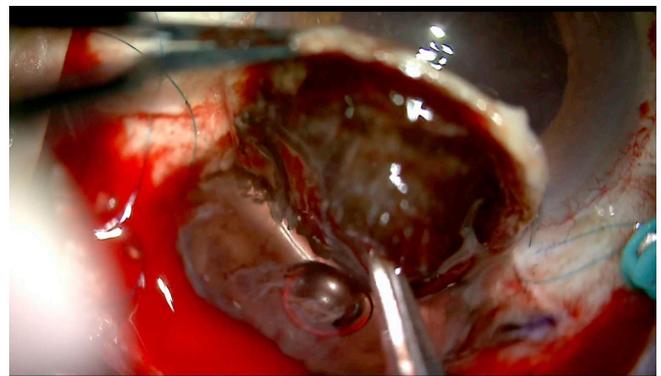


Fig. 1. An intravitreal air bubble can be visualized through the intact hyaloid membrane.

## Funding

None.

## Conflicts of interest

María Isabel Relimpio López declares that she has no conflict of interest. Antonio Manuel Garrido Hermosilla declares that he has no conflict of interest.

\* Corresponding author. Oculoplastics-Orbit and Ocular Oncology Units, Department of Ophthalmology, Virgen Macarena University Hospital, Seville, Spain.  
E-mail address: [gaherfamily@hotmail.com](mailto:gaherfamily@hotmail.com) (A.M. Garrido-Hermosilla).

### **Ethical approval**

This article does not contain any studies with human participants or animals performed by any of the authors.

### **Informed consent**

Informed consent was obtained from the patient before surgery according to the Spanish legislation.

### **Appendix A. Supplementary data**

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.suronc.2019.05.008>.

### **References**

- [1] M. Marinkovic, N. Horeweg, M.S. Laman, J.C. Bleeker, M. Ketelaars, F.P. Peters, et al., Ruthenium-106 brachytherapy for iris and iridociliary melanomas, *Br. J. Ophthalmol.* (2017), <https://doi.org/10.1136/bjophthalmol-2017-310688> pii: bjophthalmol-2017-310688.
- [2] R.A. Kurt, K. Gündüz, Exoresection via partial lamellar sclerouvectomy approach for uveal tumors: a successful performance by a novice surgeon, *Clin. Ophthalmol.* 4 (2010) 59–65.