



Reply to: Comment on: Localized versus 360° intraoperative laser retinopexy in cases of rhegmatogenous retinal detachment with mild-to-moderate grade proliferative vitreoretinopathy

Pasquale Loiudice¹ · Andrea Montesel¹ · Francesco Sartini¹ · Riccardo Morganti² · Chiara Posarelli¹ · Marco Nardi¹ · Michele Figus¹ · Giamberto Casini¹

Received: 6 October 2020 / Revised: 9 October 2020 / Accepted: 30 October 2020 / Published online: 7 January 2021
© The Royal College of Ophthalmologists 2020

To the Editor:

We would like to thank Antaki and colleagues for their precious contribute and for their interest in our work [1]. In their recent considerable research, Dirani et al. retrospectively evaluated the role of 360° intraoperative laser retinopexy for the prevention of retinal re-detachment in patients treated with pars plana vitrectomy [2].

In our interventional, prospective, randomized study, we compared the efficacy of intraoperative localized and 360° laser retinopexy in cases of rhegmatogenous retinal detachment (RRD) treated with pars plana vitrectomy and air tamponade. We agree with the authors regarding the inhomogeneity of the results of the published studies on the topic.

For sample size calculation we estimated the effect size using the results of previous studies who employed laser retinopexy in eyes with retinal detachment. In cases of retinal detachment in silicone oil-filled eyes, Zhou et al. treated 26 patients with circumferential laser photocoagulation and 22 subjects with localized laser photocoagulation. Single-operation success rates were of 92.31% and 59.09%, respectively [3]. In 2017, Zhou et al. retrospectively analysed the medical records of 48 cases of retinal detachment with undetected breaks. Single-operation reattachment rate was 89.47% in the 19 eyes who underwent 360° laser retinopexy and 55.17% in the 29 patients treated with localized laser retinopexy [4]. Based on these results we estimated an effect

size of ~30% and calculated that 42 patients were required for each group, with a power of 80% and a significance level of 0.05.

We considered that results from studies that analysed the use of laser retinopexy in cases of retinal detachment were more appropriate for our purposes than studies that compared combined pars plana vitrectomy/scleral buckling with vitrectomy alone.

We believe that the increasing interest in the topic should be welcomed and hope it will represent a step forward for the management of uncomplicated cases of RRD.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

References

1. Loiudice P, Montesel A, Sartini F, Morganti R, Posarelli C, Nardi M, et al. Localized versus 360° intraoperative laser retinopexy in cases of rhegmatogenous retinal detachment with mild-to-moderate grade proliferative vitreoretinopathy. *Eye*. 2020. <https://doi.org/10.1038/s41433-020-0950-9>.
2. Dirani A, Antaki F, Rhéaume MA, Gauthier D, Coriveau L, Arbour JD, et al. 360-degree intra-operative laser retinopexy for the prevention of retinal re-detachment in patients treated with primary pars plana vitrectomy. *Graefes Arch Clin Exp Ophthalmol*. 2020;258:249–56.
3. Zhou C, Qiu Q. 360 degrees versus localized demarcation laser photocoagulation for macular-sparing retinal detachment in silicone oil-filled eyes with undetected breaks: a retrospective, comparative, interventional study. *Lasers Surg Med*. 2015;47:792–7.
4. Zhou C, Zheng Z, Qiu Q. Pars plana vitrectomy with 360 degrees versus localized laser retinopexy in the management of retinal detachment with undetected breaks intraoperatively: a retrospective, comparative, interventional study. *Lasers Med Sci*. 2017;32:583–89.

✉ Pasquale Loiudice
ldcpasquale@gmail.com

¹ Ophthalmology Unit, Department of Surgical, Medical, Molecular and Critical Area Pathology, University of Pisa, Pisa, Italy

² Department of Clinical and Experimental Medicine, Section of Statistics, University of Pisa, Pisa, Italy