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Strategy for the management of complex retinal detachments: the European vitreo-retinal society retinal detachment study report 2

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Abstract

Objective: To study the outcome of the treatment of complex rhegmatogenous retinal detachments (RRDs).

Design: Nonrandomized, multicenter, retrospective study.

Participants: One hundred seventy-six surgeons from 48 countries spanning 5 continents reported primary procedures for 7678 RRDs.

Methods: Reported data included clinical manifestations, the method of repair, and the outcome.

Main outcome measures: Failure of retinal detachment repair (level 1 failure rate), remaining silicone oil at the study's conclusion (level 2 failure rate), and need for additional procedures to repair the detachments (level 3 failure rate).

Results: The main categories of complex retinal detachments evaluated in this investigation were: (1) grade B proliferative vitreoretinopathy (PVR; n = 917), (2) grade C-1 PVR (n = 637), (3) choroidal detachment or significant hypotony (n = 578), (4) large or giant retinal tears (n = 1167), and (5) macular holes (n = 153). In grade B PVR, the level 1 failure rate was higher when treated with a scleral buckle alone versus vitrectomy (P = 0.0017). In grade C-1 PVR, there was no statistically significant difference in the level 1 failure rate between those treated with vitrectomy, with or without scleral buckle, and those treated with scleral buckle alone (P = 0.7). Vitrectomy with a supplemental buckle had an increased failure rate compared with those who did not receive a buckle (P = 0.007). There was no statistically significant difference in level 1 failure rate between tamponade with gas versus silicone oil in patients with grade B or C-1 PVR. Cases with choroidal detachment or hypotony treated with vitrectomy had a significantly lower failure rate versus treatment with scleral buckle alone (P = 0.0015). Large or giant retinal tears treated with vitrectomy also had a significantly lower failure rate versus treatment with scleral buckle (P = 7×10⁽⁻⁸⁾).

Conclusions: In patients with retinal detachment, when choroidal detachment, hypotony, a large tear, or a giant tear is present, vitrectomy is the procedure of choice. In retinal detachments with PVR, tamponade with either gas or silicone oil can be considered. If a vitrectomy is to be performed, these data suggest that a supplemental buckle may not be helpful.

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