Sterile hypopyon following pars plana vitrectomy and silicone oil injection

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PURPOSE

To report five cases of post-operative sterile endophthalmitis in patients who underwent pars plana vitrectomy with silicone oil injection for retinal detachment at Southend University Hospital and the Royal Eye Infirmary, Derriford Hospital.

RESULTS

All five patients presented with signs of anterior chamber inflammation exhibiting flare, fibrin and hypopyon in the early or late post-operative period following vitrectomy with silicone oil injection. Treatment with topical antibiotics and steroids was commenced, with rapid resolution of the anterior chamber inflammatory reaction and no further intervention required. Aqueous samples yielded no organisms in all cases.

DISCUSSION

- Minimal ocular pain and absence of sequestered purulent material between the silicone oil bubble and retina suggest a different aetiology to postoperative exuberant inflammation.
- Prompt resolution of the hypopyon and complete resolution with intensive topical steroid treatment only, further suggests the inflammatory nature of the process.
- In our case series, poli-dimethyl-siloxane (PDMS) was injected in four eyes and Heavy Silicone Oil (Densiron 68) was used in one eye. Both of these substances have been associated with anterior chamber inflammation in numerous previous studies [1,2,3].

CONCLUSION

The use of silicone oil as a tamponade agent for retinal detachment can rarely induce sterile anterior chamber inflammation with signs resembling infectious endophthalmitis. Onset of symptoms, absence of pain and good response to topical steroids can help differentiate between the two entities.

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