Research Paper

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Subconjunctival Migration of Intraocular Silicone Oil

Medical Science

KEYWORDS : Migration of silicone oil, Subconjunctival space, Vitrectomy, Retinal detachment

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ABSTRACT

We report a patient with intraocular silicone oil migration into the subconjunctival space. A 24-year-old man presented with retinal detachment in the right eye. Vitrectomy with injection of silicone oil was performed. Postoperatively, retinal detachment was resolved. Three months after the operation, removal of intraocular silicone oil was performed. Two months after the last operation, multiple elevated round lesions of his right subconjunctival space occurred. We speculated that intraocular silicone oil migrated into subconjunctival space from the vitreous cavity through the scleral wounds. Clinicians should consider the possibility of silicone oil leakage when cases of surgical history with silicone oil injection are encountered.

INTRODUCTION

Silicone oil is commonly used for intraocular tamponade in vitreoretinal surgery for severe retinal detachments. There are several reports of intraocular silicone oil migration into the subconjunctival space 1 ,2, the orbit 3 and even the central nervous system 4. Herein, we report a patient with intraocular silicone oil migration into the subconjunctival space.

CASE PRESENTATION

A 24-year-old man complaining of blurred vision in right eye was referred to our hospital. He had a history of atopic dermatitis. Bilateral cataract surgery with intraocular lens implantation was performed at the age of 19 years. Upon initial examination, his best-corrected visual acuity (BCVA) was 0.01 in the right eye and 1.2 in the left eye. Intraocular pressure (IOP) was normal in both eyes. Slit-lamp examination showed pseudophakia in both eyes. Fundus examination showed retinal detachment with vitreous haemorrhage in the right eye. Therefore, a pars plana vitrectomy with silicone oil injection was performed in the right eye. Vitrectomy using a 23-gauge system with sutureless scleral entry sites was performed. At the completion of surgery, silicone oil with a 1,000-centistoke viscosity was injected into the vitreous cavity to achieve tamponade. Postoperatively, retinal detachment was resolved. Three months after the operation, removal of intraocular silicone oil was performed. Although his BCVA was improved to 1.0 in the right eye, the right IOP continued over 25 mmHg during one month follow-up period. Two months after the last operation, multiple elevated round lesions of his right subconjunctival space occurred (Figure1 arrows). Upon an anterior segment

examination, cell inflammation and flare were not detected.

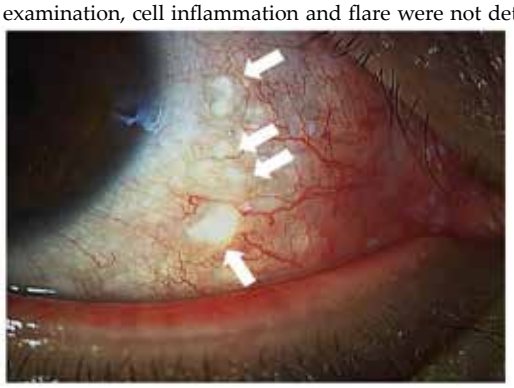

Fig. 1 Diffuse slit lamp photograph of the right eye. Note multiple silicone oil bubbles (arrows).

DISCUSSION

There are several reports describing silicone oil migrating out of the eye under various conditions 1–4. Our findings indicated that silicone oil had leaked out of the vitreous cavity and migrated into the subconjunctival space.

Recently, 23-gauge or 25-gauge vitrectomy wound construction allows sutureless closure of the sclerotomies and the known advantages include shortened operating time and reduced incidence of postoperative wound leak 5, 6. Suture-related complications such as wound leakage, suture irritation, inflammation, postoperative astigmatism, and scleral pigmentary changes are avoided with this technique. Teixeira et al. 5 reported that silicone oil was observed in the wound using the ultrasound biomicroscopic examination. Thus, we speculated that intraocular silicone oil migrated into subconjunctival space from the vitreous cavity through the scleral wounds. In addition, the presence of postoperative ocular hypertension might be contributed to this complication in this case.

CONCLUSIONS

Although our findings were based on a single case, clinicians should consider the possibility of silicone oil leakage when cases of surgical history with silicone oil injection are encountered.

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