Case Report

Silicone sleeve adherent to the retina: An unusual intraocular foreign body

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Abstract

Use of silicone tipped back flush needle or extrusion cannula helps in achieve successful outcome in vitreous surgery. We report a case of accidental dislocation of silicone sleeve into the vitreous surgery. This was unnoticed by the surgeon. Silicone sleeve was adherent to the retina. Proper inspection of the instrument before and after surgery is recommended to minimize this complication.

Key words: silicone sleeve; soft tipped extrusion cannula; flute needle; vitrectomy.

Introduction

Modern vitreous surgery comprises many complex steps for safe and successful management of diseases of retina and vitreous. Fluid-air exchange is an important part of this procedure. This is facilitated by the use of soft tipped extrusion cannula for active suction and flute needle or soft tipped back flush needle for passive suction. These instruments are silicone tipped to prevent retinal injury. However silicone tips may be lost inside the eye during surgery if the instruments are not handled properly. There are not many reports in the literature to discuss this untoward incident during surgery.\(^1\),\(^2\) We report a case of retained silicone sleeve following vitreous surgery for the management of proliferative diabetic retinopathy.

Case report

A 56-year-old gentleman presented to us with complaints of diminution of vision (OU). He was diagnosed as a case of proliferative diabetic retinopathy (Figure 1) and advised panretinal photocoagulation (PRP) laser (OU). He was also explained about the possibility of pars plana vitrectomy in the left eye later.
He underwent one session of PRP laser (OU) and then lost follow up for six months. He presented again with history of additional laser therapy (OU) and pars plana vitrectomy (OS) done elsewhere. Medical report from the operating surgeon was not available. On examination his visual acuity was 20/60 (OD) and counting fingers (OS). His anterior segment was quiet (OU). His fundus examination showed laser scar (OU) with silicone filled eye, residual fibrous membrane with retinal break and silicone sleeve attached to membrane along inferotemporal arcade (OS). He was advised PRP laser fill in (OD) and revitrectomy with membrane dissection, silicone oil removal and silicone sleeve removal (OS). He underwent the same. Intraoperatively silicone sleeve was held with foreign body forceps and removed from the eye (Figures 2 & 3). Silicone oil removal, membrane dissection, fluid-air exchange, endolaser photocoagulation and silicone oil injection was performed to complete the operation. Postoperatively his retina was flat with 20/300 (OS) visual acuity.

**Discussion**

Introduction of fluid-air exchange in vitrectomy was a major advance in the management of retinal detachment. Flute needle used during this step had blunt metallic tip. It was prone to cause retinal injury. So many modifications were introduced to make this instrument safer and more efficacious. However addition of silicone tip to the metallic part of the instrument make them inherently prone for dislodgement in the vitreous cavity (Figure 4).

Agrawal et al reported a case in 2002 where they discovered the loose silicone sleeve on the first postoperative day. It did not cause any retinal damage and was removed a year later. Ascaso et al have reported two cases in 2012 in a case report. They noticed accidental fall of silicone sleeve into vitreous cavity intraoperatively without retinal damage. In contrast to these reported cases
in our case the surgery was done elsewhere. The patient did not have information about this complication. So we do not know whether it was noticed by the surgeon. There is a possibility that it got stuck to the posterior sclerotomy tip and remained unnoticed to the surgeon. Later on it migrated to retina. Secondly the retina was not damaged in previously reported cases. In our case silicone sleeve was adherent to the residual fibrous membrane on the retina and the site had a retinal break. We cannot directly attribute development of retinal break to silicone sleeve but this association has to be kept in mind.

Dislodgement of silicone sleeve is commoner than reported cases in the literature. Mostly it is noticed intraoperatively and removed by the surgeon. To avoid such mishap the surgeon and the scrub nurse should carefully check the instruments before and after use. Single use instruments should not be reused after sterilization. Additionally manufacturers should also find out ways to better design of this important instrument.

References


**Figure legends**

**Figure 1:** Preoperative fundus photograph showing diabetic retinopathy;

**Figure 2:** Intraoperative fundus photograph showing silicone sleeve stuck to the reina;

**Figure 3:** Intraoperative photograph of silicone sleeve after removal from the eye;

**Figure 4:** Photograph showing silicone sleeve attached to metallic part of the soft tipped back flush needle and extrusion needle.