Mechanical Blepharoptosis and Eyelid Swelling Caused by Silicone Oil

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ABSTRACT

The purpose of this article is to report a case of upper eyelid mechanical ptosis caused by silicone oil migration in a Jordanian patient after pars plana vitrectomy and intraocular silicone oil injection. A 20-year-old male patient was referred to the oculoplastic clinic for the management of a left upper eyelid swelling and complete ptosis that developed 12 years after pars plana vitrectomy and silicone oil placement for retinal detachment secondary to perforating eye injury. Eye examination showed upper eyelid swelling and a complete ptosis induced by the weight of inflammatory tissue and silicone oil, as proved by histopathologic examination. We presumed that silicone oil had leaked through the pars plana vitrectomy ports or through a subtle traumatic perforation of the posterior segment, which might have been aggravated by increased intra-ocular pressure postoperatively. In conclusion, mechanical ptosis caused by silicone oil migration after retinal detachment surgery is rare and this is one of the few reports in the literature.


KEY WORDS: silicone oil; blepharoptosis; lipogranulomatous; retinal detachment.

INTRODUCTION

Silicones are synthetic compounds and do not exist naturally. These materials are very stable, highly biocompatible, non-toxic, and insoluble in body fluids. Silicone oil was first used for the treatment of retinal detachment in 1962 by Cibis.1

The use of silicone gel in aesthetic surgery has been surrounded by controversy related to concerns about migration, toxicity and an unproven association with systemic diseases, leading to a restriction, issued by the FDA in 1992, on the use of silicone gel implants.

Migration of silicone oil from the vitreous cavity into the upper eyelid, after pars plana vitrectomy with intraocular silicone oil injection, is a very rare complication. We report here on a patient who developed a unilateral upper eyelid ptosis and swelling 12 years after vitreoretinal surgery with silicone oil injection.

CASE REPORT

A 20-year-old male patient was referred to the oculoplastic clinic for the treatment of left upper eyelid swelling and ptosis on December 6, 2006. He had a history of perforating eye injury caused by hammering metal on metal in 1994. Primary repair of the corneal wound was done followed by cataract extraction; posterior sclera wound repair, and 3-port pars plana vitrectomy with intraocular silicone oil injection.

The metallic foreign body was located behind the eyeball and adjacent to vital intra-orbital structures and, therefore, was left in place as it was not interfering with vision and no signs of orbital cellulitis were noticed (Figure 1).
was seen after one week postoperatively and there was a slight
with lipogranulomatous inflammatory reaction. The patient
levator aponeurosis, which was found to be dehisced, was then
semisolid
was found to be invaded by silicone oil globules, which were
formation was performed transcutaneously. The preaponeurotic fat
FIGURE 2
28   Mechanical Blepharoptosis and Eyelid Swelling Caused by Silicone Oil:
Intraocular silicone oil is associated with a number of com-
Silicone oil is essential for most cases of proliferative
vitreoretinal surgery with intraocular silicone oil injection.
They presumed that for the first patient silicone oil had
leaked from the eye during or after surgery, whereas for the
second patient silicone oil had probably been left behind in
the space previously occupied by the epibulbar buckle. In this
case, the patient had a history of perforating eye injury by a
high- velocity object, for which primary and secondary repair
with 3-port pars plana vitrectomy and silicone oil injection
were done. We think silicone oil may have leaked through the
pars plana vitrectomy ports and posterior scleral wound
(foreign body exit) during or after surgery, which might be
aggravated by increased intraocular pressure postoperatively.
It is known that intraocular silicone oil emulsification can
lead to increased intraocular pressure. Our patient was lost
to follow up for 12 years. During that period, intraocular
silicone oil emulsification might have occurred that lead to
an intraocular pressure increase that aggravated silicone oil
leakage outside the eye.

The migration of silicone oil from the sub-T enon space
across the levator complex into the pre-aponeurotic fat might
be due to a plane opened by the foreign body or to intrao-
perative trauma.

Dehiscence of the levator aponeurosis, which was seen
intraoperatively, could be due to the weight of the silicone
oil and to the lymphoedema caused by the inflammatory
reaction to the silicone foreign body (siliconoma).

We describe a case of silicone ptosis, a posttreatment
complication of retinal detachment treated by silicone oil
injection. Silicone oil ptosis occurred when silicone oil was
left in situ for an extended period of time, so it is recom-
manded to remove intraocular silicone oil after 3 months to
prevent complications, and long term follow-up is needed
for those patients who have to retain silicone oil for extended
periods of time.

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