Case Report

Blindness after Facial Contour Augmentation with Injectable Silicone

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Blindness as a complication of cosmetic surgery is not common, but it has been reported in cases of blepharoplasty and facial injection of various substances. The author reported a 36-year-old female with blindness in one eye following silicone injection in the temple area for facial contour augmentation and explained the possible pathophysiology.

Keywords: *Blindness, Cosmetic techniques, Face, Injections, subcutaneous, Silicones*

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Tissue-augmenting agents or soft tissue fillers are used to correct wrinkles, improve facial contours and restore volume lost. Complications following temporary fillers often occur soon after augmentation[1]. Conversely complications that occur after using permanent fillers can appear months to years after augmentation[1]. Liquid injectable silicone is being used for permanent soft tissue augmentation. Early case series have been reported late onset complications with injectable silicone for facial augmentation occurred. Rapaport et al[2] have previously shown that complications following silicone injection into the face and legs consisted of chronic cellulitis, nodules, foreign body reactions and movement of material to near and distant parts of the body. Hennekes et al[3] reported acute inflammation of the eyelids and orbits after subcutaneous liquid silicone injections in the forehead 20 years earlier. Furthermore, visual loss from posterior ciliary artery occlusion after subcutaneous silicone injection for cosmetic purposes have been reported by Shin et al[4].

Blindness as a complication of facial augmentation with injectable silicone is rare and there has been no previous report in Thailand. In the present paper, the author reports a case of blindness following silicone injection in the temple area for cosmetic purposes.

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Case Report

A 36-year-old Thai female presented with sudden painful visual loss in her right eye and headache at the time of silicone injection in the right temple area for augmentation 2 hours earlier.

She had no history of hypertension, or any other medical problem and was receiving no medication.

At examination, she had a bruise at the right temple. The visual acuity was 20/20 in the left eye and there was no light perception in the right eye. Intraocular pressure was 14 mmHg in the right eye and 13 mmHg in the left eye. Results of anterior segment examination were unremarkable except for a positive relative afferent pupillary defect in the right eye. Ophthalmoscopic examination revealed diffuse retinal whitening, a cherry-red spot in the macula, vascular attenuation and box-carring of flow in arteries and veins (Fig. 1).

The most likely diagnosis was central retinal artery occlusion in the right eye. Immediate management included ocular massage, anterior chamber paracentesis in the right eye and oral acetazolamide but it was unsuccessful at restoring retinal perfusion.

Investigation for an underlying cause was unrevealing, with normal complete blood cell count,

Fig. 1 The fundus photograph of the right eye shows diffuse retinal whitening, a cherry-red spot at macula, vascular attenuation and box-carring of flow in arteries and veins

erythrocyte sedimentation rate, fasting blood sugar, protein C, protein S, antinuclear antibody, anti-HIV, electrocardiogram and echocardiogram. She denied a fundus fluorescein angiography. Her right visual acuity remained with no light perception at 1 month follow-up.

Discussion

Visual loss as a complication of cosmetic surgery has been reported in cases of blepharoplasty[5-12] and injection of various substances such as autologous fat[13,14], steroid[15,16], and silicone[4] into the face. Orbital hemorrhage causing an increase orbital pressure with compromised vascular circulation within the eye has been proposed as the cause of visual loss following blepharoplasty[5-8,10-12]. Arterial occlusion from fat embolism has been reported as the cause of visual loss after autologous fat injection into the face (glabellar area[14] and nasolabial groove[17]). Visual loss from the occlusion of posterior ciliary artery that spared the central retinal artery has been reported after subcutaneous silicone oil injection for cosmetic purposes[4].

In the present case, unilateral sudden blindness secondary to central retinal artery occlusion following injection of silicone in the temple area may have resulted from a silicone embolism. It was presumed that the silicone embolism was introduced into the frontal branch of the superficial temporal artery, which anastomoses with the supraorbital artery (distal branch of the ophthalmic artery). Pressure on the injecting syringe may have caused the silicone embolism to reach in retrograde the ophthalmic artery. The subsequent release of pressure on the syringe may have then allowed arterial systolic pressure to propel the silicone embolism into the central retinal artery.

It was likely that the cause of blindness in this case came from ophthalmic artery occlusion leading to central retinal artery occlusion. It was the rare central retinal artery occlusion that led directly to the light perception failure in the patient's right eye.

Conclusion

The present case suggests that blindness is a serious complication that can occur following facial contour augmentation with injectable silicone. Thus, surgeons should be aware of cosmetic procedures and consider the benefits to risks ratio.

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ตาบอดหลังฉีดซิลิโคนบริเวณใบหน้าเพื่อความสวยงาม

อรุณี ตั้งศิริชัยพงษ์

ตาบอดเป็นภาวะแทรกซ้อนที่พบได้น้อยหลังการทำศัลยกรรมเพื่อความสวยงาม มีรายงานพบภาวะแทรกซ้อนนี้หลังการผ่าตัดศัลยกรรมตกแต่งบริเวณเปลือกตา และจากการฉีดสารชนิดต่าง ๆ บริเวณใบหน้า ผู้รายงานได้รายงานผู้ป่วยหญิงอายุ 36 ปี มีปัญหาตามองไม่เห็นหนึ่งข้าง หลังฉีดซิลิโคนบริเวณขมับเพื่อความสวยงามของใบหน้า และอธิบายกลไกการเกิดพยาธิสภาพที่เป็นไปได้ในผู้ป่วยรายนี้