The Classification and Prognosis of Periocular Complications Following Cosmetic Filler Injection

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Introduction

Common side effects during hyaluronic acid filler injections are typically mild and reversible, but several reports of blindness have received attention. The present study focused on orbital symptoms combined with blindness, aiming to classify affected patients and predict their disease course and prognosis.

Methods

From September 2012 to August 2015, 9 patients with vision loss after filler injection were retrospectively reviewed. Ptosis, ophthalmoplegia, and enophthalmos were recorded over 6-month follow-up, and patients were classified into 4 types according to periocular symptom manifestation. Additionally, 2 cadaveric eyeballs were anatomically studied to investigate anatomical evidence for the mechanism of enophthalmos development.

Results

Two patients were categorized as Type I (blindness without ptosis or ophthalmoplegia), two patients as Type II (blindness and ptosis without ophthalmoplegia), two patients as Type III (blindness and ophthalmoplegia without ptosis), and three patients as Type IV (blindness with ptosis and ophthalmoplegia). During the follow-up periods, there was no recovery from blindness, but ptosis and ophthalmoplegia fully recovered except in one Type IV patient with mild strabismus. At 6 months after filler injection, an average of 1-mm enophthalmos developed in Type II and III patients, and 1.7-mm enophthalmos in Type IV patients. Anatomical investigation revealed previously undiscovered branching to periorbital adipose tissue from ophthalmic arteries.

Conclusion

The present study includes previously unpublished information about orbital symptom manifestations and prognosis combined with blindness due to retinal artery occlusion after cosmetic filler injection. Information about symptom progression and prediction of injury will help clinicians when managing such devastating complications.

References

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