Long-term efficacy of hyaluronic acid fillers in anophthalmic and sighted orbits correction

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Aim: Hyaluronic acid (HA) fillers remain to be popular for augmentation. They have proven to be effective in oculoplastic surgery, as well, for eyelid position and anophthalmic or sighted orbits correction. However different duration of the effect with a various follow-up period was reported in cases of intraorbital HA injection. In the current study we present the long-term results of HA injection for enophthalmos and anophthalmic syndrome correction.

Material and methods: 20 patients (20 orbits) with anophthalmic and sighted orbits were included into prospective observational study. Inclusion criteria were globe dislocation (enophthalmos, hypoglobus), significant cosmetic defect due to prosthesis recession and deeper upper eyelid sulcus. Intraocular tumors in anamnesis and orbital wall defects were considered as exclusion criteria. HA filler (Restylane SubQ Lidocaine) was injected extraconally using 21G cannula. Biometrical parameters and globe/prosthesis reposition assessment were registered after the injection and every 3 months during the 18 months' follow-up period. Ultrasound B-scan, CT and/or MRI were carried out for specific indication.

Results: Median age (range) - 45, 5 years (24 - 76). Median HA volume injected – 1, 8 ml (1 – 3). Median follow-up period - 19, 2 months (18 - 40). In all cases enophthalmos correction and prosthesis reposition, along with lid lag and upper eyelid sulcus improvement with no complications were noted. Stable functional and cosmetic effect was observed during 9 months of the follow-up, with a subsequent gradual decrease till the 18th month after the treatment. The injected HA volume correlated significantly with enophthalmos/prosthesis position along with upper eyelid excursion enhancement.

Conclusion: The cosmetic and functional result of HA filler injection remained satisfactory for all the patients. Though no serious complications were noted, we still emphasize that caution and risk-minimizing tactics (use of blunt cannula, extraconal placement) are essential during intraorbtal HAG injections especially in sighted orbits.