Respiratory Epithelial Orbital Cyst: A Rare Cause of Globe Displacement

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Respiratory Epithelial Orbital Cyst: A Rare Cause of Globe Displacement

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Abstract

A 55-year-old homeless man presented with right globe displacement, oblique binocular diplopia, and decreased vision for many years. There was no pain at rest or with eye movements. Past surgical history was significant for injury from a motor vehicle accident many years ago requiring reconstructive facial surgery. There was no history of chronic sinusitis.

The patient's visual acuity was 20/50 in the right eye and 20/25 in the left. The right eye had significant hypoglobus, proptosis, and hypotropia. Sursumduction was reduced to 50% on the right. There was 2mm of lagophthalmos associated with a cicatrix of the right brow and glabella and mild exposure keratopathy. Hypesthesia was present in the distribution of the supraorbital nerve.

Orbit CT (Figure 2) shows a well-circumscribed ovoid homogenous soft tissue mass measuring 32x26x22mm within the right extraocular subuneral orbit. It displaces the globe downward and outward and expands into the orbital roof with smooth bony remodeling. There is no continuity with the frontal sinus. Review of a CT from 2007 shows a smaller mass suggesting gradual growth over 12 years.

A lateral lid crease orbitotomy with excisional biopsy was performed for diagnosis and to provide relief from visual symptoms. Elevation of the zygomaticofrontal sutura periorbita created a rent in the cyst. An unusual forest green-frothing-like paste exuded from the cyst without foul odor. The cyst was decompressed with a 12 French Frazier suction. This improved exposure and a lateral bone flap was not necessary. The entire cyst wall was bluntly peeled from the orbit soft tissue and sharply dissected from the bone and periorbita. The pathology showed a collapsed cyst lined by ciliated respiratory-type epithelium and a thin fibrous wall with scattered foci of pigment laden macrophages. The pathological diagnosis was consistent with a respiratory epithelial orbital cyst. Anesthetic cultures were negative.

At the 1-month post-operative visit, the visual acuity was improved to 20/10 in the right eye. Sursumduction was improved to 75%, and proptosis had resolved. The lagophthalmos was stable. The patient was advised to apply ocular lubrication but was subsequently lost to follow-up.

Case Description

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