Extraskkeletal Osteoma of the Eyelid—A Rare Case Report

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Abstract

Osteoma is a benign osteogenic lesion with a very slow growth, characterized by proliferation of either cancellous or compact bone. Depending on its location, osteoma may be classified as central, peripheral, or extraskkeletal type. Osteoma has been reported in relation to the paranasal sinuses and less frequently with the orbit. We report a case of a 25-year-old female who developed extraskkeletal osteoma on her left upper eyelid, without involvement of the paranasal sinuses or orbit. Extraskkeletal osteoma of the eyelid is an extremely rare variety. The mass was surgically removed and sent for histopathologic examination, which showed osteoma. To the best of our knowledge, this is the first case of extraskkeletal osteoma of the eyelid reported in the English language literature.

Keywords

Extraskkeletal osteoma, lid osteoma, Sudhir Singh

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Compliance with Ethical Guidance: Informed consent was received from the patient involved in this study.

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Case Report

A healthy 25-year-old female patient, with a 6-month history, reported with a chief complaint of left upper lid mass and droopiness. History revealed that the swelling initially started as a peanut size and had gradually increased to the present size. Ocular examination was suggestive of nontender, bony hard, noncompressible, nonfluctuant, and nonpulsatile swelling on the left upper lid (see *Figure 1A* and *B*). The superior, inferior, medial, and lateral margins were well palpable. Mass was nonadherent to orbit, and it could be digitally displaced horizontally or vertically (see *Figures 1C* and *D*). The size of the swelling was 25 × 15 × 10 mm.

There was a history of blunt trauma to the left upper lid, and 3 months before she noticed this swelling. There was no history of vision changes, ocular pain, pain with eye movement, or headaches. Her vision was 20/20 in both the eyes. Both the eyes underwent slit lamp examination and fundus was also normal.

Past ocular history and medical history were noncontributory.

Review of systems was negative.

The patient was operated under local anesthesia. Two silk sutures were taken near the lid margin to provide traction during surgery. The globe was secured with an entropion plate. Lid crease incision was performed superficial to tumor (see *Figures 2A* and *B*). The lesion was isolated from

the surrounding tissue by blunt dissection. Dissection was easily carried out around the mass except for the lower portion, which was found adherent with tarsal plate (see *Figures 2B–D*). The tumor and its extent were identified. The lesion was excised completely (see *Figure 2E*). No communication with the orbit or sinuses could be identified.

The tarsal plate was sutured with 6-0 vicryl interrupted sutures. Skin was sutured with interrupted 6-0 vicryl sutures (see *Figure 2F*). Patient's ptosis was mostly recovered on 14th postoperative day (see *Figure 3B*). Specimens sent for histopathologic examination and histopathologic findings were consistent with an osteoid osteoma.

Gross Examination

The tumor was an encapsulated nodular lesion 25 × 15 × 10 mm in size. The consistency was bony hard. The anterior surface was glistening—white to pink color and was smooth with rounded protuberance. The cross-sections of specimen could not be cut by scalpel (see *Figure 4*).

Microscopic Examination

Histologic examination shows compact and mature bone and marrow space filled by connective tissue (see *Figure 5*).

Discussion

Osteoma is a benign slow-growing osteogenic lesion, composed of well-differentiated mature bone tissue, characterized by the proliferation

Figure 1: A: Showing Severe Ptosis of the Left Upper Eyelid B: Showing Prominent Eyelid Swelling After Eye Closure C: Showing Downward Displacement of Lid Mass During Palpation D: Showing Lateral Displacement Of Lid Mass During Palpation

Figure 2: A: Muscle Deep Lid Crease Incision was Performed Superficial to Tumor B, C: Anterior Surface of the Eyelid Mass Exposed by Blunt Dissection D: Superior, Medial, and Lateral Margins were Dissected Out E: Status Postexcision of Eyelid Mass F: Appearance of the Eyelid after Wound Closure

of compact or cancellous bone, almost exclusively found in the head and neck region. Central, peripheral, and extraskeletal are the three variants of osteoma. Trauma, inflammation, developmental disorders, and genetic defects are considered as the etiologic factors.¹

Osteoma can occur at any age, but more frequently seen between the third and fifth decades. It has got a slight male predilection.² Paranasal sinuses are the favorite locations of peripheral osteoma of the craniofacial region—frontal and ethmoidal sinuses being the common ones. External auditory canal, orbit, temporal bone, and pterygoid processes are the other locations.³ Primary orbital bone tumors constitute a very small percentage of all orbital tumors. More often, osteomas originate from the paranasal sinuses. Among the bony orbital tumors, fibrous dysplasias and osteomas are the most commonly encountered entities.⁴

Figure 3: A: Preoperative Patient's Photograph Showing Left Upper Eyelid Severe Ptosis and Lid Mass B: Two Weeks Postoperative Patient's Photograph Showing Correction of the Left Upper Eyelid Ptosis

Figure 4: Showing Anterior and Posterior Gross Appearance of Extraskeletal Osteoma of Eyelid

Figure 5: Histologic Examination Shows Compact and Mature Bone and Marrow Space Filled by Connective Tissue (H&E $\times 10$)

The case we reported here was an extraskeletal osteoma of the eyelid, as it was located in the left upper lid without any communication to orbit or

paranasal sinuses. There was a history of blunt trauma to the left upper lid 3 months before this lid mass was noticed by the patient. The extraskkeletal soft tissue osteoma usually develops within the muscle. In our case, extraskkeletal osteoma probably was developed from orbicularis oculi of the left upper lid. During surgery, we found that this lesion was lying just beneath pretarsal muscle and anterior to tarsal palate. It was confined only to the eyelid. Extraskkeletal osteoma of the lid is very rare. To the best of our knowledge, this is the first case of extraskkeletal osteoma of the lid reported in the English language literature.

The osteoma is often slow growing and asymptomatic, diagnosed incidentally on radiographs. But later on, it can achieve a faster growth rate, as the rate of osteogenesis increases, and can cause deformation of the bone and compression of the adjacent structures. They usually appear

as unilateral, sessile or pedunculated, well-circumscribed, mushroom-like masses, ranging from 1.5 to 40 mm in diameter.⁵ All these features are consistent with the present case. During physical examination, tumor was confined to eyelid and boundaries were well defined and palpable. So we did not order for computed tomography scan and planned this case for an excisional biopsy.

The differential diagnoses in this case include osteoid osteoma, dermoid cyst, and lipoma. Osteoma of the orbit can be seen as a bony hard swelling.⁶ Dermoid cyst and lipoma are also seen as subcutaneous nodules in the lid, but they will be soft and fluctuant.⁷

Management of osteoma of the eyelid is complete excision with clear margin to establish the histopathologic diagnosis and prevent recurrence. ■

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