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Case Report

Epibulbar Osseous Choristoma: A Case Report

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Abstract

Purpose: To present the case of a 20-year-old female with an epibulbar osseous choristoma.

Observations: In this case study, a 20-year-old girl with an epibulbar osseous choristoma is described. The patient's right eye's superotemporal quadrant had a firm, white subconjunctival tumor. Under topical aneasthesia, she had the mass' removal and biopsy performed. The osseous tissue in the pathologic sections had heterthrophic osseous tissues.

Conclusions and Importance: In conclusion, this report presents a case of a very rare conjunctival tumor. In asymptomatic patients with tiny, stable lesions, it may be constantly monitored; nevertheless, if there are signs of growth or new symptoms, cautious surgical excision may be required. We decided to perform surgical excision of the mass because the patient complained of discomfort, which effectively eliminated this symptom.

Keywords: Epibulbar Osseous Choristoma; Pediatric Ocular Mass; Conjunctival Mass; Excisional Biopsy

Introduction

Choristoma is a rare, benign, congenital proliferative tumor [1], which is defined as normal tissue that stops migrating during embryonic development and is located in an abnormal position. They are the most common epibulbar and orbital tumors in children. Epibulbar choristomas affect the cornea, limbus or subconjunctival space, and range in appearance from a small, flat lesion to a large mass filling most of the epibulbar region. Astigmatism is often present. Choristomas may be associated with coloboma, Goldenhar syndrome or epidermal nevus syndromes; those associated with the latter are often bilateral and extensive. Choristomas are occasionally familial. Although choristomas most commonly involve the epibulbar area, they can affect many areas of the eye and orbit, and often affect more than one area [2].

Case Report

A 20 year female presented to Sri madhusudhan sai institute of medical sciences muddenahalli, right sided conjunctival mass 6 month back which is gradually increasing in size and associated with foreign body sensation underneath the eyelid in the superotemporal quadrant. On examination, visual acuity was found to be 6/6 bilaterally. Pupil was round, regular and reactive extraocular movements were full and normal in all directions and alignment was orthotropic. Slit lamp examination revealed, firm nodule mass in the superotemporal quadrant of the bulbar conjunctiva (Figure 1). It had a firm texture, a slight hyperemia, an ill-defined boundary, an irregular shape, and no tenderness when it first appeared. The nodule was immobile because it was firmly attached to the substrate. There was no protrusion of the eyes c. The anterior and posterior portions were confirmed to be normal.no signs of malignancy.

Patient was taken up for surgery to remove the neoplasm from the conjunctiva under local anesthesia with informed consent. Extraocular muscles were identified prior to surgery and were displaced to avoid any damage. After conjunctival and Tenon's capsule incision of approximately 5 mm overlying the lesion, the whitish mass identified which was firmly adherent to the sclera. To reveal

the bulk of 5 x 5 mm, the conjunctiva and Tenon's capsule were meticulously dissected. Using a size 11 blade and a microscope set to high magnification, the mass was removed from the sclera. To strengthen the sclera, the capsule was therefore periodically sutured. Suture removal following surgery was typical. The mass was sent was histopathology.

Histopathology reveled Its result was episcleral osseous choristoma. Histopathologically, mature heterotrophic osseous tissue was seen in subconjunctival area (Figure 1).

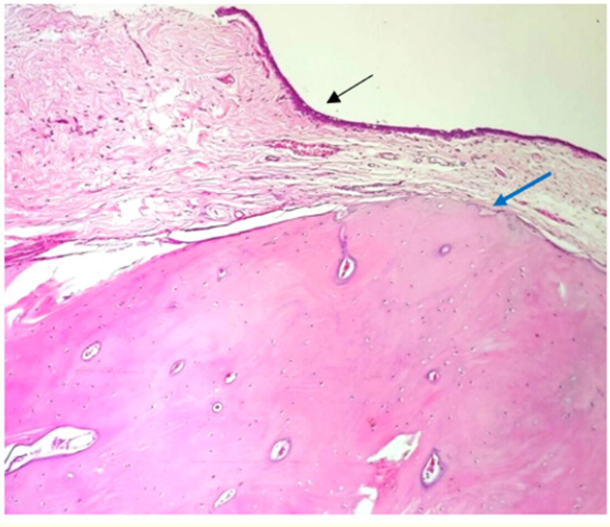

Figure 1: Conjunctival epithelium (arrow) and subepithelium showing heterotrophic osseous tissue (blue arrow) [H&E, 10x].

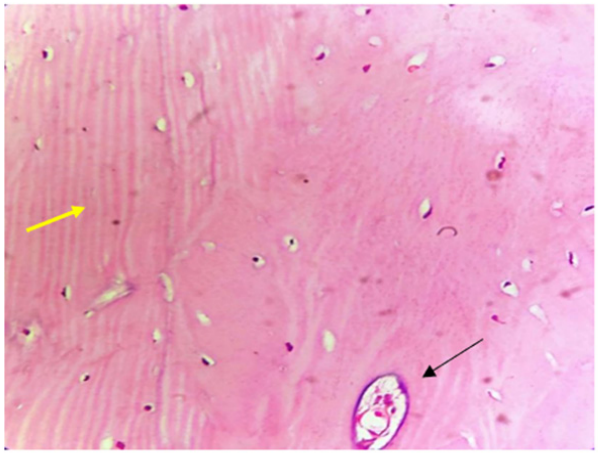

Figure 2: Mature heterotrophic lamellated bone tissue (yellow arrow) with Haversian canals (black arrow) [H&E 40x].

Outcome and follow-up

The patient was cured after surgery and needs to be followed up 1 month after operation. At the patients two week follow up, her primary complaint of foreign body sensation had resolved.

Discussion

Osseous choristoma etiology is unknown and is related to abnormal gene expression and mesenchymal development. Trauma or infection stimulates the bone morphologic proteins, which leads to heterotopic ossification and accelerates the disease progression [3,4]. However, osseous choristoma does not have any malignant metastatic tendency and can be present at birth. It develops rapidly in early childhood and then gradually stabilizes and ceases growth [5], and it may eventually be detected due to symptoms such as foreign body sensation or conjunctival congestion in the later adolescent years. first case of epibulbar osseous choristoma was described by Von Graefe in 1863.7 Since that time, only 65 total cases have been reported in the literature in both pediatric and adult patients. There is a slight female preponderance (59%) as well as, interestingly, a preponderance (68%) for the right eye [6]. Our case supports these statistics. Of the cases that reported location, 76% were located in the superotemporal quadrant as our case was. Biopsy is done for lesons to rule out malignancy. Histopathology shows compact bone surrounded by fibrous tissue. Haversian canals with concentric rings of lamellar bone are common, but bone marrow is rarely found. The osteocytes appear normal [7].

The differential diagnosis of a pediatric conjunctival mass includes the following entities: limbal dermoid, myxoma, scleral melanocytosis, melanoma, Kaposi's sarcoma, sebaceous carcinoma, extraocular retinoblastoma extension, and intraorbital foreign body, among others [8].

When surgery is necessary, the indications include: need for diagnosis, cosmesis, tearing, foreign body sensation, irritation, or recurrent ocular inflammation. If the lesion has intimate scleral attachment requiring a partial sclerectomy, great care during surgery and consideration of preoperative imaging are needed to avoid iatrogenic globe rupture. In this case, we have taken great care to avoid globe perforation.

Conclusion

Osseous choristoma is rare, benign conjuctival tumor. If small lesions and asymptomatic patient can be followed up but if signs of growth or discomfort or for cosmesis surgical excision can successfully resolve the symptoms.

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