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Case Report

Eyelid Soft Tissue Chondroma: A Case Report

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Soft tissue chondroma · Eyelid · Subcutaneous nodule · Mass

Abstract
Soft tissue chondromas are rare benign tumors that occur in extraosseous and extra-synovial locations. We report herein a rare presentation of eyelid soft tissue chondroma in a 45-year-old male presented with a 2-year history of a slowly enlarging subcutaneous firm mass on the left upper eyelid, and complete excision of the lesion followed by histopathological examination rendered the diagnosis of soft tissue chondroma.

Introduction

Soft tissue chondromas (STCs) are rare, slowly growing, benign tumors that occur in extraosseous and extra-synovial locations [1]. STCs account for only 1.5% of benign soft tissue tumors, and they are typically small masses that are firm and are made of hyaline cartilage [2]. The vast majority of STCs are found in extremities and less commonly in the head, neck, and trunk [3]. We report, herein, an extremely rare presentation of STC in the eyelid. To the best of our knowledge, similar presentation was only reported once in the literature [4]. The CARE Checklist has been completed by the authors for this case report, attached as online supplementary material (for all online suppl. material, see https://doi.org/10.1159/000530956).

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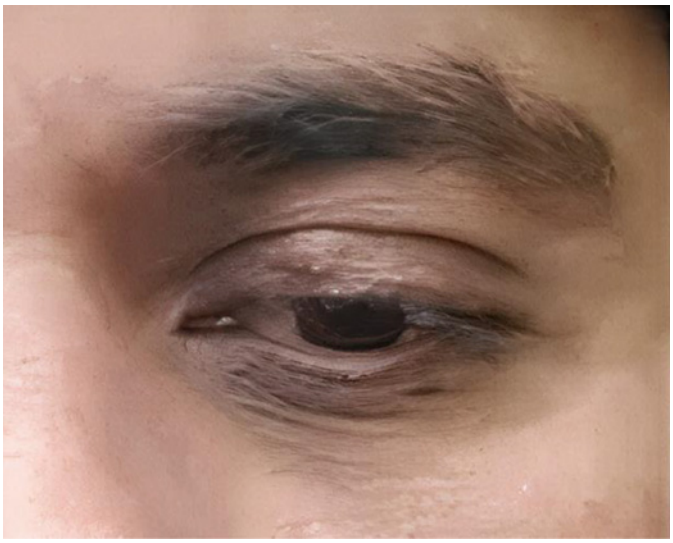

Fig. 1. Left upper eyelid firm subcutaneous nodular mass along the upper tarsus.

Case Presentation

A 45-year-old male presented with slowly painless enlarging subcutaneous nodule of the left upper eyelid over the past 2 years. It was asymptomatic and localized to the middle upper eyelid (shown in Fig. 1). There was no history of other similar nodules on the face, and no previous intervention was done. Examination showed 20/20 vision in both eyes, full extraocular motility and normal ophthalmic examination. Inspection and palpation of the left upper eyelid revealed a firm, solid localized subcutaneous mass measuring 8 × 7 mm with no attachment to the overlying skin, and upon everting the upper eyelid, an overlying pyogenic granuloma was noted. Initially, the most likely diagnosis was an upper eyelid chalazion due to the chronic presentation and the location of the mass. Therefore, the decision of complete excision through a transconjunctival approach was made along with the patient consent. Intraoperatively, the mass was attached to the upper tarsus without infiltration of surrounding tissues. However, histopathological examination showed three fragments of fibrous tissue, the largest with an overlying unremarkable skin (shown in Fig. 2). The two larger fragments show a well-circumscribed chondroid lesion comprising benign chondrocytes in lacunae and a chondroid matrix (shown in Fig. 3). No other findings were noted even in deeper levels, a diagnosis of STC was rendered, and no recurrence was noted up to a 2-month follow-up.

Discussion

STCs develop from embryonal remnants in areas of pre-existing fetal cartilage [1]. Another theory has been put forward, proposing that STCs can develop secondary to a history of trauma and chronic inflammation where the mesenchymal stem cells differentiate into chondrocytes and form mature cartilage tissues [2].

The tumor mainly affects patients in 4th–6th decade with the absence of gender predilection. The typical clinical presentation is that of a painless, slowly enlarging nodular soft tissue mass that is usually present for a variable time preceding diagnosis [5]. The vast majority of STCs are found in extremities especially fingers of hands and feet, and less commonly in the head, neck, and trunk. Moreover, STCs of the dura, larynx, pharynx, oral

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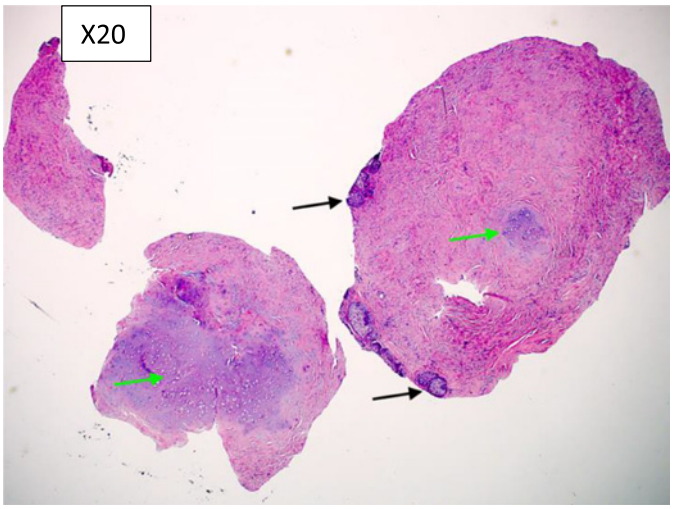

Fig. 2. A low power magnification showing three fragments of tissue with skin (black arrow) and a chondroid lesion (green arrow) (hematoxylin and eosin, ×20 magnification).

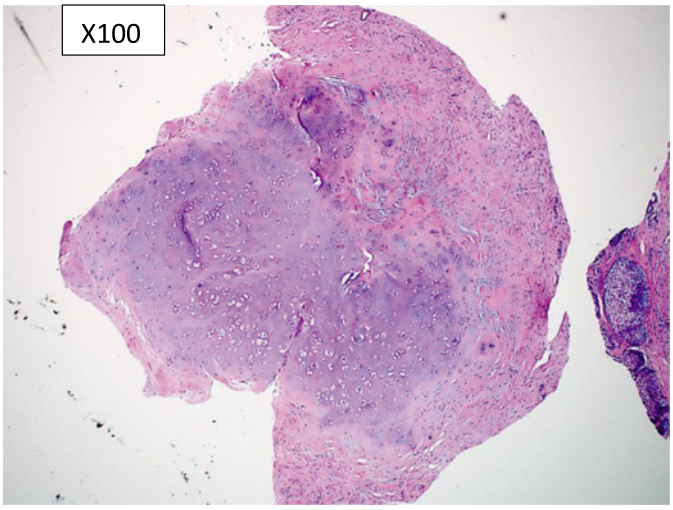

Fig. 3. A photomicrograph showing the well-circumscribed benign chondroma within the dermis (hematoxylin and eosin, ×100 magnification).

cavity, skin, parotid gland, and fallopian tube have been reported [3]. However, to the best of authors' knowledge, this is the second case of eyelid involvement to be reported in the literature [4].

Aseem et al. [4] reported an eyelid STC in a 54-year-old woman that presented with a 2-year history of a slowly enlarging subcutaneous nodule associated the epiphora due its proximity to the lacrimal system. However, it was not associated with a pyogenic granuloma like our case. We hypothesize that the pyogenic granuloma in our case developed secondary to chronic irritation of the upper eyelid unlike the previously reported case that was located inferiorly.

The clinical differential diagnosis of a subcutaneous nodular mass presenting in the upper eyelid includes inflammatory or infectious lesions such as chalazion or epidermal cyst, benign or malignant lesions including epithelial eyelid tumors and metastatic tumors. Furthermore, the diagnosis of STCs can only be confirmed by histopathological examination. The characteristic

feature is the presence of a well-encapsulated lobulated tumor composed of chondrocytes within a mucinous cartilaginous matrix [6]. Immunohistochemically, the tumor cells are positive for vimentin and S100 and negative for epithelial and myoepithelial markers [3]. Histopathologically, the differential diagnosis of STCs includes other cartilaginous lesions such as cartilaginous hamartoma, dermoid cyst, dermatofibroma, chondroid syringoma, and skeletal tumors [4].

Although STCs carry no risk of malignant transformation, complete excision is the treatment of choice as it is both diagnostic and therapeutic [2, 7]. The likelihood of recurrence after excision is low and has been reported in 10–15% of cases secondary to incomplete excision [8, 9]. If STCs reoccurred, the treatment is re-excision.

Conclusion

STCs are rare benign slowly growing tumors, usually affecting extremities. To the best of authors' knowledge, this is the second case of eyelid involvement to be reported in the literature. Once diagnosis is confirmed by histopathological examination, complete excision is the treatment of choice with low likelihood of recurrence.

Statement of Ethics

Written informed consent was obtained from the patient for publication of the details of their medical case and any accompanying images. Any sort of information that might reveal the patient's own identity has been completely avoided. This retrospective review of patient data did not require ethical approval in accordance with local/national guidelines.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

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Author Contributions

The authors confirm sole responsibility for the following: study conception and design, data collection, analysis and interpretation of results, and manuscript preparation. Dr. Abeer A. AlHazzani, Dr. Rawan H. Malaikah, Dr. Faisal A. AlTahan, and Dr. Maria A. Arafah contributed to design, data collection, analysis and interpretation of results, and manuscript preparation. Dr. Yasser H. Al-Faky contributed to the data acquisition and supervision of the study. All the authors approved the final version.

Data Availability Statement

All data generated and analyzed during this study are included in this article and its online supplementary material. Further inquiries can be directed to the corresponding author: Dr. Abeer A. Alhazzani.

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