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Case Report

Preauricular pilomatrixoma in a 3 year-old girl : A case report

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Abstract:

Objectives: To report a case of preauricular pilomatrixoma in a 3-year-old girl.

Methods: Retrospective review on a case report

Results: A three-year-old girl presented with six month history of painless right pre-auricular swelling that was gradually increasing in size. The mass was small, soft, non tender with normal overlying skin. She underwent excisional biopsy of lesion and histopathological examination showed pilomatrixoma. She was well post operatively and no recurrence after 2 years of follow up.

Conclusion: Pilomatrixoma is often misdiagnosed clinically as epidermoid cyst, sebaceous cyst, dermoid cyst, foreign body reaction, calcification in lymph node, fat necrosis, pyogenic granuloma, chalazion and keratoacanthoma, but a high index of suspicion and careful histological examination of its characteristic clinical feature can help clinicians to differentiate it from other tumors.

Key words: *Pilomatrixoma, benign tumor, preauricular.*

Introduction:

Pilomatrixoma is a benign, usually asymptomatic neoplasm that arises from hair follicle matrix cells. It was originally called a calcifying epithelioma by Malherbe and Chenantais in their initial description in 1880[1]. In 1961, Forbis and Helwig proposed the current name to more accurately reflect the origin of the tumor[2]. Affected individuals are typically young; peak incidence occurs in patients 8 to 13 years of age. Its prevalence is slightly higher in white females than in other groups[1 - 3]. The lesions usually appear as firm, solitary, slowly growing, painless tumuors of the dermis. They can extend into the subcutaneous tissues and often develop into encapsulated, irregular masses measuring between 0.5 and 5 cm in diameter. The overlying skin may exhibit a faint, bluish-red discoloration on examination[3 - 4]. The diagnosis can be confirmed by histologic examination. Treatment consists of surgical excision. Recurrences are rare, but when they do occur, the physician should suspect a malignant pilomatrixoma variant[3, 5]. Because

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most case descriptions are reported in the dermatology literature, otolaryngologists might not be familiar enough with the condition to include it as a differential diagnosis.

Case report:

A 3-year-old girl presented with six months history of painless right preauricular swelling, that gradually increasing in size. The swelling was not associated with fever or discharge. On examination she had a small soft mass measuring 1x2cm in size at the preauricular area that was non tender with normal overlying skin. Patient underwent excision biopsy of lesion. Intra operative finding showed small right preauricular mass with no preauricular pit, was excised completely from surrounding subcutaneous tissue. Histopathological examination revealed tissue composed of nest of small basaloid cells with abrupt keratinization, which cause irregular islands of epithelial shadow cells that have distinct cell border. The stroma of the tumor contains numerous multinucleated giant cells diagnosed as Pilomatrixoma (Figure 1 and 2). Post operatively patient was well and there was no recurrence after 2 years follow up.

Figure 1: *10 X-1: Histopathologic exam demonestrate sheet of small basiloid cells with abrupt keratinization and presence of ilands of shadow cells.*

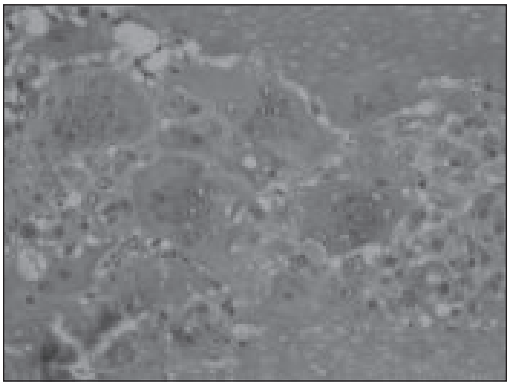

Figure 2: *Numerous multinucleated giant cells are seen in the stroma (40x7)*

Discussion:

The head and neck region is the most common site of pilomatrixoma; between 56 and 72% of all cases appear in this area[6-9]. The next most common site is the upper extremities. Together, these two sites host the vast majority of this tumors.Making a clinical diagnosis of pilomatrixoma can be difficult. The differential diagnoses include dermoid and inclusion cysts, epidermoid cyst, sebaceous cyst, foreign body reaction, calcification in lymph node, fat necrosis, pyogenic granuloma, chalazion and keratoacanthoma. preauricular sinuses, hemangiomas, and malignant soft-tissue tumors. Perforating pilomatrixoma may present as draining crusted nodule or ulcer. Perforating or rapidly growing pilomatrixoma can mimic neoplastic lesion. Although many possibilities exist, the presence of such a nodule on the head, neck, or upper extremity, especially in a younger patient, should raise the clinician's suspicion of pilomatrixoma. Various imaging methods for evaluating pilomatrixoma have been reported. Plain radiographs of suspicious lesions have limited utility, but they can detect foci of calcification. Computed tomography or magnetic resonance imaging might be considered for those patients who have larger or more unusual tumors. The clinically superficial location of

most of these tumors makes routine radiographic evaluation unnecessary. Hence, preoperative radiographic imaging was not obtained for our patient. An accurate histopathologic evaluation is the most important tool for confirming the diagnosis. The preauricular area and the forehead have been reported to be common sites of pilomatrixoma, even though they do not feature a particularly high density of hair follicles. Considering the embryology of this neoplasm, it has been theorized that its etiology might be related to specific types of hair[10]. Depending on the site of involvement, the surgical approach can be modified to ensure the total removal of the lesion without injury to vital neural or vascular structures. Complete surgical excision of the tumor is the recommended treatment although Morales and Mc Goey reported they successfully treated eight patients with incision and curettage of large lesions on exposed sites[11]. Following excision, pilomatrixoma recurrence is relatively rare, with overall rates of 2.6% in a large series of patients[2-6]. In the event that a lesion does recur, the physician should suspect pilomatrixoma carcinoma[4,5,9]. The biologic activity of this malignant variant is similar to that of basal cell carcinoma, and aggressive surgical excision remains the recommended treatment of choice.

Conclusion:

Pilomatrixoma is often misdiagnosed clinically as epidermoid cyst, sebaceous cyst, dermoid cyst, foreign body reaction, calcification in lymph node, fat necrosis, pyogenic granuloma, chalazion and keratoacanthoma, but a high index of suspicion and careful examination of its characteristic histological features can help clinicians to differentiate it from other tumors.

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