Interesting Case Series

A 10-Year-Old Child With a Temporal Mass

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Figure 1. Right temporal mass on delivery from surgical field.

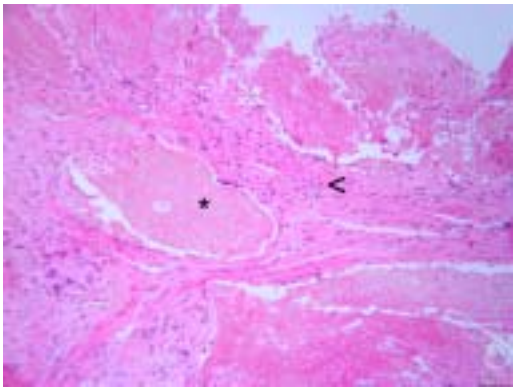

Figure 2. Microscopic view of right temporal mass revealing sheets of basaloid cells (arrow). The grouping of enucleated ghost cells is seen in the central section of the slide (star).

DESCRIPTION

A 10-year-old girl, with no significant medical history, presents with a 1-year history of a slowly enlarging subcutaneous facial mass. The mass is tender, rock hard on palpation, and the overlying skin is slightly discolored.

NEXT

QUESTIONS

1. **What is the differential diagnosis for a subcutaneous facial mass in a child?**
2. **What clinical signs distinguish this mass from other common superficial facial masses in children?**
3. **Which diagnostic tests or imaging studies are appropriate to aid in the diagnosis?**
4. **What are the treatment options for this particular lesion?**

DISCUSSION

This patient presented with a common benign subcutaneous neoplasm known as pilomatricoma. Pilomatricomas or calcified epitheliomas of Malherbe originate from hair matrix cells and outer root-sheath cells of the hair follicle. The differential diagnosis for facial mass in children includes sebaceous hyperplasia, epidermoid cysts, dermoid cysts, calcified lymph nodes or hematomas, fibroma, dermatofibroma, and foreign-body reaction. Pilomatricomas commonly occur in children, and most often in the head and neck region (45%–70%) with slight female preponderance. There is a bimodal distribution with a peak before the third decade, and a second peak between the sixth and seventh decades. Despite this distribution, the majority of tumors occur before the age of 20, representing 45% to 60% of total cases. Multiple and recurrent lesions have been reported in 2% to 10% of patients. Molecular studies have found a common mutation in the activating β-catenin gene, which is involved in adherence junctions. Pilmatricomas have distinguishing clinical characteristics that include a solitary, hard, or stony nodule that is freely mobile and slow-growing. They tend to be between 1 and 60 mm in size. Twenty to 40% of masses are painful and can be associated with discoloration of overlying skin. This tumor is readily diagnosed on physical examination. Consequently, diagnostic testing and imaging are not currently recommended. Fine needle aspiration biopsy has been shown to have some use but only in association with a highly suspicious clinical presentation. Fine needle aspiration biopsy cytology is often misinterpreted because of lack of diagnostic basaloid and ghost cells in aspirates. Complete surgical excision with clear margins is the treatment of choice. However, there is a reported 6% to 10% recurrence rate for these tumors. Mixed clinical data are available on the need for removal of overlying skin during operative treatment. Although rare, there have been 20 reported cases of malignant conversion, although none of these occurred in children. Malignant conversion reportedly occurred in patients with multiple pilomatricomas on initial presentation or those with repeat recurrences despite surgical treatment. Wide-local excision has been advocated for pilomatrix carcinomas.

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