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Case Report
Tongue Swelling

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Unexpected Diagnosis of Chondroma in a Pediatric Patient Presenting with Tongue Swelling: A Case Report

Bhaumik S[1*], Mondal RK[2]

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[1*] Somdatta Bhaumik, Senior Resident, Department of Pathology, Nil Ratan Sircar Medical College and Hospital, Kolkata, West Bengal, India.

[2] Rajib Kumar Mondal, Associate Professor, Department of Pathology, Nil Ratan Sircar Medical College and Hospital, Kolkata, West Bengal, India.

Chondromas are rare benign cartilaginous tumours, especially uncommon in the oral cavity and even rarer in pediatric patients. We present a case of a 5-year-old male child with a swelling on the dorsum of the tongue, initially diagnosed as an epidermoid cyst based on MRI findings. However, histopathological examination revealed a chondroma, highlighting the importance of histopathological analysis in confirming diagnoses and guiding appropriate management, particularly in atypical cases.

Keywords: Chondroma, benign cartilaginous tumour, pediatric, oral, histopathology

Corresponding Author

Somdatta Bhaumik, Senior Resident, Department of Pathology, Nil Ratan Sircar Medical College and Hospital, Kolkata, West Bengal, India.
Email: somdattabhaumik@gmail.com

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Introduction

Chondromas are benign tumors composed of mature hyaline cartilage, commonly found in the skeletal system.[1] While they are relatively rare in the oral cavity, they can occur in various locations, including the tongue.[2]

The presentation of chondromas in pediatric patients, especially on the tongue, is exceedingly rare, often leading to diagnostic challenges.[3] Here, we report a case of a 5-year-old male presenting with a swelling on the dorsum of the tongue, initially suspected to be an epidermoid cyst based on clinical evaluation and MRI findings. However, histopathological examination following excision revealed unexpected findings of a chondroma.

Case Report

A 5-year-old male patient presented to the outpatient department with a swelling on the dorsum of the tongue, more towards the right side.

The swelling was first noticed by the parents approximately 2 years ago and has gradually increased in size since then. The patient only complained of foreign body sensations in the tongue. There were no associated symptoms such as pain or difficulty in swallowing. On examination, a firm, non-tender nodule was palpable on the dorsum of the tongue, measuring approximately 1.5 cm in diameter. The overlying mucosa appeared intact, with no signs of inflammation or ulceration.

Based on the clinical presentation and MRI findings, which showed "a well-defined T2/STIR hyperintense altered signal intensity lesion without diffuse restriction", a provisional diagnosis of an epidermoid cyst was made. The lesion was excised and sent for histopathological examination. Histopathological examination of excised specimen revealed unexpected findings. Microscopic examination demonstrated a well-circumscribed neoplasm composed of mature hyaline cartilage and myxoid cartilage, surrounded by fibrous connective tissue, consistent with feature of chondroma [Fig. 1]. No evidence of malignancy was noted in sec. examined.

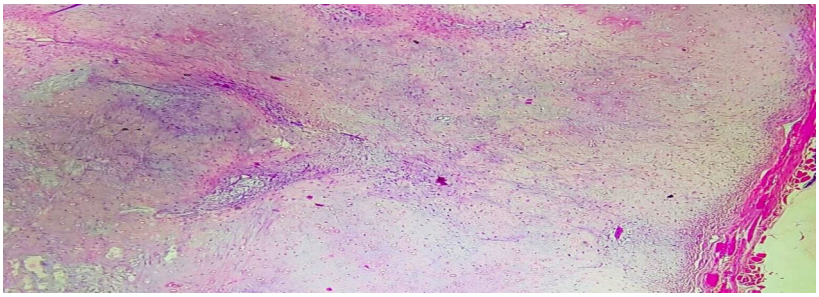

Figure 1a: Soft tissue chondroma with a fibrous pseudocapsule (H and E, 4x)

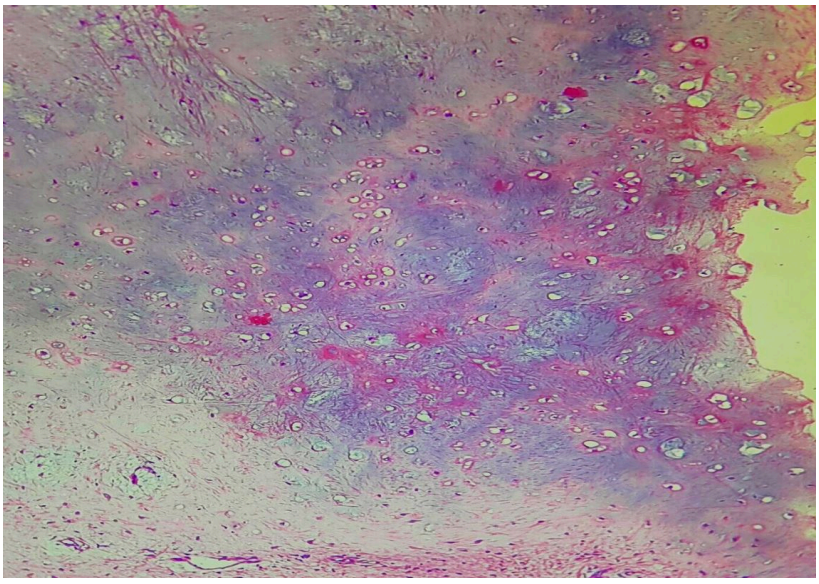

Figure 1b: Neoplasm showing hyaline cartilage and myxoid cartilage (H and E, 10x)

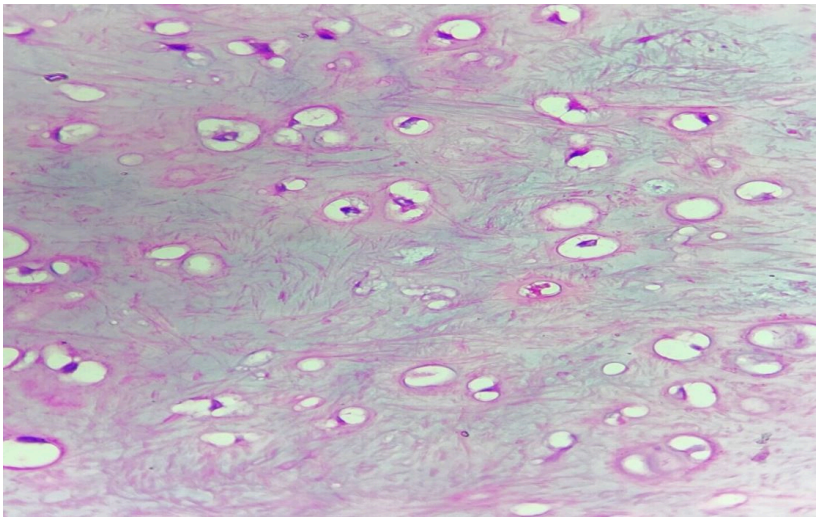

Figure 1c: High-power view showing benign chondrocytes in clusters (H and E, 40x)

Discussion

Chondromas are benign tumours arising from cartilaginous tissue and are commonly found in the skeletal system, particularly in the long bones and ribs. Soft tissue chondromas can arise in the extraosseous and extra-synovial soft tissues. Around 80% of these tumours manifest within the fingers, while the remaining cases predominantly emerge in the hands, with lesser frequencies noted in the toes, feet, trunk, and head-neck region.[1] Rare occurrences have been documented in the skin and duramater.[4,5] However, their occurrence in the oral cavity, especially in paediatric patients, is exceedingly rare. The exact etiology of chondromas in the oral cavity remains unclear, but they are thought to arise from remnants of embryonic cartilage or metaplasia of connective tissue. [2]

The clinical presentation of chondromas in the oral cavity can vary depending on the size and location of the tumour. It has been reported that in cases involving the tongue, chondromas are usually seen on the lateral borders.[6] Repeated microtrauma could potentially serve as an initiating factor. [7] Such chondromas are usually asymptomatic, especially when the lesion is small or slow-growing, as in our case, and are often discovered incidentally during radiological evaluation for other medical conditions.[2], [8] Imaging modalities such as MRI are often used to evaluate soft tissue lesions in the oral cavity and can provide valuable information regarding the location, size, and characteristics of the tumour. [9] However, a definitive diagnosis can only be achieved through histopathological examination of the specimen.

Essential diagnostic criteria include: (i) a soft tissue mass composed of nodules of well-delineated cartilage (ii) a hyaline or myxoid matrix that may show calcification (iii) chondrocytes with limited atypia and little mitotic activity. [1] In our case, MRI initially suggested a T2/STIR hyperintense lesion, leading to a clinical diagnosis of an epidermoid cyst.

However, post-excision histopathological examination of the lesion revealed histological features consistent with those of a chondroma.

Conclusion

Chondromas are rare benign tumors, particularly uncommon in the oral cavity and even rarer in pediatric patients. This case highlights the importance of histopathological examination in confirming diagnoses and guiding appropriate management, especially in cases where clinical and radiological findings are inconclusive or misleading. Awareness of atypical presentations of oral lesions, such as chondromas, is crucial for accurate diagnosis and optimal patient care. Further studies are needed to better understand the etiology, clinical behavior, and optimal management of chondromas in the oral cavity, particularly in pediatric patients.

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