



UNUSUAL UNILATERAL CHEEK SWELLING CASE SERIES

ENT

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ABSTRACT

Unilateral cheek swelling represents a diagnostic challenge due to its diverse etiology, ranging from benign cysts to neoplastic and inflammatory conditions. Prompt diagnosis and tailored management are crucial to prevent morbidity. We report a series of five patients with unilateral cheek swelling, each with distinct etiologies, to highlight the clinical variability and diagnostic considerations in span of 30 days at tertiary care center of Central India. The cases included chondromyxoid sarcoma, maxillary sinus cholesteatoma, Kimura's disease, salivary duct cyst, and post-traumatic sialoceles. Careful clinical assessment, imaging, histopathology, and individualized treatment strategies were required for optimal outcomes. This series emphasizes the importance of a broad differential diagnosis in patients presenting with unilateral cheek swelling.

KEYWORDS

Cheek Swelling Chondromyxoid Sarcoma, Maxillary Sinus Cholesteatoma, Kimura's Disease, Salivary Duct Cyst, And Post-Traumatic Sialoceles.

INTRODUCTION

Facial swellings are a common presenting complaint in otolaryngology and maxillofacial practice. Unilateral cheek swelling in particular can arise from infectious, traumatic, neoplastic, odontogenic, or salivary gland pathologies^{1,2}. The diagnostic challenge lies in the overlapping clinical features such as pain, swelling, and reduced mouth opening, necessitating detailed imaging and histopathological correlation³. While odontogenic abscesses and salivary gland infections are frequently encountered, rarer entities like Kimura's disease or maxillary sinus cholesteatoma may mimic common conditions and risk misdiagnosis^{4,5}.

This report presents five cases of unilateral cheek swelling with distinct underlying etiologies managed at a tertiary care center. The aim is to underline diagnostic diversity, highlight the role of imaging and histopathology, and discuss tailored management approaches.

MATERIALS & METHODS

This is a retrospective descriptive case series conducted at the Department of Otorhinolaryngology, BRAMH, over a 3-month period. Patients presenting with unilateral cheek swelling were evaluated through:

History and clinical examination including onset, progression, pain, associated nasal/dental symptoms, and systemic complaints.

Imaging: ultrasonography, computed tomography (CT), and magnetic resonance imaging (MRI) as indicated.

Laboratory investigations including hematological parameters and microbiological cultures when applicable.

Histopathological examination (HPE) of excised tissue, supplemented by immunohistochemistry (IHC) where necessary.

Management: individualized treatment ranging from conservative care to surgical excision, depending on etiology

Ethical clearance was obtained, and informed consent was taken from all patients.

Case Series

Case 1

A 48-year-old female presented with progressive right cheek swelling of 2 months' duration with pain and reduced mouth opening. Imaging revealed an ill-defined maxillary sinus lesion suspicious for neoplasm. Excision and HPE revealed chondromyxoid sarcoma.

Case 2

An 18-year-old female presented with right nasal obstruction and cheek swelling for 4 months. CT showed a non-enhancing mass in the maxillary sinus. Histopathology after Caldwell-Luc surgery confirmed cholesteatoma of the maxillary sinus.

Case 3

A 35-year-old male had a 5-year history of left cheek swelling extending beneath the temporomandibular joint. MRI revealed multiloculated cystic changes. Excision confirmed Kimura's disease.

Case 4

A 74-year-old male presented with left cheek swelling of 2 months' duration. Ultrasonography suggested an epidermoid cyst. Excision and histology confirmed a salivary duct cyst.

Case 5

A 28-year-old male developed left cheek swelling following road traffic accident and maxillary fracture repair. Imaging suggested inflammatory changes. Persistent sialoceles was managed with excision and parotid duct ligation.

DISCUSSION

Unilateral cheek swelling has a wide differential diagnosis, including odontogenic infections, salivary gland cysts, benign and malignant neoplasms, and post-traumatic sequelae^{6,7}.

Neoplastic Lesions: Chondromyxoid sarcoma, though rare, should be considered in persistent maxillary sinus masses. Diagnosis relies on histopathology with supportive IHC findings^{1,5}.

Rare Maxillary Sinus Pathology: Cholesteatoma of the maxillary sinus is extremely rare, with <15 cases reported to date. Complete excision via Caldwell-Luc remains the treatment of choice to prevent recurrence^{8,9}.

Inflammatory Disorders: Kimura's disease, a chronic inflammatory

disorder with eosinophilic infiltration, often mimics neoplastic or cystic lesions. Surgical excision remains diagnostic and therapeutic¹⁰.

Salivary duct cysts: These represent ~10% of salivary gland cysts and should be considered in slow-growing preauricular swellings^{2,4}.

Traumatic sequelae: Sialoceles formation after ductal injury is rare but important. Conservative therapy may suffice in minor ductal injuries, but surgical excision and duct ligation are warranted for persistent cases^{14,15}.

This series illustrates the need for multidisciplinary evaluation—radiology, histopathology, and surgical expertise—in managing unilateral cheek swelling.

CONCLUSION

Unilateral cheek swelling encompasses a broad spectrum of pathologies, ranging from inflammatory and cystic conditions to rare neoplastic and traumatic etiologies. Accurate diagnosis requires integration of clinical features, imaging, and histopathology. Tailored treatment—from conservative management to surgical excision—ensures optimal outcomes. Clinicians should maintain a broad differential diagnosis when evaluating patients with cheek swelling to avoid misdiagnosis and delays in management especially with such variable differential diagnosis.

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