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# Rare presentation of left maxillary sinusitis: A Case Report

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***Abstract: :****The maxillary sinus is most commonly affected sinus. The clinical manifestations of rhinosinusitis are diverse. Complications arise due to spread of infection beyond the bony walls (limits) of sinus. However, the findings of physical examination may vary from simple mucopurulent discharge in nasal cavity to edema over septum & edema over inferior turbinate which is rare. Erosion of maxillary sinus wall may also occur in case of chronic sinusitis. The regions of normal dehiscence (semi lunar hiatus and infra-orbital canal) are more prone to destruction by sinusitis. Here we report a patient with rhinosinusitis who presented to us with complain of mass in left nostril and dehiscent medial wall of maxillary sinus.*
***Key Words:*** *Rhinosinusitis, facial pain, Orbital complications, inferior turbinate*

## I. Introduction

Rhinosinusitis is inflammation of nasal mucosa & paranasal sinuses.
It is classified as acute, sub acute, recurrent and chronic. (1)
Acute RS: 7 days to ≤4 weeks
Subacute: 4-12 weeks
Recurrent: ≥4 episodes of ARS per year
Chronic RS: ≥12weeks

Acute exacerbation of chronic RS: sudden worsening of CRS with return to baseline
The most common complaint is nasal obstruction & post nasal discharge alongwith facial pain & pressure. (1). Due to hypoventilation of maxillary sinus secondary to ostial blockage, there is negative pressure and inward bowing of maxillary sinus walls, most prominently the roof (3). Erosion of maxillary sinus wall which is a feature of sinonasal tumors may also occur due to chronic sinusitis. However, in chronic sinusitis the erosion is focal and confined to medial wall. (4). Oral cavity examination may suggest dental pathology & postnasal drip. Anterior rhinoscopy show most commonly mucopurulent discharge & mucosal hyperemia. Here we report a case of rhinosinusitis patient with unusual presentation in the form of left nasal mass.

## II. Case Report:

A 40-year old man presented to our OPD with complaint of mass in left nostril since 3 months. The swelling was initially small but had now increased in size interfering with normal easy breathing as said by patient since last 10 days. Past & personal history was not significant.

The patient underwent medical treatment during this 3 month period but the swelling didn't decrease. His general health was good and no previous surgical intervention was performed.

Anterior rhinoscopy revealed a globular swelling which was merging with left inferior turbinate, soft and cystic in consistency, probing all around was possible except laterally. It was sensitive to probing. There was nasal mucosa hyperemia. Septal spur was present inferiorly on left side. Paranasal sinuses tenderness was not present. There was no hypoesthesia or paresthesia over maxillary region. Orbital examination was within normal limit. Oral cavity examination was within normal limits.

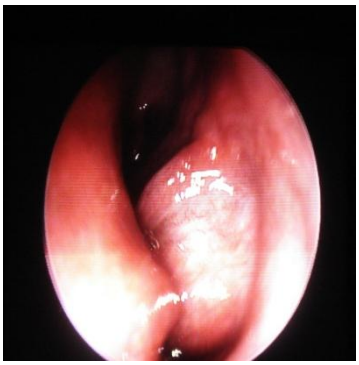
Routine hematological & biochemical investigations were within normal limits

X-ray PNS (water's view): revealed haziness in left maxillary sinus. Bony wall dehiscence was not seen.

Picture 1 

The patient underwent Diagnostic nasal endoscopy (DNE) under local anaesthesia . Findings were smooth globular cystic bulge almost merging with left inferior turbinate and there was no pus or granulation or polyp in the left middle meatus. There was a spur on left side inferiorly near the nasal floor. Right nasal endoscopy was within normal limit.

This is the nasal endoscopic picture of the patient

Picture 2 

## III. Procedure

An incision was given over the most prominent part of the swelling parallel to the inferior turbinate. Pus oozed out of the incision, the medial wall of the maxillary sinus was found to be dehiscent and the probe could be inserted into the maxillary sinus. The opening was dilated and excess mucosa was cut. All the walls of the maxillary sinus were inspected with the help of rigid endoscope (0 degree, 4mm). There was no dehiscence in any other wall. The maxillary sinus was flushed with Betadine and a red rubber catheter was placed inside maxillary sinus through the incision for daily irrigation and was removed after 72 hrs. The patient was given 3 week course of antibiotics, nasal saline drops, and steam inhalations.

At 1 week follow up patient was symptomatically relieved and satisfied. Again at 15 days follow up DNE of the patient was done. The inferior antrostomy opening was patent and patient was asymptomatic.

## IV. Discussion

Rhinosinusitis is inflammation of nasal mucosa and paranasal sinuses. Maxillary sinus is the most commonly affected sinus. The symptoms of sinusitis resemble closely allergic rhinitis and acute viral rhinitis (5). The predisposing factors are mostly a preceding viral upper respiratory tract infection or associated allergy. In this case the symptoms used to recur as soon as the patient stopped taking medication. Recurrence was due to inadequate natural drainage. Remission and exacerbation of symptoms with initiation and termination of antibiotics and long standing process should arouse suspicion of chronic infection and erosion of bony partitions.

The AAO-HNS has identified major & minor symptoms to help making diagnosis of rhino sinusitis (1).
Major and Minor Factors Associated With the Diagnosis of Rhinosinusitis

| Major factorsM Major Factors | Minor factorsM Minor Factors |
|---|---|
| Facial pain/pressure*<br>Facial congestion/fullness<br>Nasal obstruction/blockage<br>Nasal discharge/purulence/discolored postnasal discharge<br>Hyposmia/anosmia<br>Purulence in nasal cavity on examination<br>Fever (acute rhinosinusitis only) † | Headach<br>Fever (in Headache<br>Fever (in nonacute cases)<br>Halitosis<br>Fatigue<br>Dental pain<br>Cough<br>Ear pain/pressure/fullness |

*Facial pain/pressure alone does not constitute a suggestive history for rhinosinusitis in the absence of another major symptom or sign.
†Fever in acute sinusitis alone does not constitute a strongly suggestive history for acute sinusitis in the absence of another major symptom or sign

In the present case, the patient presented with complaint of swelling in left nostril with no history of headache, nasal discharge, fever, olfactory loss, cough or sore throat, which was unusual. Complications arise due to spread of infection beyond the bony walls of sinus. Osteomyelitis of maxilla may also develop. The regions of normal dehiscence are more prone to destruction by chronic sinusitis. Plain radiographs are non-specific. CTscans can provide much more detailed information about the anatomy and alterations of the paranasal sinus walls than plain films (7).
In this case, the X Ray PNS and DNE were used owing to limitations of rural set-up and socio-economic condition of the patient.
Our clinical case emphasizes the variation in clinical presentation right from chief complaints of the patient to the anterior rhinoscopy findings and then to the limitations in diagnosing with help of X-ray in the absence of privilege of CTscan. Here the role of meticulous nasal endoscopy was proven as it revealed the dehiscent medial wall of left maxillary sinus as a result of left chronic maxillary sinusitis.

## CONCLUSION

The diagnosis should be based on combination of proper history, physical examination, radiological investigation, endoscopic nasal evaluation & laboratory results. The primary therapy is medical and in case the disease is recalcitrant to maximal medical therapy, surgical interventions are required (8).The complications of sinusitis must be dealt with urgently. If action is taken in time many irreversible conditions are avoided and patients have potential to recover and function independently as was the case with our patient.

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