

CSF Rhinorrhea- A Rare Presentation of Angiomatous Nasal Polyp

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Abstract

Aim and objectives: To study a suspected congenital meningocele in a paediatric patient with CSF rhinorrhea and right nasal obstruction which was histologically diagnosed as Angiomatous Nasal Polyp (ANP).

Materials And Methods: A 13 year old female patient presented with recurrent CSF rhinorrhea, right nasal obstruction with recurrent meningitis for 10 years. She had no history of papilledema. On nasal endoscopy, mass in right nostril with bilateral inferior turbinate hypertrophy was seen; right 1st pass wasn't possible. Ct-brain showed mucosal thickening in right sphenoid sinus; breach of size 0.9 mm in the right cribriform plate. On CT-Cisternography, 2mm breach noted in right cribriform plate medially showing evidence of CSF leak into right nasal cavity through defect in right cribriform plate. CT-PNS was s/o right sided meningocele; right sphenoid sinusitis. She underwent right sided trans nasal endoscopic meningocele excision with CSF leak repair.

Results: On histopathology, surface of the mass was covered with pseudostratified ciliated columnar epithelium composed of edematous fibro collagenous stroma. It had congested blood vessels with moderate

amount of lymphoplasmacytic inflammatory cells. It was s/o angiomatous polyp.

Discussion

Clinically ANPs present as soft, gelatinous translucent polypoidal, painless mass with nasal discharge often resulting in gradual obstruction of the nasal cavity, loss of smell sensation and recurrent epistaxis. Most ANPs arise in maxillary sinus and extend towards the choana and into the nasopharynx.^[6/7] The patient had a history of recurrent meningitis and CSF rhinorrhea with right nasal block since childhood so more suspicious of meningocele but on histopathology it was ANP.

Conclusions: ANPs do not invade peripheral soft tissue but can cause significant benign bony changes. This case highlights importance of keeping ANP in D/D of unilateral nasal mass.

Keywords: Angiomatous nasal polyp (ANP), CSF rhinorrhea, Nasal obstruction

Introduction

Meningocele is a herniation of meninges through a defect in the skull. An intranasal meningocele presents with a mass in the nose; it may be mistaken for nasal polyp and removed with disastrous complications. The presence of intracranial communication makes biopsy

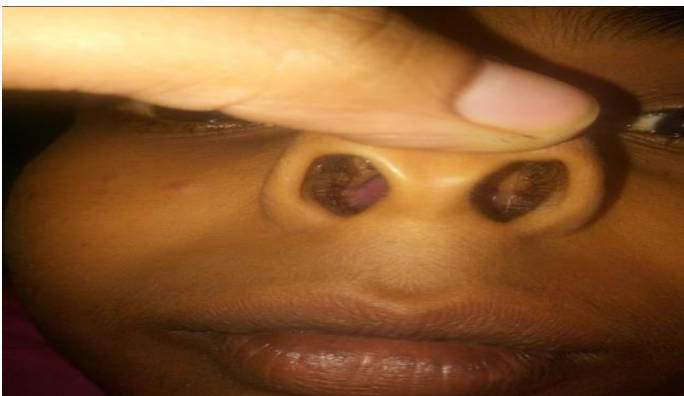
contraindicated. Angiomatous nasal polyp (ANP), is known as angioectatic polyp which is a rare benign lesion. Based on the predominant elements seen on histological evaluation, inflammatory sinonasal polyps (SNPs) have been classified into five types: edematous, glandular, fibrous, cystic, and angiectatic or angiomatous.

Although SNPs are the most common sinonasal lesions examined pathologically, as an uncommon subtype ANP only accounts for 4%-5% of all SNPs [1-3, 5]. Angiomatous nasal polyps (ANPs) are characterized by extensive vascular proliferation and ectasia, with scanty inflammatory infiltrate and abundant extracellular fibrin [2, 4, 5]. In a relatively uncommon presentation, ANPs can grow rapidly and exhibit aggressive clinical behavior such as extensive bone erosion and remodeling or epistaxis which could simulate malignancy preoperatively, and so be a source of diagnostic difficulty [2, 5].

This was an extremely rare case of ANP which presented with CSF rhinorrhea.

Case Report

A 13 years old female patient presented with Recurrent CSF rhinorrhea, right nasal obstruction with recurrent meningitis for 10 years. She had no signs of raised intracranial tension at the time of presentation.



Investigations

Hb 12.1%, TLC -6000/cumm

Platelet Count - 333*1000/cumm

ESR - 35 at the end of 1 hour

CXR PA view – Normal

CSF examination - Proteins-171 mg/dl; Sugar – 41 mg/dl; wbc - 4500/cumm; RBC-0.

CSF C/S - No growth.

ADA - 6.4U/L

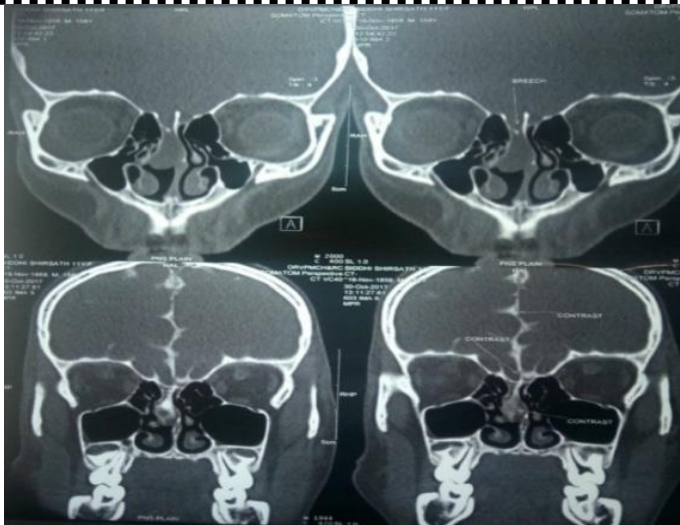
Neurosurgery opinion for CSF Leak was done and was advised therapeutic guarded lumbar puncture.

Anterior Rhinoscopy Pinkish mass was seen in the right nasal nostril with clear fluid discharge.

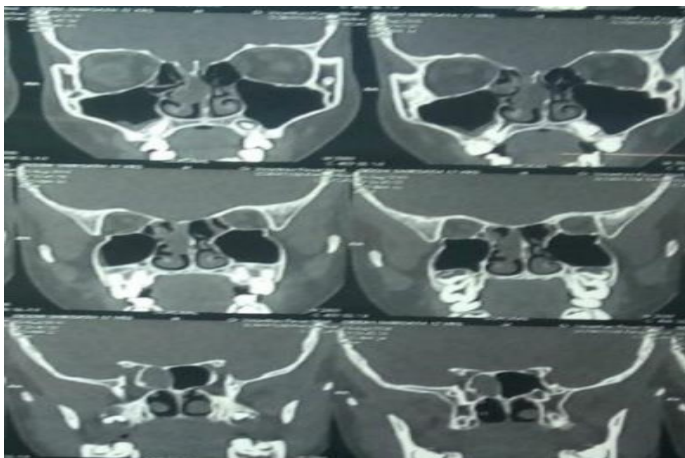
Nasal endoscopy Mass in the right nostril with b/l inferior turbinate hypertrophy. Right 1st and 2nd pass was not possible.



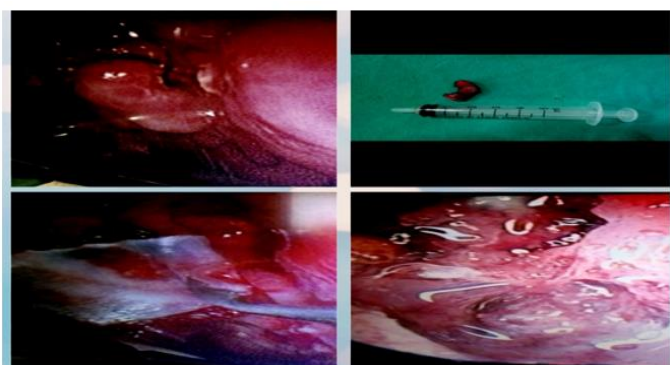
- **MRI BRAIN NAD**
- **CT BRAIN** Mucosal thickening in the right sphenoid sinus. Breach of size 0.9 mm noted in the right cribriform plate.
- **CT CISTERNOGRAPHY** 2mm breach noted in right cribriform plate medially. E/O evidence of CSF leak into the right nasal cavity through the defect in the right cribriform plate.



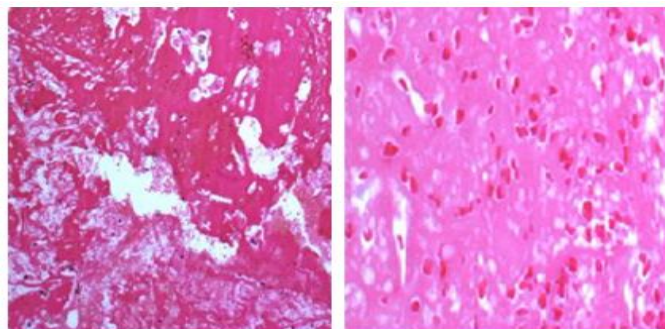
CT PNS- Well defined lobulated soft tissue density lesion in the right nostril with its stalk seen arising from the defect of size 0.9 mm in the cribriform plate on the right most likely s/o meningocele and right sided sphenoid sinusitis.



- Patient underwent right sided endoscopic intranasal meningocele excision with CSF leak repair.
- Intra op findings:



- On Histopathology, the surface of the mass was covered by pseudostratified ciliated columnar epithelium composed of edematous fibro collagenous stroma.
- It had congested blood vessels with a moderate amount of lymphoplasmacytic Inflammatory cells which was s/o Angiomatous Polyp.



Discussion

Clinically ANPs present as soft, gelatinous translucent polypoidal, painless mass with nasal discharge often resulting in gradual obstruction of the nasal cavity, loss of smell sensation and recurrent epistaxis.

Most ANPs arise in maxillary sinus and extend towards the choana and into the nasopharynx.^[6,7]

Progressive expansion of the ANPs may lead to surrounding bony erosions, CSF leak, facial deformity⁸.

The incidence of recurrent CSF Rhinorrhea, nasal obstruction with recurrent meningitis may consolidate the clinical doubt of a meningocele or the presence of malignant lesion⁵. It was radiologically suggestive of meningocele however the most noteworthy pathological characteristics of ANP were the great quantity of blood vessels, evidence of intravascular thrombosis, the massive necrosis of the lesion, and the extravasation of the blood composition into the nearby stroma⁴⁻⁵. Histopathological correlation of the nasal mass is highly important in excluding the possibility of meningocele or malignant lesions.

Conclusion

ANPs do not invade peripheral soft tissue but can cause significant benign bony changes. This case highlights the importance of keeping ANP in D/D of unilateral nasal mass in cases of CSF rhinorrhea.

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