Rhinitis caseosa

Raghul Sekar , Sunil Kumar Saxena, Kalaiarasi Raja, Antony Raj James

Department of Otolaryngology,
Jawaharlal Institute of
Postgraduate Medical Education
and Research, Pondicherry, India

Correspondence to
Dr Raghul Sekar;
raghul8020@gmail.com

Accepted 17 March 2021

DESCRIPTION

A 59-year-old woman presented to the otorhinolaryngology clinic with a 1-year history of left-sided nasal obstruction and rhinorrhoea with a headache. The nasal obstruction and rhinorrhoea were insidious in onset, intermittent and progressive. There was no history of trauma to the nose. On physical examination, we could visualise a smooth mucosal mass on the left side occupying the entire nasal cavity, which was neither sensitive nor bleeding in touch. The septum was pushed to the right, occluding the right nasal cavity. Eye examination showed normal findings. Contrast-enhanced CT of the nose and paranasal sinus showed an expansile, ill-defined, heterogeneous, fluid attenuating lesion with multiple air foci filling the left maxillary sinus and entire nasal cavity (figure 1A,B). Erosion of medial wall, floor and focal erosions of the lateral wall of the left maxillary sinus, lateral deviation of nasal septum towards right maxillary sinus was noted (figure 1C). There was no orbital/intracranial extension or extension into other sinuses. The patient underwent Endoscopic debridement under general anaesthesia.

A white pultaceous, cheesy mass was noted in the left maxillary sinus eroding the medial wall and occupying the entire nasal cavity (figure 2A,B). There was the erosion of the bony septum and extension into the right nasal cavity. The white cheesy material was carefully suctioned along with left inferior turbinectomy, and the remanent tissue was debrided (figure 2C). The patient had an uneventful recovery and also appreciated the immediate resolution of symptoms. The histological examination confirmed that it was indeed a nasal cholesteatoma/rhinitis caseosa.

The term rhinitis caseosa was coined by Duplay for bilateral polyposis filled with cheesy, caseous material. Nasal cholesteatoma is synonymously used with rhinitis caseosa. They have

Figure 2 White cheesy material occupying entire left maxillary sinus (A) eroding medial wall of maxilla and filling entire nasal cavity eroding septum (black arrow) and going into opposite nasal cavity. Cheesy material occupying floor of right nasal cavity (B) between septum and lateral wall (black arrow). Postendoscopic clearance showing an intact posterior wall of left maxilla (star) with septal perforation (black arrow) (C).

bone eroding properties but do not contain squamous epithelium, unlike cholesteatoma elsewhere. Nasal cholesteatoma is considered to be an end stage in chronic inflammation of the maxillary sinus. The exact incidence of maxillary sinus cholesteatoma is not known due to the rarity of its occurrence. Cholesteatoma can arise from various parts of the body. In the cranium, it can arise from temporal bone, orbit and skin, with paranasal sinus being the rarest of them all. Among paranasal sinuses, the most frequent sites were the frontal and ethmoid sinus, maxillary sinus being the rarest of them all.¹ Maxillary sinus cholesteatoma is more frequent in females than in the male.² The pathogenesis of rhinitis caseosa is such that it might a secondary condition to a primary pathology causing blockade of the maxillary sinus. This blockade will lead to the normal respiratory epithelium being replaced by

Figure 1 Contrast-enhanced CT of nose (axial view A, coronal view B) showing ill-defined heterogeneous fluid attenuating lesion with multiple air foci completely filling the left maxillary sinus and entire nasal cavity with expansion of the maxillary sinus. Erosion of medial wall, floor, focal erosions of lateral wall of left maxillary sinus and lateral deviation of nasal septum towards right maxillary sinus noted (plain CT axial view C).

Patient's perspective

I started experiencing symptoms of left-sided nasal obstruction and thick, clear nasal discharge for 1 year. I consulted ENT doctors, who examined my nose and told me that I have a mass in the left side. They advised CT scan to know the nature of the mass. Following the CT scan, I was told to have a large mass filling the entire left nose causing all my symptoms. They suggested I undergo endoscopic surgery for the removal of the mass. The surgery was an hour-long. When I was completely out of anaesthesia, the doctors told me that there was a cheesy mass in my left nose which was a rare but benign condition called 'rhinitis caseosa'. They told me they removed it completely and the condition was less likely to recur in future. Two days after the procedure, I had a complete resolution of symptoms.

© BMJ Publishing Group Limited 2021. No commercial re-use. See rights and permissions. Published by BMJ.

To cite: Sekar R, Saxena SK, Raja K, et al. *BMJ Case Rep* 2021;**14**:e242126. doi:10.1136/bcr-2021-242126

Images in...

a hyperkeratotic epithelium.³ An expansile cyst will release proteolytic enzymes responsible for the bone eroding properties of the nasal cholesteatoma.⁴ The differential diagnosis for this disease is allergic fungal rhinosinusitis, sinonasal malignancy. The symptoms depend on the anatomical site involved. In the maxillary sinus, it causes headache, nasal obstruction, rhinorrhoea, cheek pain and buccal swelling.⁵

There are no proper guidelines regarding the management due to the rarity of the condition. Caldwell Luc's (Open) approach has been suggested as a standard of care for maxillary sinus cholesteatoma, but this case was managed endoscopically, and the procedure resulted in disease remission clinically. Recurrence has not been reported for this condition.⁶ It has an excellent prognosis. Early diagnosis and surgical intervention are needed before it causes extensive bone destruction.

1. Infective granulomatous conditions caused by bacteria like nasal tuberculosis, rhinoscleroma and leprosy—since these conditions are common in India and are associated with destruction of septum.

Learning points

- Rhinitis caseosa or nasal cholesteatoma is a condition with bone eroding properties, so early diagnosis and surgical management becomes the standard of care.
- Isolated involvement of the maxillary sinus is an infrequent condition.
- This condition can closely mimic sinonasal malignancy and allergic fungal rhinosinusitis, so appropriate differentiation between them is essential.
- A CT scan of the nose and paranasal sinus showing an expansile mass filled with air pockets should suggest the diagnosis of rhinitis caseosa.

2. Fungal aetiology such as chronic granulomatous fungal sinusitis, allergic fungal sinusitis—since both can present with polyposis and bone erosion.
3. Non-infective granuloma such as Wegener's granulomatosis and sarcoidosis—since they occur in immunocompetent patients.
4. Midline granuloma caused by non-Hodgkin T-cell lymphoma—it is a rapidly progressive condition unlike our patient.
5. Eosinophilic granuloma is also known as Langerhans cell histiocytosis.
6. Tumour of nasal cavity such as inverted papilloma, adenocarcinoma and Squamous cell carcinoma.

Contributors RS, KR and ARJ were involved in the clinical care, literature review, diagnosis and management of the case. RS and ARJ had prepared the manuscript, and SKS had done the final revision of the manuscript to be submitted.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

ORCID iD

Raghul Sekar <http://orcid.org/0000-0002-9514-6189>

REFERENCES

- 1 Storper IS, Newman AN. Cholesteatoma of the maxillary sinus. *Arch Otolaryngol Head Neck Surg* 1992;118:975–7.
- 2 Pogorel BS, Budd EG. Cholesteatoma of the maxillary sinus; a case report. *Arch Otolaryngol* 1965;82:532–4.
- 3 Viswanatha B. Cholesteatoma of the nose and maxillary and ethmoid sinuses: a rare complication of palatal surgery. *Ear Nose Throat J* 2011;90:428–30.
- 4 Amar MS, Wishahi HF, Zakhary MM. Clinical and biochemical studies of bone destruction in cholesteatoma. *J Laryngol Otol* 1996;110:534–9.
- 5 Yağci AB, Kara CO, Karabulut N. Horseshoe maxillary sinus: CT of a unique case with cholesteatoma. *Eur J Radiol* 2003;48:5–7.
- 6 Vaz F, Callanan V, Leighton S, et al. Congenital maxillary sinus cholesteatoma. *Int J Pediatr Otorhinolaryngol* 2000;52:283–6.

Copyright 2021 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <https://www.bmj.com/company/products-services/rights-and-licensing/permissions/>
BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Become a Fellow of BMJ Case Reports today and you can:

- Submit as many cases as you like
- Enjoy fast sympathetic peer review and rapid publication of accepted articles
- Access all the published articles
- Re-use any of the published material for personal use and teaching without further permission

Customer Service

If you have any further queries about your subscription, please contact our customer services team on +44 (0) 207111 1105 or via email at support@bmj.com.

Visit casereports.bmj.com for more articles like this and to become a Fellow