Scholars Journal of Medical Case Reports
Abbreviated Key Title: Sch J Med Case Rep
ISSN 2347-9507 (Print) | ISSN 2347-6559 (Online)
Journal homepage: https://saspublishers.com

OPEN ACCESS

Radiology

Primary Naso-Sinusal Tuberculosis: Case Report

S. Kirami[1*], I. Azzahiri[1], B. Boutkioute[1], M. Ouali Idrissi[1], N. Cherif Idrissi El Ganouni[1]

[1]Radiology Department ARRAZI, Mohammed VI Hospital, Cadi Ayad University, Marrakech

DOI: 10.36347/sjmcr.2023.v11i06.051 | **Received:** 03.04.2023 | **Accepted:** 09.05.2023 | **Published:** 18.06.2023

***Corresponding author:** S. Kirami
Radiology Department ARRAZI, Mohammed VI Hospital, Cadi Ayad University, Marrakech

Abstract **Case Report**

Tuberculosis remains a public health problem in morocco. Extrapulmonary localizations account for 20 to 30% of tuberculosis disease. We present a case of nasosinusal tuberculosis, an unusual and rare localization of the disease, in a 55 year old women. The main symptoms were dominated by nasal obstruction. CT-scan showed a filling of the maxillary sinus extending into the nasal cavity. Tuberculosis was confirmed histologically after an endoscopic middle meatotomy.

Keywords: Nasosinusal, tuberculosis, primary, chronic rhinitis, CT scan, biopsy.

INTRODUCTION

Tuberculosis still an endemic disease in developing countries. Extra pulmonary localizations account for 20 to 30% of the disease. It unusually involves the nose and the paranasal sinuses which are rarely the primary site of the infection. It is characterized by a polymorphous and unspecific presentation, often posing a differential diagnosis problem [1].

The aim of this work is to report a case of a primary nasosinusal TBK diagnosed in a middle age women. A breef review of the litterature was performed to recall the imaging caracteristics of this rare localisation.

CASE REPORT

We present a case study of a 55 year old female patient with no particular pathological history , who presented for 3 months a crusting epistaxis with right nasal obstruction, all progressing in an apyretic context and preserving general state of health.

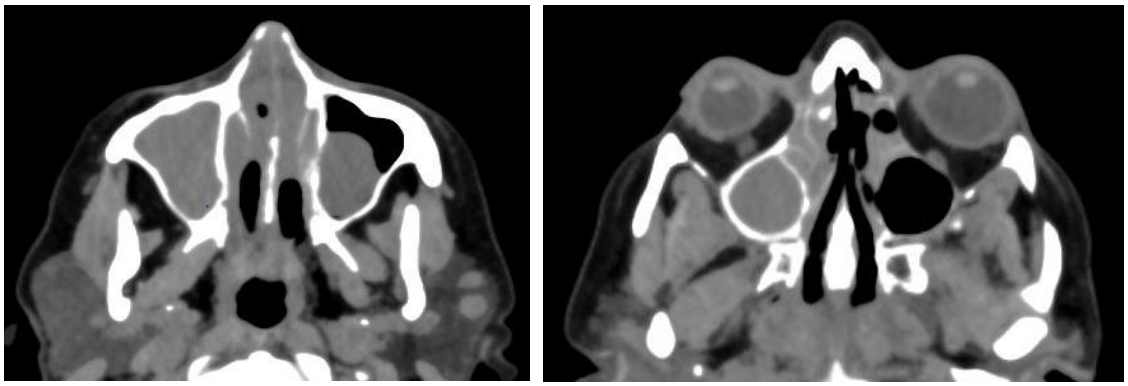

Figure 1: Axial section of a facial non enhanced CT scan showing complete filling of the right maxillary sinus and polypoid filling of the left maxillary sinus extending into the nasal cavity, spontaneously isodense with some hyperdense areas.

CT scann of the shows a complete filling of the right maxillary sinus and polypoid filling of the left maxillary sinus extending into the right nasal cavity, spontaneously isodense with some hyperdense areas that do not enhance after injection of contrast medium.This is associated with thickening of the nasal

mucosa and middle and inferior turbinates, causing complete obstruction of the nasal passage.

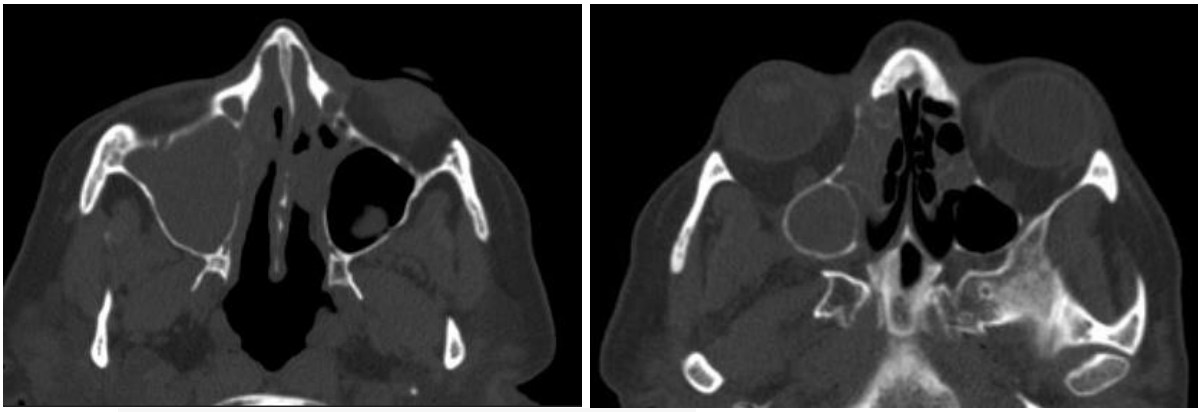

Figure 2: Axial section of a facial CT scan in a bone window showing thinning of the internal walls of the maxillary sinuses, nasal septum, and ethmoidal labyrinth, with areas of bone destruction.

The overall effect is thinning of the internal walls of the maxillary sinuses, nasal septum, and ethmoidal labyrinth, with areas of bone destruction.

Nasofibroscopy shows crusty rhinitis with nasosinusal polyps. The histopathological examination of the nasal biopsy shows a granulomatous reaction with epithelioid-gigantocellular proliferation and caseous necrosis allowing the diagnosis of nasosinus tuberculosis.

The chest X-ray and CT were normal. The bacteriological samples from the sputum were negative pleading in favor of primary sinusal localisation.

The patient was treated with a quadruple therapy for tuberculosis based on isoniazid, rifampicin, ethambutol and pyrazinamide for 2 months followed by 4 months of HE dual therapy with a good clinical evolution.

DISCUSSION

Tuberculosis of the sinonasal région is a rare condition. The diagnosis should be considered in the presence of chronic rhinitis resistant to usual antibiotic therapy. The disease is nearly always secondary to pulmonary or extra pulmonary tuberculosis which reaches the sinus by the way of blood stream howerver the primary nasosinusal localisation remains very rare [2].

Several forms of nasal tuberculosis have been described. The ulcerative form causes naso-sinusal ulcerations. The pseudotumoral form, as found in our patient, gives a septal budding lesion. All these forms can be complicated by sclerotic and retractile lesions or even by lysis of the nasal cartilage.

Any of the sinuses may be attacked, the maxillary and ethmoid being the most susceptible, involvement of base of skull have also been repported in letterature [3].

The topography and extension of the lesions should be evaluated by CT scan, or magnetic resonance imaging. CT may show hasinness of sinuses, sinusal polyposis, sclerotic thickened bone (hyperostosis) involving the sinus wall from a prolonged mucoperiosteal reaction. Intrasinusal calcification may be present. The presence of enhancement is possible. Those imaging features are not specific of tuberculosis [4].

Differentiel diagnosis of chronic naso-sinusitis includes infectious, inflammatory, and neoplastic processes. Infectious causes include mycobacterial (TB, atypical), bacterial (rhinoscleroma), treponemal (syphilis), fungal (mucormycosis, aspergillus), and parasitic (leishmaniasis) conditions. Inflammatory and neoplastic disorders to consider are Wegener's granulomatosis, sarcoid, inhalant granuloma (silicosis), and foreign body retention [5].

The appearance on endoscopy is more often exoplantic than ulcerative. The direct examination usually does not reveal any bacilli and culture is usually negative.

The diagnosis is confirmed histologically by tissue biopsy with the demonstration of epithelioid and gigantocellullar granulomas associated with foci of caseous necrosis. PCR can be used to detect the bacterial DNA.

Therapeutic modalities includes surgical exision with a risk of recurences f greater than 50%, Current recommandations suggest anti TBK mediactions : isoniazid, rifampin, and pyrazinamide for 2 months, followed by isonizid and rifampin alone for 4 months [6].

CONCLUSION

Nasosinusal primary tuberculosis is an exeptional condition. It must be considered in the presence of chronic rhinitis resistant to the usual antibiotics. Cross-sectional imaging have a main role in evaluationg topography, extension of the lesions and differential diagnosis. The diagnosis is based on anatomopathological and mycobacteriological examination of a biopsy specimen of the lesion.

REFERENCES

1. Mardassi, A., Dimassi, H., Nefzaoui, S., & Benzarti, S. (2015). Naso-Sinusal Tuberculosis: 3 Cases Report.
2. Bouchentouf, R., Bouaity, B., Touati, M., Benjelloun, A., & Aitbenasser, A. (2013). Primary sinonasal tuberculosis: apropos of a case. *The Pan African Medical Journal*, *14*, 29-29.
3. Clément, P., Le Guyadec, T., Zalagh, M., Gauthier, J., N'Zouba, L., & Kossowski, M. (2005). Manifestations bucco-naso-sinusiennes des maladies infectieuses spécifiques. *EMC-Oto-rhino-laryngologie*, *2*(2), 198-217.
4. Kim, Y. M., Kim, A. Y., Park, Y. H., Kim, D. H., & Rha, K. S. (2007). Eight cases of nasal tuberculosis. *Otolaryngology-Head and Neck Surgery*, *137*(3), 500-504.
5. Nitassi, S., Nazih, N., Boujemaoui, M., Essakali, L., & Kzadri, M. (2007). Tuberculose naso-sinusienne: à propos d'un cas. *Fr ORL*, *93*, 347-9.
6. Razafindrakoto, R. M. J., Rakotoarisoa, A. H. N., Ramarozatovo, N. P., Rakotomananjo, A. H., Rakotonirina, M. P., & Randrianandraina, M. P. (2012). Un cas de tuberculose naso-sinusienne primaire: une entité clinique rare. *Rev Méd Madag*, *2*(2), 151-153.