# CAVERNOUS THROMBOSIS REVEALING SINUS TUBERCULOSIS: A CASE REPORT

**Abdelkrim HANANE, Naima ALILECHE, Yahia MOHAMMEDI, Djamila HASSANI, Ali SAHEB**

**ENT-HEAD AND NECK SURGERY DEPARTMENT, NEDIR MOHAMED UHC. ALGERIA**

## Introduction

Tuberculosis is still endemic in developing countries. Mycobacterium tuberculosis is the causative agent. The lung is the privileged place of tuberculosis. Naso-sinus localization is rare, characterized by clinical polymorphism and non-specific symptomatology, posing a problem of differential diagnosis.

## Observation

A 42-year-old patient, garbage collector, diabetic, who consulted in the emergency department for left orbital swelling with insomnia headaches. ENT clinical examination: ptosis of the left eye and nonreducible axile proptosis, fever at 38°5 and purulent rhinorrhea from the left middle meatus. Ophthalmological examination: negative light perception, complete ophthalmoplegia, arereflectic mydriasis and intermaculo-papillary retinal ischemia. Naso-sinus imaging by CT shows almost total filling of the ethmoidal cells and the left maxillary sinus (Figure 1). Cerebro-orbital MRI found left cavernous thrombophlebitis with dilation of the ophthalmic vein, right internal conical intra and extra abscessed collection sheathing the right muscle, the optic nerves in their posterior portions and a small internal temporal empyema (Figure 2). The patient was hospitalized in our department, put on triple antibiotic therapy: cefotaxime, ciprofloxacin and metronidazole with anticoagulation at a curative dose for 3 weeks but without clinical improvement. The patient underwent surgery by combined endoscopic and external approach (Figure 3). The histopathological study of biopsy specimens found a respiratory tissue site of epithelio-giganto-cellular granulomatous inflammatory lesion evoking tuberculosis (Figure 4). The patient was put on anti-tuberculosis treatment: 2RHZ /4RH with a good clinical and biological evolution. The patient kept sequelae: ptosis and permanent left blindness.

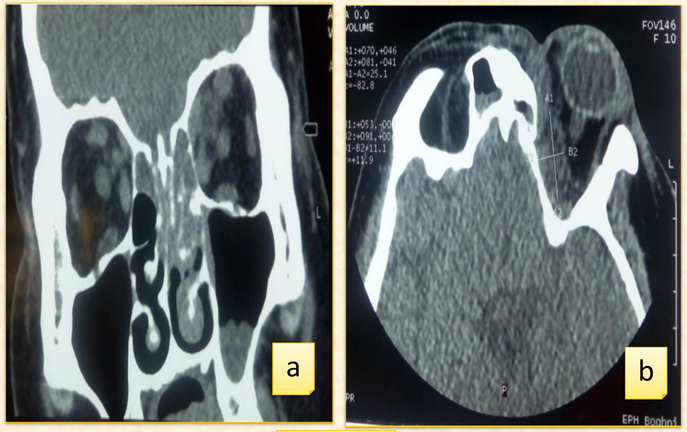


Figure 1

Orbito-nasal CT images :
a: Coronal section b: Axial section

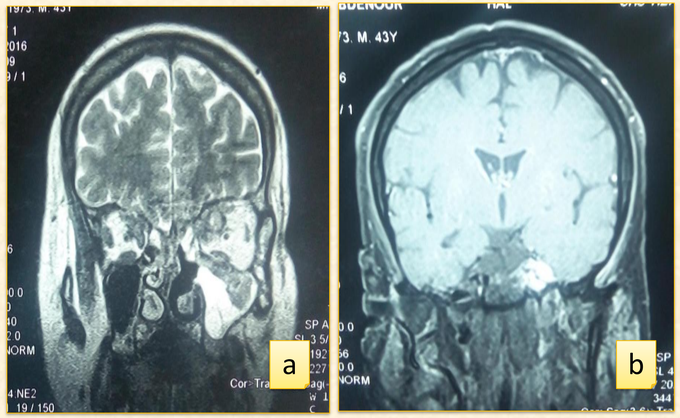


Figure 2

Cerebro-orbital MRI images:
a: Coronal section, T2 sequence
b: Coronal section, T1 sequence with gadolinium injection

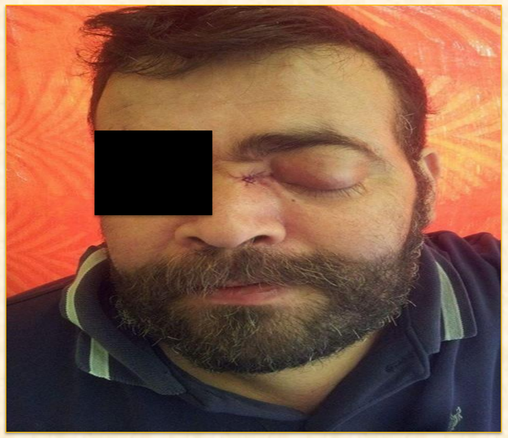

Figure 3

Postoperative view

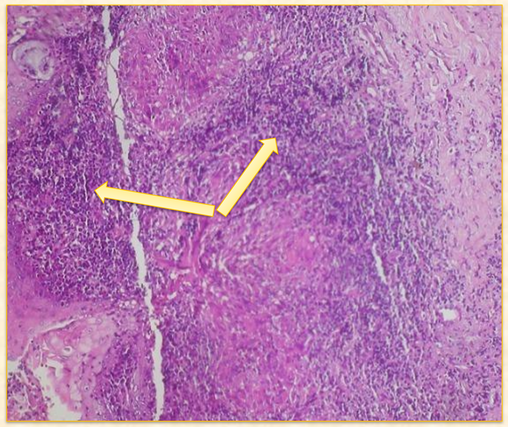

Figure 4

Epithelio-giganto-cellular granulomatous inflammatory lesion

## Discussion

Naso-sinus tuberculosis remains rare; the cerebroorbital localization is exceptional(1). There are only a few publications across world literature. The first description dates back to 1938: Hersh had identified 27 cases. In French literature, the first case described dates back to 1960 (1). The rarity of naso-sinus involvement is attributed to the characteristics of the nasal mucosa: mechanical protection provided by ciliary movements, bactericidal properties of nasal secretions as well as the lymphatic richness of the pituitary mucosa which oppose the development of Bacillus of koch (BK). However, certain local (trauma, chronic atrophic rhinitis) or general (poor hygiene conditions, immunosuppression) factors may favor the development of BK (2). It poses a problem of differential diagnosis in its pseudotumor form (2). The slow evolution and non-specificity of the symptoms and radiological signs explain the delayed diagnosis and the occurrence of serious complications (cavernous thrombosis, cerebral empyema, blindness, etc.) (3). The diagnosis is histological (presence of an epitheliogiganto- cellular granuloma with caseous necrosis) (3). The attenuation of clinical signs and the negativity of bacteriological samples are signs of the effectiveness of the treatment (2). Monitoring is clinical and endoscopic (2).

## Conclusion

Sinus tuberculosis is characterized by its rarity and clinical polymorphism. It is necessary to know how to evoke it in front of any trailing semiology under usual treatment, in order to establish an early effective therapy.

### References / Sources:

1. Slutsker L, Castro KG, Ward JW, Dooley SW. Epidemiology of extra pulmonary tuberculosis among persons with AIDS in the United States. Clin Infect Dis. 1993;16:513–8. [PubMed]
2. Contant A, Fantan Y, Peraldi R, Acquaviva F. Tuberculose nasale: A propos d'un cas. Rev Laryngol Otol Rhinol. 1995;116:225–8. [PubMed]
3. Hughes RG, Drake-Lee A. Nasal manifestations of granulomatous disease. Hosp Med. 2001;62:417–21. [PubMed]