

## Short Communication

# Non-Traumatic Abscess of the Nasal Septum

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## Abstract

We present a case of abscess of the nasal septum occurring spontaneously outside any traumatic context in a 77-year-old patient known diabetic. This is an extremely rare case in which no obvious etiology has been observed found on nasal sinus CT.

**Keywords:** Abscess; Nasal septum; Non traumatic

## Abbreviations

CT: Computed Tomography; NSCT: Naso-Sinusal Computed Tomography

## Introduction

Abscess of the nasal septum is a rare entity, very few cases have been written in the literature.

It is an ent emergency because of the potentially serious complications it can cause if neglected or not treated.

CT scan with contrast allows to affirm the diagnosis of this condition when it is suspected based on clinical findings.

## Observation

This was a 77-year-old man who was admitted to the emergency department of the specialty hospital in Rabat for a nasal swelling associated with bilateral nasal obstruction. Patient didn't have any history of maxillofacial surgery or trauma, he however had a history of diabetes. The clinical examination found a patient stable on the hemodynamic and respiratory level, in good general condition with low fever. A nasal Computed Tomography (CT) scan showed a hypodense collection enhanced in the periphery after injection with contrast in the cartilaginous portion of the nasal septum, suggesting a diagnosis of nasal septal abscess.



**Figure 1:** Sagittal section showing a collection at the nasal septum.



**Figure 2:** Axial section to show the anteroposterior extent of the collection.



**Figure 3:** Coronal section illustrating the collection of the nasal septum.

## Discussion

Nasal septal abscess is defined by the presence of a collection between the cartilaginous or bony part of the nasal septum and the muco-perichondrium or mucoperiosteum [1]. To the best of our knowledge, very few cases of this condition have been reported in the literature and it affects all ages, with a predilection for male children [2]. In the majority of cases, the nasal septum abscess occurs after a nasal trauma causing the formation of a hematoma



**Figure 4:** Coronal section to illustrate the emptiness of the maxillary sinuses, also note the good aeration of the sinus cavities on the different images.

that is subsequently infected and more rarely spontaneously in this case in immunocompromised patients (aids, diabetes) following a neighboring infection: skin (nasal boil), sinus or dental. The most accepted pathophysiological mechanism is the direct subperiosteal spread of pus via the perpendicular lamina of the ethmoid to the sub-perichondral space. In addition, the diffusion of pus through bone cracks, bone defects or thrombophlebitis is possible according to some authors [3].

With an insidious onset, the usual clinical manifestation is painful nasal obstruction which is usually bilateral and occurs in a context of fever. It is sometimes associated with purulent rhinorrhea and headache [4]. Naso-Sinusal Computed Tomography (NSCT) is used to establish the final diagnosis, which is strongly suspected in the presence of such clinical findings. It reveals a hypodense collection of the nasal septum sometimes containing air and specifies the extent of the abscess as well as the structure of the cartilage and the

bone. Its other interest lies in the search for the cause and potential complications that may be neurological (meningitis, abscess, thrombosis) or ophthalmological (cellulitis or orbital abscess) [5,6].

Management is based on surgery to drain the collection, excision of necrotic tissue and antibiotic therapy [7].

## Conclusion

Nasal septum abscess is an extremely rare pathology when it occurs outside the context of trauma. A global understanding of the pathophysiological mechanism of this condition allows an accurate scan assessment.

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