International Journal of Otorhinolaryngology and Head and Neck Surgery
Amana B et al. Int J Otorhinolaryngol Head Neck Surg. 2018 May;4(3):826-828
http://www.ijorl.com
pISSN 2454-5929 | eISSN 2454-5937

DOI: http://dx.doi.org/10.18203/issn.2454-5929.ijohns20181878

Case Report

Rhinolithiasis: lesion specificities of the first case described in Togo

Bathokedeou Amana[1], Winga Foma[1]*, Essobozou Pegbessou[1], Stephen Lionel Antoine Lawson[2], Warou Dolou[2], Essohanam Boko[1], Eyawèlohn Kpemissi[1]

Department of ENT/Head and Neck Surgery, [1]Université de Lomé, Lomé, [2]Université de kara, Kara, Togo

Received: 15 March 2018
Accepted: 07 April 2018

***Correspondence:**
Dr. Winga Foma,
E-mail: adrienfoma@yahoo.fr

ABSTRACT

Rhinolithiasis is a solid concretion by progressive deposition of calcareous salts around an endogenous or exogenous central body, resorbable or not, of variable shape and sizes. Its diagnosis is based on endoscopic nasal examination completed by a computed tomography (CT) of the naso-sinus cavities. We are reporting the first described case of rhinolithiasis in Togo, particularly remarkable for its association with septal perforation, nasal mycosis, and granulomatous reaction.

Keywords: Nasal obstruction, Rhinolith, Rhinolithiasis, Rhinoscopy

INTRODUCTION

A rare and sometimes unsuspected pathology, rhinolithiasis is a solid concretion caused by progressive deposition of calcified salts around an endogenous or exogenous body, resorbable or not, of variable shape and sizes.[1-3] The diagnosis of rhinolithiasis is based on endoscopic nasal examinations and computerized tomography (CT) of the naso-sinus cavities.[1,3] Although generally asymptomatic, rhinolithiasis can present in severe forms due to infectious and mechanical complications. Treatment is extraction by endoscopic nasal surgery.[1,3] We report the first case of rhinolithiasis described in Togo, remarkable for its association with septal perforation, nasal mycosis, and granulomatous reaction.

OBSERVATION

A 62-year-old female, reseller, with atopy, consulted for nasal obstruction, purulent unilateral left rhinorrhea, cacosmia, and headaches that had been developing with relapses for ten years. Clinical examination and occipito-mental radiography (Blondeau or Waters view) at community medical centers lead to several antibiotic treatments (amoxicillin + clavulanic acid and quinolones) and anti-inflammatory drugs that were ultimately unsuccessful. The anterior rhinoscopy revealed an inflamed mucosa, thick purulent discharge, and a yellowish mass obstructing the left nasal cavity, extending from the floor to the body of the mid-turbinate and stiff to micro-tip palpation. The analysis of the previous Waters' radiographic view showed a radio-opaque image that was individualized at the floor of the left nasal cavity (Figure 1a). The CT of the naso-sinus cavities then made it possible to objectify a clear center, calcified mass in the left nasal cavity with septum disruption, associated with mucosal thickening of the maxillary sinuses (Figures 1 b-d). The diagnosis of rhinolithiasis was made even though the patient does not remember any past incident of nasal foreign body. The rhinolith was extracted in pieces with Luc's forceps under general anesthesia, revealing an irregular septal perforation of approximately 1 cm on major-axis. The necrotic mucosa was debrided and the nasal cavity was washed and then treated for 48 hours. Follow-up was

simple under amoxicillin/prednisone for 7 days and local care. Macroscopic analysis of the piece revealed calcium concretions around a friable core similar to that of the black tamarind (dialium guineense) (Figures 2 a and b). Anatomo-pathological examination of the fragments and debris revealed, in addition to the mineral concretions, mycotic filaments with a granulomatous inflammatory reaction made of giant cells and epithelioid cells of lymphoplasmocytes and polynuclear neutrophils associated with fibrosis. The mycotic agent was not identified for a lack of special staining. Nasofibroscopic follow-up at 6 months was normal.

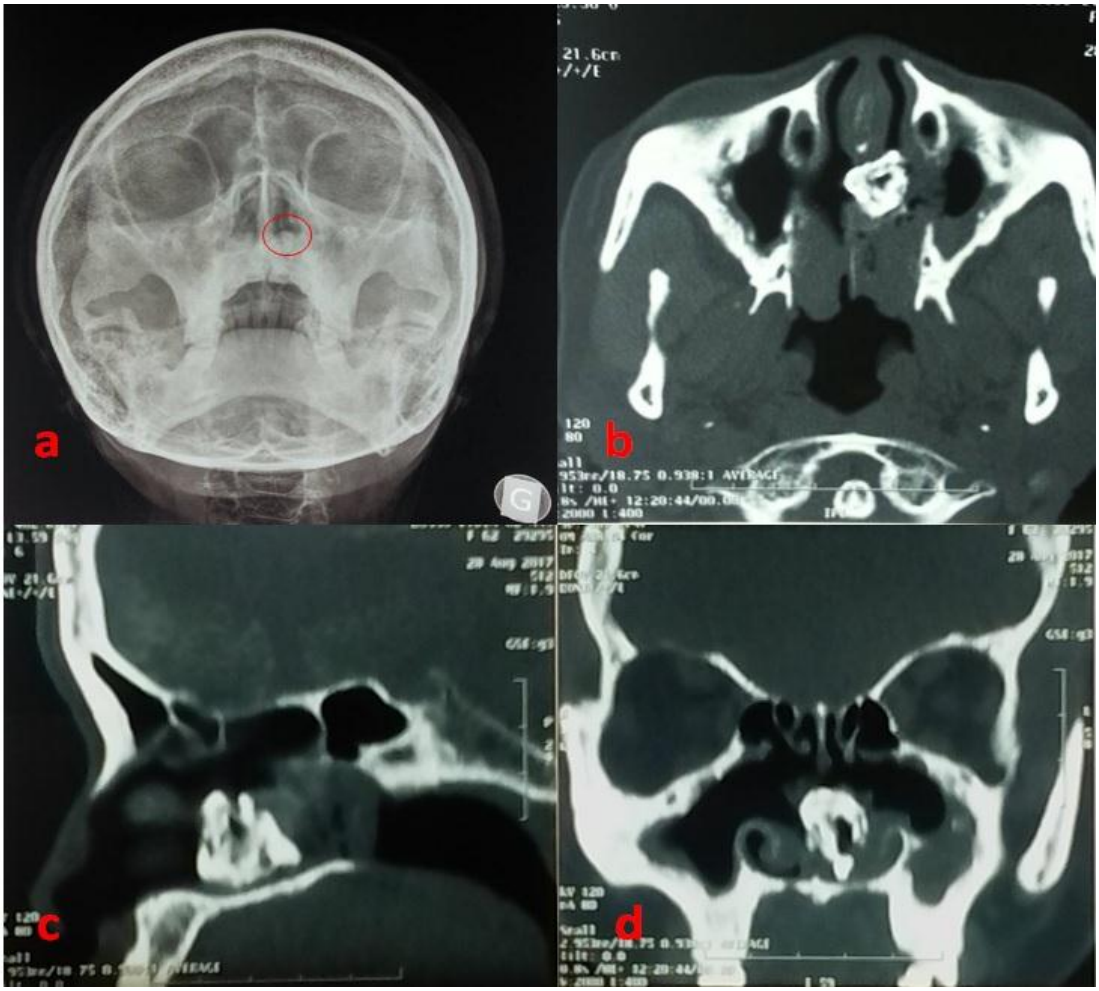

Figure 1: (a) Waters' view X-ray showing a radio-opaque image at the floor of the left nasal cavity and (b, c, d) CT images of the naso-sinus cavities showing a clear center, calcified mass in the left nasal cavity measuring 21 mmx16 mmx13 mm with septum tear, associated with mucosal thickening in the maxillary sinus.

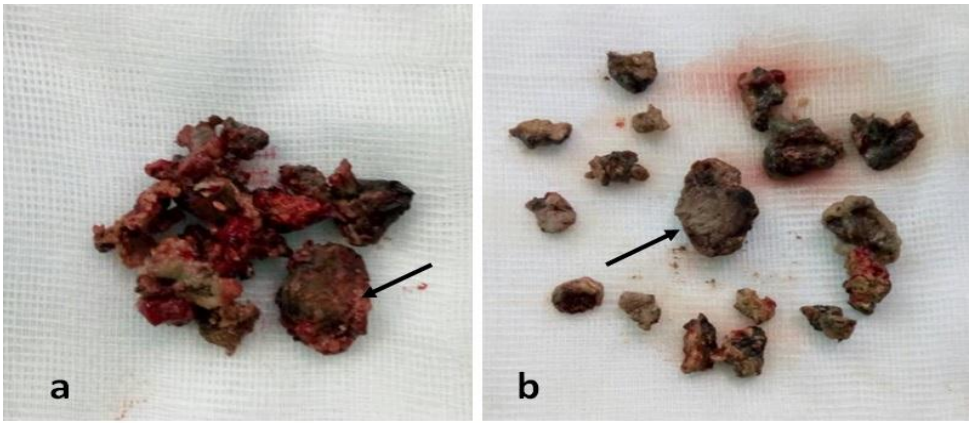

Figure 2: (a) Extracted rhinolith and (b) arrangement of calcium concretions rinsed with physiological saline around the black tamarind core (arrow).

DISCUSSION

Our observation highlights the inadequate knowledge of rhinolitic pathology by the uninformed practitioner who often labels any chronic rhinological syndrome with "sinusitis" and treats it as such without a thorough naso-sinus examination. We also underscore the unique importance of CT in the exploration of chronic naso-sinus syndromes. Although rare, rhinolithiasis is often reported in countries where every so often occur poor socio-economic conditions, poor health coverage, and certain ethno-cultural habits (endonasal applications of phytotherapeutic substances or in the context of certain rituals); however, it can present in all social groups since the origin of the foreign bodies in question can be endogenous such as tooth, dry clot, and sequester or exogenous such as fruit pits, pearls, buttons or any other foreign body.[1-5] Clinically, rhinolithiasis, often reported in the female patient of the third decade of life, exhibits obstructive rhinitis with non-specific repetition and fetid or bloody at times.[5] Facial pain is observed sometimes and is associated with nasal mucosal lesions and sinus superinfections.[1-3] The advanced age of our patient suggests the possibility of a neglect of the nasal symptoms which often are attributed to allergic rhinitis due to atopy or a long asymptomatic past. Moreover, Kermanshahi et al have reported a case of asymptomatic rhinolith lasting more than 80 years.[6] As it is often impossible to find during the interview the date of the beginning of the troubles, the absence of any notion of introduction of intranasal foreign body is common as seen in our patient.[3] This can lead to a misdiagnosis of pathologies such as nasolabial tumors with calcium density: osteoma, odontoma, ossifying fibroma, osteosarcoma, chondrosarcoma, calcified angiofibroma, calcified polyp, bone osteitis and fungal balls.[1-3,5,6] Rhinoliths can be possibly associated with several other nasal pathologies such as a vestibular or turbinoseptal anomaly, a massive granulomatous reaction comprising the rhinolith, sometimes a sinusitis, a polyp, a benign tumor, a hypertrophic rhinitis, or a mycosis that can justify extraction by external surgical approach.[3] For our patient, CT and macroscopy indicated a rhinolithiasis rather than a fungal ball; the mycosis was only an associated colonization. In addition, fungal balls are non-invasive lesions which, on CT, present as a heterogeneous image with discrete calcification.[7] Although the extraction of the rhinolith is possible under local anesthesia, the existence of a septal perforation complication with the risk of worsening lesion and a fairly large rhinolith with risk of fragmentation and inhalation in the airways have justified the use of a general anesthesia in our context.

CONCLUSION

Rhinolithiasis is a rare and unsuspected pathology but sometimes dependent on serious complications. One must think about it when working on a chronic rhino-sinus syndrome and conduct a good rhinoscopic examination. The post-treatment outcomes are often good.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Ziadi T, En-nafaa I, Africha T, Hammoune N, Nourredine A, Drissi M, et al. Une rhinorrhée chronique. Rev Med Interne. 2016.
2. Kharoubi S. Revue générale sur les rhinolithiases. Ann Otolaryngol Chir Cervicofac. 2008;125:11–7.
3. Merol JC, Schmidt P, Legros M, Chays A. Corps étrangers des fosses nasales. Rhinolithiase. Encycl Méd Chir (Elsevier SAS, Paris, tous droits réservés), Oto-rhino-laryngologie. 2003;20-390-A-10:4.
4. Hadi U, Ghossaini S, Zaytoun G. Rhinolithiasis: a forgotten entity. Otolaryngol Head Neck Surg. 2002;126:48-51.
5. Dincer Kose O, Kose TE, Erdem MA, Cankaya AB. Large rhinolith causing nasal obstruction. BMJ Case Rep. 2015.
6. Kermanshahi MS, Jassar P. A bolt from the blew: rhinolith in the nose for more than 80 years. BMJ Case Reports. 2012.
7. Thompson III GR, Patterson TF. Fungal disease of the nose and paranasal sinuses. J Allergy Clin Immunol. 2012;129:321-6.

Cite this article as: Amana B, Foma W, Pegbessou E, Lawson SLA, Dolou W, Boko E, et al. Rhinolithiasis: lesion specificities of the first case described in Togo. Int J Otorhinolaryngol Head Neck Surg 2018;4:826-8.