

CASE REPORT

Rhinoscleroma

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INTRODUCTION

Rhinoscleroma is a chronic granulomatous disease caused by the enterobacterium *Klebsiella rhinoscleromatis*, which selectively affects the upper airways. The nasal cavity is the most common site of involvement, although lesions may arise at any point of the airway down to the bronchi [1].

CASE-REPORTS

Case 1

A 45-year-old man presented with a 2-month history of gradual nasal obstruction on the left, a seromucous nasal discharge, and repeated nosebleeds. The nasal pyramid was swollen on the left side (Figure 1). Anterior rhinoscopy disclosed a budding, apparently infected, crusty tumor issuing from the left nasal vestibule. The oral cavity, pharynx, and larynx were normal. Biopsies of the left nasal cavity were taken at the end of rigid nasal endoscopy. Pathological findings established the diagnosis of rhinoscleroma at the infiltrating stage.

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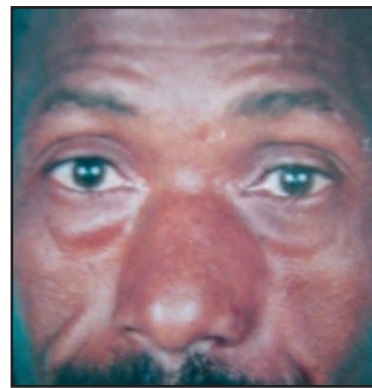
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Figure 1: Rhinoscleroma of the left nasal cavity causing deformity of the nasal pyramid.



Trimethoprim-sulfamethoxazole was given for 8 weeks, in combination initially with a brief course of glucocorticoid therapy in a dosage of 1 mg/kg/24 hours. The swelling resolved completely and the nasal obstruction improved. At last follow-up after 20 months, nasal endoscopy showed no evidence of residual granuloma and the nasal mucosa had a normal appearance. Therefore, no further biopsies were taken.

Case 2

This 28-year-old economically deprived man presented to the otorhinolaryngology department with chronic bilateral nasal obstruction and a seromucous nasal discharge. He reported closed rhinolalia and repeated nosebleeds. A budding, crusty, and infected tumor was found in the nasal cavity. Computed tomography of the face visualized a tumor that was located bilaterally in the nasal cavities and expanded the bony palate, sinonasal walls, and nasal septum on the left (Figure 2). Examination of a biopsy taken during nasal endoscopy showed rhinoscleroma at the infiltrating stage (Figure 3).

Trimethoprim-sulfamethoxazole was prescribed for 8

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weeks, initially with a brief course of glucocorticoid therapy in a dosage of 1 mg/kg/day. Incomplete tumor regression then prompted further antibiotic therapy, for a total of 4 months. Marked symptomatic improvement was noted. Nasal endoscopy after 12 months disclosed cicatricial sclerosis in the left nasal cavity with no clinical symptoms or disfigurement. A biopsy of the sclerotic lesion was negative. The nasal mucosa was normal in the right nasal cavity.

DISCUSSION

Rhinoscleroma is common under dry semi-desertic climates and among economically deprived individuals. The reservoir of *K. rhinoscleromatis* is the human nasal mucosa. Transmission occurs via direct inhalation of nasal droplets [1]. In most series, ages ranged from 8 to 76 years and a slight female predominance was noted. [2-3]. *K. rhinoscleromatis* is a Gram-negative encapsulated organism. [3]

Figure 2: Computed tomography of the face, coronal section. Rhinoscleroma involving both nasal cavities.

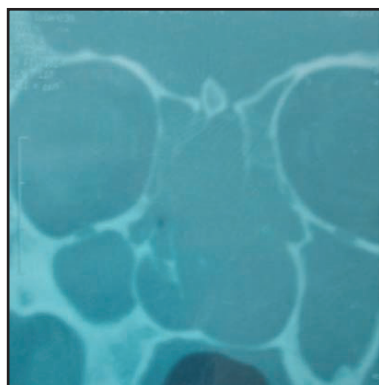
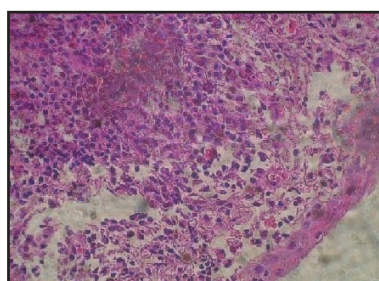


Figure 3: Histological appearance of rhinoscleroma.



Rhinoscleroma is divided into four clinical stages: **catarrhal stage**, characterized by a blood-streaked mucous or mucopurulent nasal discharge; **the atrophic stage**, with fetid crusts; **the infiltrating or granulomatous stage**, in which granulomatous nodules develop; and **the sclerotic stage**, where the nodules are replaced by fibrous tissue. [3-5] Rhinoscleroma should be considered in patients with crusty chronic rhinitis that fails to respond to standard treatment [1]. The main differentials are syphilis, tuberculosis, leprosy, and Wegener granulomatosis. The diagnosis rests on the identification of *K. rhinoscleromatis* in microbiological specimens and on the presence in histological specimens of nests of Mikulicz cells containing the organism, a pattern that is diagnostic for rhinoscleroma.

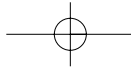
The treatment rests on medical means. The many antimicrobial agents that are active against *K. rhinoscleromatis* include tetracyclines, streptomycin, and sulfonamides. The recommended treatment duration is 2 to 6 months. Lavage of the nasal cavity is used also. A brief course of oral glucocorticoid therapy in a dosage of 0.5 to 1 mg/kg/day is often given initially to accelerate recovery and to prevent the development of sclerosis. [1] Surgery is used to remove sclerotic lesions that fail to respond to medications. Plastic surgery of the nares, oropharynx, or larynx may be required in patients with sclerotic lesions that fail to respond to medical therapy. [2,4].

CONCLUSION

Although the incidence of rhinoscleroma seems to be declining in Morocco, this diagnosis should be considered in patients with centropacial granuloma. Early diagnosis, appropriate treatment, and careful prolonged follow-up are essential to eradicate this infectious disease and to avoid the development of mutilating sequelae.

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