

A RARE CASE OF ANTERIOR NASAL SEPTUM PERFORATION

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Keywords: nasal septum, perforation, occupational environments

Abstract: This article presents a case of anterior nasal septum perforation occurring in a female patient, diagnosed with rheumatoid arthritis after a long-term treatment with Methotrexate. A study conducted by the author taking into consideration people working in occupational environments presenting dust, fumes, gases, resulting from electroplating, has not detected cases of perforation of the nasal septum, as they occurred in older statistics, probably due to modernization of the production processes.

INTRODUCTION

The nasal septal perforation represents a medical condition in which the cartilaginous portion (in rare cases the bone portion also) of the nasal septum presents an orifice of various sizes and shapes, which makes the two nasal cavities communicate, leading to changes in pressure, flow, especially discomfort in the physiological nasal breathing. A particular type of nasal discomfort occurs in small dimensions nasal septum perforations, which produces whistling, disturbing the social life of the patient.

The nasal septum perforation may appear due to several factors: extended use of nasal decongestant medication, cocaine, nasal piercing, aggressive nasal hygiene, syphilis, TB, exposure to occupational hazards, and even due to complications of rhino-septoplasty. Seldom, this medical condition may occur in cases of granulomatosis, such as Wegener's granulomatosis. Nevertheless, it is our choice to bring this particular situation into view, in order to emphasize the fact that septal perforations may occur in other circumstances than the mentioned ones.

The incidence of the occurrence at population level is situated around the value of 0,9%. (1)

CASE REPORT

The present study presents the case of a female patient, aged 24 years old, smoker, who presented to the Otolaryngology ambulatory for an increased amount of nasal secretions and the need to eliminate them from the nostrils. Initially, these secretions were serous, rare blood-streaked, which subsequently transformed into crusts, also with previous elimination.

The medical history of the patient revealed that four years ago, she was diagnosed with HLA-27 positive rheumatoid arthritis, undergoing treatment with methotrexate for two years, according to the schedule indicated by the rheumatologist. The above mentioned symptoms started after completing the treatment with methotrexate, prior to this treatment, the patient being completely asymptomatic.

This situation is important in order to illustrate the fact that that septum perforation can also occur in other circumstances than the well-known ones.

The Ear, Nose and Throat (ENT) clinical

examination found the fact that the nasal pyramid had normal appearance and the patient's breathing was physiologically nasal.

Upon anterior rhinoscopy, there has been observed at approx. 8 mm from the nasal orifice, the presence of an oval perforation of nasal septum with a large diameter of about 10 mm, with regular edges, the anterior one showing sero-mucous secretions, and the posterior one showing a congestive appearance.

Indirectly, pharyngoscopy and bucco-pharyngoscopy detect only a mucous of normal aspect with seromucous secretions in small amount.

The nasal septum was not deviated and the nasal turbinates were almost normal in terms of appearance.

Figure no. 1. Anterior edge of the perforation with serous secretions

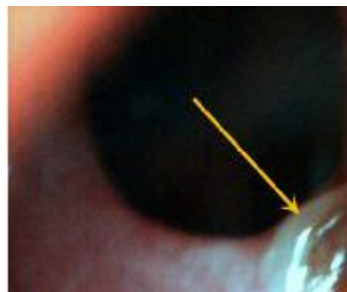
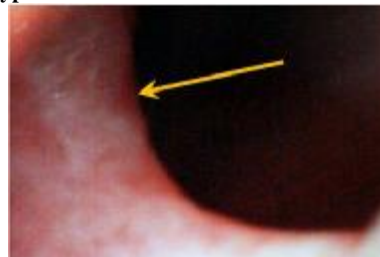


Figure no. 2. Posterior (healed) edge of perforation with congestive-type lesions

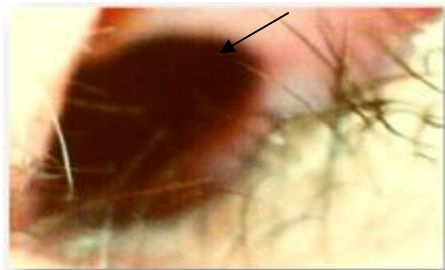


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Article received on 12.07.2015 and accepted for publication on 16.09.2015

ACTA MEDICA TRANSILVANICA December 2015;20(4):99-100

Figure no. 3. Septal perforation viewed at the level of nostrils



DISCUSSIONS

A spontaneous communication between the two nasal cavities can occur from a variety of causes: prolonged use of nasal decongestants, cocaine, syphilis, tuberculosis, fungal infections, and local circulatory disorders (although the area is well vascularised from many arterial sources).(5)

Taking into account a national statistic, in Romania, between 2003 and 2012, there were declared 62 septum perforations by exposure to hexavalent chromium (source: Incidence of occupational diseases in Romania, National Institute of Public Health of Bucharest) (4), while in Sibiu, in 2000, there were declared two perforated nasal septums and 9 atrophic rhinitis by exposure to hexavalent chromium in persons working in metallic coatings (galvanized) environments, in two large companies (source: Public Health Directorate of Sibiu County, records of occupational diseases).(4)

More rarely, septal perforation can occur in some mixed diseases of the connective tissue, scleroderma, rheumatoid arthritis, granulomatoses, such as Wegener's granulomatosis.

Provoked septal perforations may occur as a result of self-trauma to the anterior septum portion, due to an aggressive nasal hygiene, nasal traumas with compressive septal hematoma, nasal piercing, exposure to hazards in the workplace, but also as a complication of rhino-septoplasties, when damage to perichondrium on both sides of the nasal septum, bring about circulatory disorders with septal necrosis and subsequent perforation.

Most common symptoms include the emergence of quantitative growth of nasal secretions, followed by the appearance of some annoying crusts crusting, small episodes of rhinorrhagia (which may be important in persons on anticoagulant therapy), bad-smelling nasal breathing.

In the case of small perforation, besides those above-mentioned, there can appear hissing of different tonality which worsens even more the discomfort.

A series of perforations can pass as asymptomatic or under the form of false symptoms, the patient ignoring the increased secretions and scabs, especially if he/she lives in an occupational environment that favours their occurrence (smoke, dust, fumes, corrosive agents, high temperatures with low humidity).

Also, asymptomatic or oligosymptomatic are the posterior perforations, these influencing less the air flow dynamics.

Clinical examination should start by inspecting the nasal pyramid, which can be distorted by a large perforation, located higher, as sometimes it happens in syphilis.

Previous rhinoscopy reveals the anterior-medial perforations, and can determine the location, shape, size and the present state of perforation (stabilized or in the process of healing) as well as its age.

Often, for characterizing a perforation and for diagnostic accuracy, nasal endoscopy is required, preceded by the nasal lavage and followed by secretions suction.

Conservative treatment, which we use in these cases aims at constantly softening and removing the secretions. A number of ointments and solutions can be used, such as, vitamin A oil, boro-glycerine, saline water with or without hyaluronic acid.(3)

Surgical treatment is addressed to stable perforations in the absence of superinfection and aims at eliminating the disturbing symptoms, in case of large perforations, abundant mucus, scabs and bleeding, and for small perforations, any hissing present.(2)

Different techniques for endonasal surgery aimed at bringing mucosal flaps, or composite, to cover the defect-septal perforation. Often, in our experience, serial interventions are needed. Long term consequences of an treated nasal septum perforations, can include nasal saddling, tip ptosis as a result of loss of septal support and ultimately, chronic infections, such as local osteitis.(5)

CONCLUSIONS

Given the underlying disease of the patient (a disease itself can cause perforation) and the possibility of repeated the treatment that caused the perforation, and taking into account all surgical options, we recommended a conservative local treatment (application of vitamin A oil and lavage with saline water with hyaluronic acid), especially because abstinence from the treatment of the underlying disease cannot be taken into account.

Long supervision of the perforation is required, especially if we consider that the patient is a smoker. In such a case, at some point of evolution, biopsy of a fragment of the perforation edge will be needed to remove the suspicion of local neoplasia.

Compared to the previous statistics, which ranked first as a cause of septal perforation, the occupational exposure to dust, gases and vapours, in the present study, we found no such cases, probably due to the modernization of the technological processes.

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