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Nasal septal haematoma in Nigeria

A. B. CHUKUEZI, F.R.C.S. (Owerri, Nigeria)

Abstract

A prospective study of 46 consecutive patients with nasal septal haematoma admitted at the General Hospital, Owerri, Nigeria over a five year period is presented. The disease was commoner in males than females. The majority of the cases (65.6 per cent) were of unknown cause and were therefore grouped as spontaneous haematoma while 30.4 per cent were due to trauma. Trauma was more common in patients below the age of 15 years while spontaneous haematoma was common in patients above that age. All the patients with septal haematoma represented 0.2 per cent of total attendances to the ENT clinic over the period. Most of the patients presented with severe and threatening symptoms necessitating intense aggressive management. All the patients were managed by surgical incision and drainage, four had marked nasal abnormalities. Three patients died from a brain abscess as a complication of infected haematoma.

Introduction

Impeded nasal breathing may be caused by a number of factors (Blahova, 1985). One of these factors causing restriction of the airway is nasal septal haematoma. The literature abounds with fleeting references on this condition (Fry, 1969). Nasal septal haematoma is a world-wide occurrence and more often presumed from nasal trauma. Although nasal injury is commonplace in childhood, nasal septal trauma often is neglected and frequently goes undiagnosed until complications ensue (Olsen *et al.* 1980). This therefore calls for a thorough nasal examination by anterior rhinoscopy in all cases of nasal trauma. This view is supported by Olsen *et al.* (1980) and McGillicuddy (1972). When untreated or diagnosis is delayed, considerable functional and cosmetic abnormalities may result.

The object of this study is to know the prevalence and aetiology of nasal septal haematoma and its effects on the nose in the black population of Nigeria. There is also the necessity to highlight the need for thorough examination of the nasal cavity after trauma especially in children who are likely to be subjected later to nasal deformities if diagnosis and treatment are delayed. A neglected haematoma of the nasal septum is a childhood tragedy (McGillicuddy, 1972).

Patients and methods

In the period between July 1984 and June 1989, a prospective study of patients presenting with nasal septal haematoma was carried out. Over the five-year period a total of 46 patients with nasal septal haematoma were seen and treated in the Ear, Nose and Throat Clinic of the General Hospital Owerri, Nigeria. The study group comprised patients ranging in age from two years to 60 years. Each patient was seen and thoroughly examined by the ear, nose and throat specialist. A careful examination of the nose including anterior rhinoscopy was carried out on every patient and a detailed history taken before the diagnosis was made. The age, sex, side of the septum affected and possible cause of the haematoma were recorded. The duration between onset of symptoms and presentation to the ENT Clinic was noted. Most of the patients were referred directly to the clinic from peripheral hospitals while the others presented at the accident and emergency unit. All the patients were admitted into the hospital and underwent evacuation of the haematoma by incision and drainage under local anaesthetic, or general anaesthetic for children and uncooperative patients. This procedure was followed by packing the nose with gauze or inserting a drainage tube for three to four days. All evacuated material from the haematoma was subjected to culture and sensitivity. Infected cases were treated with antibiotics. The patients were kept in hospital for a minimum of one week to watch for any recurrence or complications. All the patients were seen one month, three months and six months after discharge to check for any late deformities of the nose.

Results

Of the 46 patients studied, 41 were male and five females giving a ratio of M:F:8:1 (Table I). The haematoma was bilateral in 40 cases. Five cases of haematoma occurred on the right side while one occurred on the left side of the nasal septum (Table II). The peak incidence was between the ages of 11 and 20 years (Table III). Fourteen (30.43 per cent) patients were admitted having sustained some form of trauma to their nose; these were mainly males below the age of 15 years. The trauma was mainly due to falls, blows on the nose or thrown objects. In 32 patients it was not possible to determine the cause of their haematoma. These 32 (65.6 per cent) patients were grouped as spontaneous haematoma (ratio of trauma: spontaneous haematoma 1:2.3). Of the total number of

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TABLE I
SEX INCIDENCE IN NASAL SEPTAL HAEMATOMA

	No. of patients
Male	41
Female	5
Total	46

TABLE II
SIDES OF NASAL SEPTUM AFFECTED BY HAEMATOMA

Sides	No. of patients
Left	1
Right	5
Both	40
Total	46

patients studied, eight had developed an abscess on presentation, four of these later developed a brain abscess. Those that suffered from brain abscess were young males between the ages of 11 and 15 years. One of them had a frontal abscess, while another had cavernous sinus thrombosis and massive orbital cellulitis on admission. Three of the patients with brain abscess died and only one survived. All the patients reported to the hospital between one to four weeks after onset of their symptoms; the average time of presentation to the clinic was two weeks. Those that developed a brain abscess presented to the clinic three to four weeks after the onset of symptoms.

One of them was referred by the ophthalmology department having been admitted initially with orbital cellulitis. There was only one case, that of the 60-year-old man, who claimed to have had a recurrence. He admitted having a similar experience 40 years before which burst on its own after forming an abscess. He denied any association of his complaint with any form of trauma in the two incidents. In all patients that had an abscess, the culture grew *Staphylococcus aureus* while in the remainder the haematoma was sterile. The symptoms with which most of the patients presented are shown in Table IV. All patients complained of nasal obstruction. In those that had headache, this was so severe that some of them had to shave their hair.

A follow-up for six months has been possible in all but two patients; in the remaining 41 only four developed nasal deformity or restriction of the airway. During the period of study there were 20,186 attendances to the ear, nose and throat clinic; those presenting with nasal septal haematoma during this period represent 0.2 per cent of the total.

Discussion

Nasal septal haematoma may arise after trauma to the nose, but also spontaneously on rare occasions (Bernstein *et al.*, 1979). In this study the findings were different. The aetiology in 65.6 per cent of the patients studied was unknown. These patients were therefore classified as having spontaneous haematomas while in 30.4 per cent the haematoma was due to trauma. Fry (1969) claimed that septal haematoma following nasal trauma is probably more common than generally acknowledged. This notion is not totally born out by our findings. McGillicuddy (1972) observed that haematoma is a rare complication of nasal trauma. This claim is also confirmed by studies done by Grymer *et al.* (1985) who found no case of nasal septal haematoma in 57 children between 0–10 years with nasal fractures. Blahova (1985) also found in a study of 241 children with nasal injury that only 25 (10.3 per cent) of them developed haematoma or septal abscess. He also found that only two cases with abscess and haematoma were actually associated with fracture of the nasal bones. The remaining 23 of these 25 patients with nasal injury had no fracture of the nasal bones. Trauma to the nose may lead to tearing of some blood vessels in the nose. Blood then collects between the mucoperichondrium and the cartilage and if the mucosa is still intact this leads to a septal haematoma. The perichondrium is stripped from the cartilage and in the cases of fracture blood can seep through the fracture to the other side to form bilateral haematomata. In some cases the septal cartilage may quickly become absorbed within a haematoma even in the absence of infection (Blahova, 1985).

It is risky to inadequately examine a nose that has had trauma. Careless examination by the casualty doctor or the general practitioner could lead to disastrous consequences such as abscess formation and septal deformities. Some patients with septal haematoma have been inadvertently sent home without proper intranasal examination because they had mild or no external trauma to the nose. It has become necessary therefore to create more clinical awareness of the condition of septal haematoma in order to eliminate confusion with or the mistake of diagnosing a nasal haematoma as a nasal polyp, tumour, or an allergic swelling or worse still to temporise and wait for it to subside (McGillicuddy, 1972).

Complications of deformity of the nose were found mainly in this study in those patients who developed a septal abscess. Observations at Owerri correlate with Ogisi's findings in 1986 at the University of Benin Teaching Hospital in Nigeria where out of 10 consecutive patients whom he followed up with spontaneous septal abscess, four (40 per cent) had septal deformity. In this series, of the eight patients who developed a septal abscess, four (50 per cent) developed a subsequent nasal deformity. It is important here to highlight the prevalence of spontaneous haematoma and the abscess that may complicate it amongst the black population. Forty (86.9 per cent) of the patients studied in this series presented with bilateral septal haematomata. In the traumatic cases, the mechanism of

TABLE III
AGE INCIDENCE IN NASAL SEPTAL HAEMATOMA

Age in years	No. of patients	%
0–10	10	21.7
11–20	17	37.0
21–30	3	6.5
31–40	4	8.7
41–50	8	17.4
51–60	4	8.7
Total	46	100.0

TABLE IV
PRESENTING SYMPTOMS IN NASAL SEPTAL HAEMATOMA

Nasal obstruction	46
Mouth breathing	41
Swollen nose	31
Severe headache	35
Fever	15
Rhinorrhoea	26
Pain in the nose	27

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bilateral occurrence could be explained. It is significant that, despite the delay in reporting to hospital, the incidence of nasal deformity was minimal. Only four of the patients (8.7 per cent) had nasal deformity. Ogisi (1986) suggested that deformity could be due to delay in presentation and delay in surgical drainage of the abscess. This observation is true but in other reports it appears that complications of deformity following nasal septal haematoma in the white population were probably due to a much more rapid resorption of the cartilage (Fry, 1969; McGillicuddy, 1972). It may be interesting to find out why the Negroid nose with a heamatoma or abscess is more likely to be resistant to deformity when compared to the Caucasian. The rapid resorption of cartilage even in a sterile haematoma has been blamed on a decrease in blood supply or influx of tissue collagenases (Fry, 1969). Could this difference in resistance to deformity be due to the shape of the nose, the blood supply or the type of tissue collagenases found in the black or white nose? There is no doubt also about the significant occurrence of spontaneous haematoma and abscess formation in the black population of Nigeria when compared to trauma as a cause. However on detailed inquiry during follow-up eight of the 32 patients with a spontaneous haematoma were found to take tobacco snuff. It was surmised that these eight who regularly blew their noses rather violently after taking snuff could inadvertently have traumatized their noses thus causing a haematoma. There was a male predominance (M:F:8:1) for nasal septal haematoma and abscess in this study; Ogisi (1986) made a similar observation a (M:F:4:1) in his study of nasal septal abscess. The prevalence of this disease amongst male Nigerians is not explained. However, younger males being more adventurous are more prone to trauma.

Key words: Nasal septum; haematoma

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Address for correspondence:
A. B. Chukuezi, F.R.C.S.Ed., F.W.A.C.S.,
Consultant Ear, Nose and Throat Surgeon,
General Hospital,
Owerri,
Imo State,
Nigeria.