

Nasal Septal abscess in Ibadan, Nigeria.

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Abstract

Nasal septal abscess is a rare entity. If diagnosed and attended to promptly, it can be cured with little or no residual deformity. The aim of the study was to find out the pattern of presentation of nasal septal abscess and complications in our environment.

This is a retrospective review of all the patient that presented to the ENT clinic of the University College Hospital, Ibadan with septal swelling over the twenty years (20years) June 1988-May 2007 period. The data retrieved included biodata, clinical presentation and operative findings and follow up complications. All data entered into the SPSS version 11.0 and results presented in tables and figures.

A total number of 26 cases reviewed age range 3-60yrs with mean age of 29.62years and a median age of 20.00years (S.D=20.70). Male: Female ratio was 5.5:1.0. Majority of the patients were students, commonest presentation was nasal obstruction in 38.5% and most patients presented within five days of onset of symptoms (56.9%). Most of the patients had preceding infective causes (53.8%) and few had trauma (38.5%). Examination finding revealed septal swelling, loss of nasal patency and nasal discharge in 53.8%, all patients had incision and drainage under general anaesthesia. Staphylococcus aureus was the commonest isolate found and 46.2% had re-accumulation of the abscess collection.

Nasal septal abscess in an uncommon nasal problem and re-accumulation after drainage still remain a major complication.

Key words: Septal, Abscess, Trauma, Re-accumulation

Introduction

Nasal septal abscess (NSA) is defined as a collection of pus between the cartilage or bony septum and its normally applied mucoperichondrium or mucoperiosteum.^{1,2}

Nasal septal abscess is one of the granulomatous

lesions within the nasal cavity which may represent either local diseases or a manifestation of an immunosuppressive systemic disorder such as tuberculosis and human immuno deficiency virus infection^{3,4}. It may also be a sequelae of an infected septal hematoma post nasal trauma or surgery due to rupture of the small vessels that supply the nasal septum and failure to identify and treat a septal hematoma can result in a saddle deformity of the septum, which will require surgical repair.^{1,5,6,7,8}

Nasal septal abscess is a rare entity. If diagnosed and attended to promptly can be cured with little or no residual deformity⁹. On the other hand; neglect can lead to nasal collapse⁶ and even cavernous sinus thrombosis^{6,9,10,11,12}.

The aim of the study was to find out the pattern of presentation profile of nasal septal abscess and complication in our environment.

Methodology.

This is a retrospective analytical review of all the patient that presented to the ENT clinic of the University College Hospital Ibadan with septal swelling over twenty years period (20years) June '88 May 2007 going through their records. The data retrieved included biodata such as age, sex, occupation, aetio-pathological profile which includes presenting complaint, duration of complaints, associated history of injury/trauma, nose picking, nasal discharge, loss of smell, epistaxis, examination findings, operative findings, the complication and outcome.

All these data were entered into the SPSS version 11.0 computer soft ware for analysis And results presented in tables and figures.

Results

A total of twenty-six patients were seen throughout the period age range 3-60years with a mean age of 29.6yrs and median age 20.00yrs (S.D.= 20.00) and majority of the patients 38.5% were in the age range 21-30yrs then 51-60yrs (23.1%) and under fives (15.4%) as seen in table 1.0. The male to female ratio was 5.5:1.0. About 46.2% of the patients were students, 23.1% of the patients were civil servants, 15.4% among the traders and 7.7% were pensioners. Nasal obstruction was the commonest complaint among the patients in 38.5%, then nasal swelling in 15.4% while combination of nasal pain, obstruction, and swelling constituted only 7.7% (Table 2.0). More

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Table 1.0 Age of patients

Age	Frequency Percent
1-10yrs	4 (15.4%)
11-20yrs	10 (38.5%)
21-30yrs	2 (7.7%)
31-40yrs	2 (7.7%)
41-50yrs	2 (7.7%)
51-60yrs	6 (23.1%)
Total	26 (100.0%)

Table 3.0 Duration of symptom before presentation
Duration of symptom

before presentation	Frequency (%)
<5days	14 (53.8%)
6-10days	8 (30.7%)
11-15days	2 (7.7%)
>15days	2 (7.7%)
Total	26 (100%)

than half of the patients 53.8% presented within five days of onset of symptom, about 30.7% within 6-10 days of onset of symptom while only two patients (7.7%) presented after 30 days of onset of symptom (table 3.0). 92.3% of the patients presented with fever, 53.8% presented with nasal discharge and 38.5% presented with positive history of nasal picking while only 23.1% each presented with nasal trauma and epistaxis (table 4.0). Physical examination finding showed septal swelling with loss of nasal patency and nasal discharge constituted the commonest findings among the patients in 53.8% septal swelling, loss of nasal patency in 38.5% and septal swelling alone in 7.7% (Fig 1.0). Test aspirates were done only in eight patients out of whom only six (23.1%) were positive for microbes. All the patients had incision and drainage done under general anaesthesia and only 38.5% had abscess 15.4% had haematoma and 46.2% had mixture of the blood and pus.

No mortality was recorded in the data collected. The post operative complication recorded showed re-accumulation in 46.2%, epistaxis in 15.4%, septal perforation, septal collapse/deformity were 7.7% each and no complication was recorded in 23.1% of the patients throughout the study periods.

Discussion

Abscess of the nasal septum are uncommon as only twenty-six cases were seen in a twenty year retrospective study. This agrees with previous reports^{2,5}. Although previous studies have found it to be uncommon among the paediatric age group¹. However our study found the paediatric group to be the third commonest age group affected for a reason not deduced from our study. The commonest age groups from the study were those in the age groups 11-20yrs then 51-60yrs which is supported with previous case reports^{13,14}. There is increase male preponderance which is similar to previous report. Previous reports have also documented links

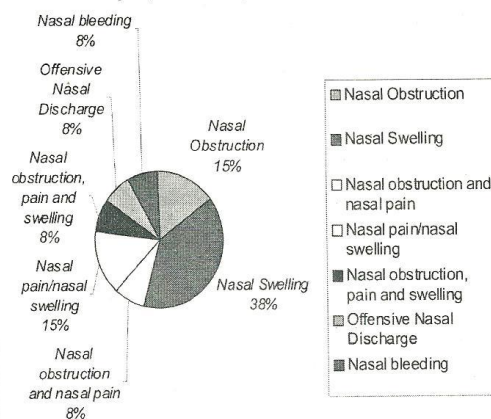
Table 2.0 Symptom/Presentation

Symptom/Presentation	Frequency Yes (%)
History of Nasal Trauma	6 (23.1%)
History of Nose picking	10 (38.5%)
History of Nasal discharge	14 (53.8%)
History of Fever	24 (92.3%)
History of Epistaxis	6 (23.1%)
History of loss of Smell	2 (7.7%)
History of Diabetes	2 (7.7%)

Table 4.0 Post septal abscess drainage complication

Complication	Frequency (%)
Septal perforation	2 (7.7%)
Re-accumulation	12 (46.2%)
Septal collapse/deformity	2 (7.7%)
Epistaxis	4 (15.4%)
No complication	6 (23.1%)
Total	26 (100%)

Symptoms of patient's Chart



between untreated nasal septal haematoma following nasal trauma and septal abscess similar to findings in our study, however furunculosis of the nasal vestibule, sinusitis, influenza, and dental infections^{3,6,13,15,16} could not be deduced from our series. Previous reports have documented links between septal abscess, HIV and Tuberculosis however none of our patients had records of retroviral screening^{3,4} its a limitation of the study being a retrospective study. Nasal obstruction was the most common presenting nasal symptom observed in our study which is similar to previous findings^{5,13}. Other associated symptoms include throbbing nose pain, general malaise, fever and headache^{3,6,13}. The presenting symptoms depend on the etiology of the nasal septal abscess and the earliest symptoms are usually those of fever^{5,6} as observed in almost all our patients and a mild upper respiratory infection. Majority of our patients were observed to present early within 5 days which may be associated with the unfamiliar location of the abscess. However two patients presented very late with purulent nasal discharge after one month this delay might have due to initial wrong diagnosis which does not respond to treatment that necessitated referral to the ENT surgeon.

More than half of the patients have a positive history of nasal discharge. Physical examination of the nose revealed bilateral swellings of the anterior septum that range in color from gray to reddish purple in the white however our study revealed a combination of septal swelling, loss of nasal patency and foul smelling nasal discharge. The septal abscess can be as a result of infection of a septal haematoma or direct extension along the tissue planes as seen with sinusitis¹⁰. Necrosis of the septal cartilage leads to septal deformity, perforation, and saddle nose deformity^{1, 2, 5, 6, 10} as observed in other studies. The lost cartilage is replaced with fibrous tissue that may scar and later lead to unorganized asymmetric contractions that will result in obstructive nasal symptoms^{1, 5, 6}. The size of the swelling depends on the stage at which the patient is examined as most of our patients presented early enough for treatment to be offered⁵.

Different authorities advocate almost same treatment methods, as well antibiotic coverage, incision, drainage and packing^{1, 6, 9, 10, 14} which was also the treatment method in our studies. Antibiotic treatment has to be given immediately to prevent bacteremia, which will occur on manipulation of a mature abscess. Evaluation of aspiration samples reveals abscess mixed with blood then abscess alone and haematoma was the least finding on test aspirate prior to incision and drainage. Only 23.1% of the patient had test aspiration which showed staphylococcus aureus^{1, 5, 6} as compared to Streptococcus pneumoniae, Streptococcus milleri, Streptococcus viridans, Staphylococcus epidermis, Haemophilus influenzae, and anaerobic bacteria cultured from nasal septal abscess^{1, 6, 11} and Klebsiella¹³ in other studies. The limitation of the study is the follow up being a retrospective study which was for a short period of two clinic visits with an average of one week interval. More than half were observed to have re-accumulation as a major complication in this study as compared to other study that revealed nasal collapse, septal perforation, septal deformity^{1, 2, 5, 6, 9}.

In conclusion nasal septal abscess is an uncommon problem that affects all age groups, more males affected than females. Infective cause was most implicated, and the commonest nasal symptom was nasal obstruction with other associated symptoms of fever, headache, nasal pain and nasal swelling, early presentation was observed. Prevention of serious complications can be achieved through early presentation, prompt and effective surgical treatment. Staphylococcus aureus still remains the commonest isolates and the commonest complication encountered was re-

accumulation of the abscess.

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