

Original Article

Importance of nasal endoscopy for the evaluation of epistaxis

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Abstract:

Objective : To evaluate the effectiveness of nasal endoscopy in cases of epistaxis.

Study design: Prospective study

Setting: Department of ENT, Burdwan Medical College & Hospital, Burdwan, India.

Method: 118 patients with epistaxis presented in the Department of ENT, Burdwan Medical College & Hospital, Burdwan were evaluated with the help of nasal endoscope to find out the hidden cause of epistaxis.

Conclusion: Significant pathology was detected in 88 cases (69%) out of 118 cases of epistaxis. Moreover, endoscope guided biopsy was taken in suspected cases and managed according to histopathology report.

Key words: *Epistaxis; Diagnostic nasal endoscopy; septal spur; Nasal polyp.*

Introduction:

Epistaxis is a common ENT Problem. Although most patients can be treated

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within an emergency setting, some are complex and may require specialist intervention. In most of the patients proper diagnosis is not possible without nasal endoscopy. Majority of the patients attending emergency department with this symptom are managed conservatively to control bleeding. Thorough clinical examination (including anterior and posterior rhinoscopy) do not reveal any abnormality in most of the cases. Significant pathology can be detected in quite a sizeable number of cases if nasal endoscopy is done.

Methods:

This study was carried out in the Dept of ENT, Burdwan Medical College & Hospital, Burdwan, India. It comprises of 118 patients with epistaxis successfully managed from August 2010 to July 2011. Cases of epistaxis were recruited in this study

from emergency as well as from ENT outpatient department.

Thorough clinical history and careful examination was done in all the patients after admission. Emergency management was done and patients were stabilized. Local examination like anterior and posterior rhinoscopy was done in cases with no active bleeding at presentation. Only 64 cases (54.2 %) presented with active epistaxis. Out of these, nasal pack was required in 40 patients only. Merocele pack was given in 24 cases, conventional anterior nasal packing with ointment socked roller gauge pack was given in 14 cases. Only 2 cases with torrential bleeding required both anterior and posterior nasal pack. After removal of nasal pack, diagnostic nasal endoscopy was done between 5th to 10th days depending upon the condition of nasal mucosa.

Patients with no active bleeding per nose at presentation were 54 in number. The cases, where clinical examination did not reveal any pathology, were selected for nasal endoscopy. Epistaxis due to bleeding diathesis and other general medical causes were excluded from this study.

Proper kits were made ready to combat any emergency, that may arise during

and following endoscopy procedure. 0.05% Oxymetazoline nasal drop instilled in each nostril and waited for 10 minutes. Superior meatus was anaesthetized with 4% lignocaine solution by Moffett's technique. Nasal cavity was packed with cotton strips soaked in 4% lignocaine solution with adrenaline (1 in 30000) and kept for 10 minutes. Straight (0 degree) and 30 degree angled 4 mm diameter Hopkins rod telescopes were used for diagnostic nasal endoscopy.

Results:

In our study, 118 patients were included among which 80 patients (67.8%) were male and 38 patients (32.2%) were female. Male to female ratio was 2.1: 1.

Most of the patients were within 6th decade of life (38.5%) followed by 2nd decade (26.27%). So, it was seen that there is a bimodal distribution of patients of epistaxis regarding their age group. By nasal endoscopic examination, abnormalities were detected in 82 (69.5%) cases. In 36 cases (30.5%) no abnormality was found even after nasal endoscopy.

Abnormalities found by diagnostic nasal endoscopy were classified in seven groups [Table 1].

Table-I
Abnormalities found in nasal endoscopy.

Abnormalities found in endoscopy	No. of cases	Percentage (%)
No abnormality found	36	30.5 %
DNS with septal spur	26	22.03 %
Mass lesion	26	22.03 %
Nasal polyp	10	8.47 %
Significant adenoid	8	6.77 %
Septal spur with ulcer	6	5.08 %
Septal spar with small polyp behind	4	3.38 %
Unhealthy granulation in sphenoid	2	1.69 %

Group-1: DNS with septal spur [figure1] and unhealthy mucosa was found in 26 cases (22.03%). Most of the cases had pus in the middle meatus.



Figure-1: A septal spur protrudes to the lateral nasal wall with congested bleeding contact area.

Group-2: Mass lesion inside nasal cavity [figure 2] was found in 26 cases. It was angiomatous in 10 cases, benign polypoidal in 8 cases and malignant suspicious looking in 8 cases.

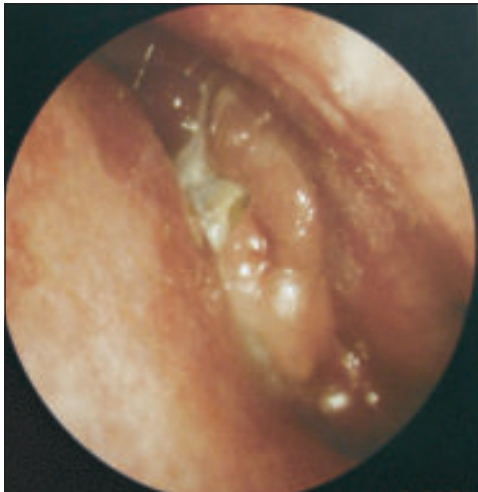


Figure 2: Ulcero-proliferative mass arising from right middle meatus

Group-3: This group comprises of small nasal polyps [figure 3 & 4] in 10 cases (8.47%). In most of the cases, the polyps were infected causing epistaxis.



Figure 3: Polypoid changes in right middle meatus



Figure 4: Polyp seen between middle turbinate and uncinate process with infective changes in left nasal cavity.

Group-4: Significant adenoid hypertrophy [figure 5] was seen in 8 cases (6.77%).

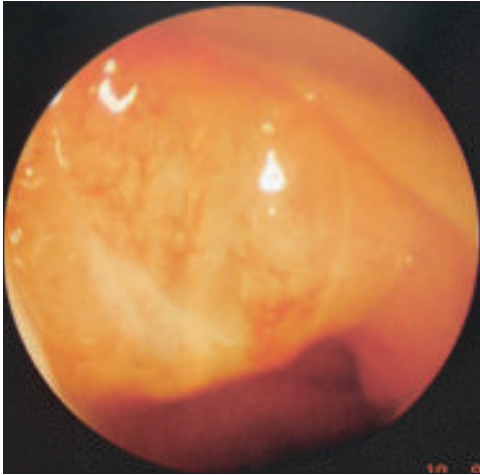


Figure 5: Adenoid hypertrophy

Group-5: Septal ulcer in posterior part was observed in 6 cases (5.08%).

Group-6: Spur with small polyp behind it was found in 4 cases (3.38%). The polyps were so hidden behind the spur that it could not be visualised by anterior rhinoscopy.

Group-7: Unhealthy granulations were seen in spheno-ethmoidal recess area in 2 cases (1.69%). It bleeds on touch easily.

54.2 % patients presented with active epistaxis. Rest of the patients had no active bleeding per nose at presentation. 77 patients had unilateral and rest of the patients had bilateral nasal bleeding.

Discussion:

Epistaxis is one of the commonest ENT emergencies. It affects all age groups¹ and it has a bimodal age distribution². Prevalence of the disease can be up to 60% of the general population^{3,4}. Male patients are more prone to be affected^{5,6}.

Usually epistaxis is spontaneous, mild and stops spontaneously following pinching of external nose (Hippocratic method), but it may occur following nose blowing and

strenuous work. Sometimes it may be profuse which can lead to haemodynamic instability requiring urgent interference. Epistaxis can be divided into two types, anterior and posterior, depending upon the source of bleeding anterior or posterior to pyriform aperture. Usually, anterior epistaxis is commonly seen in young population and posterior epistaxis is seen in old population. Anterior epistaxis is generally visualised by anterior rhinoscopy in this study all the sources of bleeding were detected posterior to the pyriform aperture.

Between 70 - 80% of all cases of epistaxis are idiopathic, spontaneous bleeds without any proven precipitant or casual factor⁷. This type is called primary epistaxis. Whereas, when a clear and defined cause of epistaxis is found, then it is called secondary epistaxis. We have found only 30.5% idiopathic cases. This is due to use of nasal endoscope for examination of epistaxis.

Nasal endoscopy takes an important role in evaluating the epistaxis. It helps to reveal the hidden pathologies inside the nasal cavity that can be missed during the anterior and posterior rhinoscopy. It is not always possible to detect the pathology of nasal cavity by anterior and posterior rhinoscopy. Moreover, posterior rhinoscopy is very difficult in most of the cases due to excessive gag reflex. So pathologies for posterior epistaxis remain undetected by conventional examination. Nasal endoscopy helps to detect those pathologies inside nasal cavity that can be easily missed by clinical examination. In our study, we found no abnormality inside nasal cavity in 36 cases. Significant pathology was detected in 88 cases (69.5%) out of 118 cases of epistaxis with obscured etiology on clinical examination. Idiopathic epistaxis was reduced to only 30.5% cases. Most of these diagnosed cases were managed

successfully in later period to prevent further epistaxis. More over, endoscope guided biopsy was taken in suspected cases and managed according to histopathology report.

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