BRIHASPATI SIGDEL
TULIKA DUBEY
RAJENDRA NEPALI
NEERAJ KC

Department of Otolaryngology & Head and Neck Surgery
Gandaki Medical College Teaching Hospital, Pokhara, Nepal.

Corresponding Author
Dr. Brihaspati Sigdel

Department of Otolaryngology & Head and Neck Surgery
Gandaki Medical College Teaching Hospital, Pokhara, Nepal.

Email: brihassig1@gmail.com

ENDOSCOPIC EVALUATION AND MANAGEMENT OF EPISTAXIS: AN EFFICIENT AND EFFECTIVE METHOD

ABSTRACT:

Background:

Epistaxis is a common emergency condition in Otolaryngology practice. It may be either an anterior or posterior type. Proper identification of the site of bleeding is crucial. Anterior and posterior rhinoscopy examination usually fails to localize site of bleeding inside the nasal cavity. Hopkins Rod endoscope helps to visualize the site of bleeding and tailor the management of epistaxis.

Objectives:

The aim of this study was to see the effectiveness of nasal endoscopy in detecting the site of epistaxis where anterior and posterior rhinoscopies failed to do so.

Materials & Methods:

It was a prospective study done at Gandaki Medical College teaching hospital in patients who presented with epistaxis. Nasal examination was done with zero and 30 degree Hopkins rod endoscope and findings were noted and further treatment was planned.

Results:

There were 62 patients aged 4 to 94 years with a mean age of 51.4 ±19.3 (SD) years. Patients over the age of 50 years were 48.4 %. Majority of cases (67.7%) were males and remaining were females. In 27(43.5 %) cases bleeding occurred from anterior parts of septum while 11 (17.7%) patients bled from septum posterior to spur and 7(11.2%) bled from the posterior part of the septum. 5(8.1%)patients bled from the middle part of the middle turbinate and 2 (3.2%)bleeders were seen at the sphenopalatine area. Most of the patient were treated with endoscopic diathermy.

Conclusion:

Endoscope added to diagnose the exact site of bleeding and to tailor the appropriate treatment. Bipolar diathermy was the commonest mode of treatment for intractable epistaxis.

Keywords: Bipolar diathermy, Epistaxis , Endoscopic evaluation

INTRODUCTION

Epistaxis is one of common emergency condition in otolaryngology. Although 60% of the population experiences nose bleed once in their lifetime, only 6% seek medical treatment.[1]Epistaxis can be anterior or posterior. Bleeding occurs due to several factors, exact cause of epistaxis is not always known.[2,3] Proper identification of the site of bleeding is very important for its control. Anatomy of the nose itself is the limitation for proper visualization of the exact site of bleeding. So, with endoscope either flexible or rigid we can

visualize the exact site of bleeding and even can control bleeding points.[4] Bleeding in children and adults usually occurs from little's area whereas in old age posterior nasal bleeding is common.[3] Male patients visiting the hospital with symptoms of bleeding are more than female. Epistaxis in old age is more severe than young.[5] Epistaxis even occurs in many patients without any particular cause, so it is most important to control the bleeding and to stabilize patients.[6]

MATERIAL AND METHODS:

This was a prospective study conducted in the Department of Otolaryngology and Head & Neck Surgery, Gandaki Medical College and Research Centre, Pokhara Nepal from November 2016 to October 2017. The number of patients included in this study were sixty two. Traumatic epistaxis was excluded from the study.Detailed clinical history was taken. A general physical examination along with a detailed Ear, Nose and Throat examination was performed and findings were noted. Radiological examination was done when necessary. Routine blood test, bleeding and coagulation profile, kidney function test , liver function test, and Electrocardiography (ECG) and radiological examination were done when necessary. Endoscopic examination was done with a zero and 30 degrees Hopkin rod endoscope. Collected data included patient demographics, duration and site of bleeding, endoscopic finding, and management.The study protocol was approved by the institutional ethical committee. Informed written consent was taken from all the patients who were included in this study. Data were entered and analyzed by SPSS Version 23.

RESULTS:

There were 62 patients from 4 to 94 years of age with a mean age of 51.4 ±19.3 (SD) years. There were 48.4 % of the patients over the age of 50 years. Majority of the patients (67.7%) were males and remaining 32.3% were female. The male to female ratio was 2.1:1. Most patients presented with epistaxis in October- November (30.6%) followed by March-April (27.4%). Epistaxis patients reached the hospital within the mean time of 2.52 (SD=2.5) hours. 56.6% of patients had bleeding from left nostril.While examination of the patient, 24 (38.7%) patients had a normal nose, deviated nasal septum to left was found to be in 22 (35.5%) patients. In 27(43.5 %) cases bleeding occurred from anterior parts of septum while 11 (17.7%) patients bled from septum posterior to spur and 7(11.2%) bled from the posterior part of the septum. Five (8.1%) patients bled from the middle part of the middle turbinate and in two (3.2%)patients bleeders were seen at the sphenopalatine area.

Table 1. Characteristics of the study population

Age of patients	Number	Percentage
25 years and below	5	8.1
25 to 50 years	27	43.5
51 years and above	30	48.4
Sex		
Male	42	67.7
Female	20	32.3
Total	62	100

Table 2. Site of Epistaxis (Enodscopic finding)

	Number(n)	Percentage(%)
Left little area	14	22.5
Right little area	13	20.9
Post to DNS with spur	11	17.7
Post Part of Septum	7	11.3
Inferior Turbinate (middle part)	5	8.1
Mucosal Bleed	5	8.1
Sphenopalatine area	3	4.8
Nasal mass	2	3.2
Inferior turbinate (anterior end)	1	1.6
Septal Angioma	1	1.6
Total	62	100

Table3. Treatment Modalities

	Number of patients (n)	Percentage (%)
Bipolar cautery	16	25.8
Septoplasty	16	25.8
Merocele (polyvinyl acetate sponge) Packing	13	21.0
Oxymetazoline nasal drop	6	9.7
Bipolar cautery+Blood transfusion	4	6.5
Bipolar cautery + Merocele	2	3.2
Blood transfusion	1	1.6
Bipolar cautery + abgel (absorbale gelatin sponge)	1	1.6
chemical cautery (silver nitrate)	1	1.6
Sphenopalatine artery ligation +septal perforating repair	1	1.6
Spa ligation	1	1.6
Total	62	100.0

DISCUSSION

In the present study, the highest number of patients visiting hospital with epistaxis were seen in age group of 51 years and above i.e 48.4 % followed by 43.5% in the age group 25-50 years, whereas in a study done by Bhadouriya SS et al highest number of patients were seen to be in the age group 11-20 years of age (25%) followed by 41-50 years of age (19%).[7]Arshad et al[8]reported the minimum age of presentation to be 35.06 ± 9 years and maximum cases were in the age group of 20-30 years which was in discrepancy with our study. Varshney et al[9]found most epistaxis cases in 40-50 years and minimum in the age group of 71-80 years.

In our study, males were more affected than females. (Male: 67.7%, Female: 32.3%). Similar findings were found in study of Bhadouriya SS[7] and Arshad et al.[8]Chaiyasate S.et al[10]also reviewed 55 cases in which he found 41 were male and only 14 were females.

On the basis of diagnosis, epistaxis was more common in deviated nasal septum 53.2%. Epistaxis was more common on the left side (56.5%) followed by right and minimum were bilateral. Bhadouriya SS[7]& Akinpelu O[11] also found similar results.Most of the patients bled posterior to spur 17.7% followed by the left anterior inferior part of the septum(14.5 %). Ray et al found 22.03% patient had bleeding posterior to spur which is in concordance to our study.[4]In our study, most of the patients were treated with bipolar cauterization. Merocele pack was used in 21% of cases. Four out of 62 patients were given blood transfusion in addition to bipolar cauterization. Only oxymetazoline nasal drop was given for 6 patients, bipolar cauterizationplus merocele nasal packing was used in 3.2%, only blood transfusion in 1.6%, bipolar cauterization plus abgelpack was used in 1.6%, chemical cautery in 1.6%, sphenopalatine artery ligation plus septal perforation repair in 1.6% & only sphenopalatine artery ligation was done in 1.6%. Endoscopic sphenopalatine artery ligation is an effective method to control epistaxis.[11,12]

CONCLUSION

Epistaxis is a common clinical condition and requires prompt treatment to reduce morbidity and mortality. We found that endoscopic visualization helps identify the site of bleeding and subsequent management.

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