



ORIGINAL RESEARCH PAPER

ENT

ROLE OF RIGID NASAL ENDOSCOPY IN DIAGNOSIS AND MANAGEMENT OF EPISTAXIS

KEY WORDS:

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ABSTRACT

INTRODUCTION

Bleeding from the nose called as epistaxis, it is a common clinical condition. About 60% of people worldwide experience the episode of epistaxis at least once in life time, with less than 10% of these requiring medical attention^{1,2}. Only 6% of the cases need specialized intervention to control bleeding and only 1% requires hospitalization, with mortality rate below 0.01%⁶⁸. It has been estimated that nose bleeds affect 108 per 100,000 population per year³.

AIMS OF THE STUDY

1. To assess the role of rigid nasal endoscopy in diagnosis and management of epistaxis.
2. To assess the exact site of epistaxis in same patients by rigid nasal endoscopy.

CONCLUSION

Nasal endoscopy helps not only in the localization of the bleeding points situated especially in the posterior and lateral part of the nose but also in its treatment without any complications.

INTRODUCTION

Epistaxis is not a specific disease process, but is essentially a symptom complex. In general population, it gives much fear and anxiety of that of tumour and other non -treatable conditions. Epistaxis can have an anterior or a posterior source and can be from septum or lateral nasal wall⁴.

Most of the epistaxis can be managed easily, however there are cases which present with difficulty to diagnose as well as manage because bleeding points cannot be visualized on routine examination as they are located in the deep crevices of the lateral nasal wall, or in the posterior part of the nasal cavity which requires further evaluations and interventions to look for the site of bleeding and then for further management. Anterior and posterior rhinoscopy has its drawback due to limited access and visualization. During anterior and posterior rhinoscopy precious time is lost in finding the bleeding point and then treating it.

In management part blind nasal packing has its disadvantages as it may convert a single bleeding point into a large abraded bleeding area. The possible reason why bleeding stops due to a blind anterior nasal packing is due to an indirect pressure that the pack exerts⁵.

Nasal endoscope has been a boon in field of otorhinolaryngology, it helps for proper visualization and offers to visualize area that were once inaccessible⁶.

In this study, an attempt is made to find out exact bleeding point or diagnosis in such patients with inconclusive findings in anterior and posterior rhinoscopy with advent of rigid nasal endoscope and to apply line of management to lesion found out with help of rigid nasal endoscopy.

MATERIALS AND METHODS

This present study is a prospective type of study conducted at Meenakshi medical college and research institute, Kanchipuram from February 2014 - September 2015.

SOURCE OF DATA

60 patients were selected randomly among the patients who presented with epistaxis in Otorhinolaryngology and Head and Neck surgery department. These patients had an inconclusive findings from routine anterior and posterior rhinoscopy.

Sample size: 60

Type of study: Prospective study

Inclusion Criteria

1. Patients above 5 years of age presented with epistaxis in the department of Otorhinolaryngology and Head and Neck surgery.
2. Patients who were consenting and cooperating for rigid nasal endoscopy procedure.

Exclusion Criteria

1. Patients with epistaxis who were below 5 years.
2. Patients who were not consenting for the rigid nasal endoscopy procedure.

SITE OF DISTRIBUTION IN EPISTAXIS

Septum, lateral wall and floor
To remove bias we have excluded bleeding due masses and adenoiditis. Septum shows higher incidence of bleeding, 55% comparing other sites in this study.

TABLE-1

SITE	No of cases	PERCENTAGE
Septum	33	55%
Lateral wall	14	23%
Floor	02	03%
TOTAL	49	82%

TYPES OF EPISTAXIS

In these study patients presenting with anterior epistaxis is more, coming 62% of total cases and posterior epistaxis is remaining 38% of cases.

TABLE-2

Type of bleeding	Cases	Percentage
Anterior epistaxis	37	62
Posterior epistaxis	23	38
Total	60	100

ENDOSCOPIC FINDING RESULTS

60 patients were selected for endoscopic evaluation for epistaxis. Out of 60 highest number of patients that is 11 was diagnosed to be having bleeding from posterior septal spur having sharp edge with ulcer. 7 patients had bleeding from the deviated posterior part of the nasal septum, which was not visible with anterior rhinoscopy, and another 7 patients had bleeding from the small ulcer, in deviated of posterior septum with spur on same side. Bleeding from crevices of high lateral nasal part constitute around 9 patients out of 60. Out of that around patients, 3 patients had

bleeding from posterior end of inferior turbinate, another 3 in inferior meatus, and 2 cases had bleeding from middle meatus and one case from middle turbinate. No bleeding from superior meatus or superior turbinate visualised in our study.

5 patients showed congested polyps and inflamed mucosa with bleeding surround it in the middle meatus as a cause for epistaxis.

Congested adenoids were seen in 7 patients with mild type of bleeding from nose.

6 patients were found to have bleeding from different masses within nasal cavity, out of that 2 patients were diagnosed to be pyogenic granuloma, one inverted papilloma, one squamous cell carcinoma of lateral wall of nasal cavity, one rhinosporidiosis diagnosed with histopathological support and one angiofibroma with radiological support.

Endoscopy was done in young 7 patients whose diagnosis attempted by anterior rhinoscopy but was not clear because of narrow nasal aperture. To find diagnosis as well to rule out other etiology for epistaxis endoscopy was carried out. Endoscopy confirmed epistaxis originating from little's area and no other pathology pertaining to epistaxis found out. These patients also lacked definite history of habitual nose pricking, associated rhinitis with dry mucosa, preceding viral infection, and seasonal changes. Thus endoscopy especially 2.7mm sized endoscope was useful in visualisation of narrow nasal cavity.

Regarding same patients, 6 out of 7 underwent endoscopic assisted chemical cautery. One underwent conservative management. None of these 7 patients showed any recurrence after treatment.

TABLE-3

ENDOSCOPIC SITE OF BLEEDING/FINDING	No of patients/60	PERCENTAGE
Deviation of septum with ulcer	07	12%
Septal spur with ulcer	11	18%
Deviation of septum and same side spur with ulcer	07	12%
Bleeding points in crevices of lateral nasal wall	09	15%
Polyposis with inflamed mucosa in middle meatus	05	8%
Enlarged and congested adenoids	07	12%
Congested little's area	07	12%
Mass/growth in septum, lateral wall, floor	06	10%
Septal perforation	01	2%

NASAL ENDOSCOPIC INITIAL MANAGEMENT FOR EPISTAXIS

After doing rigid nasal endoscopy as diagnostic procedure, the same is extended for arresting active bleeding patients as an initial step for the management for epistaxis.

Endoscopic selective nasal packing using various materials like gelfoam, surgical, nasopore was done in 24 patients. This procedure is done generally in most cases of active bleed as an initial management when other methods like cauterization and diathermy is not possible due to various reasons like large abraded area of bleed in order to avoid septal perforation and when exact localisation of bleeding vessels is not possible.

Endoscopic assisted chemical cauterization using agents like silver nitrate embedded stick and trichloroacetic acid was done in relatively mild epistaxis cases where exact site of bleeding can be localized easily. This was done mainly for the patients, having bleeding points in posterior deviation of septum with ulcer, posterior septal spur with ulcer, congested little's area and in some cases with bleeding point in posterior crevices of lateral nasal wall. This accounts for 12 patients out of 60.

Endoscopic diathermy was done in 4 patients as initial step for management. This was done mainly for the patients having bleeding points in posterior crevices of lateral nasal wall. All the cases of endoscopic diathermy was done under local anaesthesia.

Rest of the 20 patients were not done with any active intervention while conducting diagnostic nasal endoscopy as because of they were not having active epistaxis at time presentation. These patients were treated by medical management to epistaxis if required and finally proceeded with definite treatment later according to various etiology and diagnosis from nasal endoscopy.

TABLE-4

METHODS	TOTAL	PERCENTAGE
Endoscopic nasal packing	24	40%
Endoscopic chemical cauterization	12	18%
Endoscopic diathermy	04	6%

NASAL ENDOSCOPIC FINAL MANAGEMENT FOR EPISTAXIS

Regarding usage of rigid nasal endoscope in final definite treatment for epistaxis according to various etiology, Endoscope was useful in treating patients with septal bleed posteriorly due deviated septum with ulcer by removing deviated part of septum. Bleed due to sharp septal spur causing troublesome recurrent epistaxis managed by endoscopic guided spur excision. Also in combination of these cases endoscope was useful in elevating flap posteriorly around thin area around spur in which visualisation restricted by deviated septum. Out of total 25 cases of our endoscopic diagnosis as septal cause for bleeding 15 cases underwent endoscopic septal correction. Other patients with septal disease having epistaxis managed with conservative methods either because patient not willing for advised definite treatment or wants to wait and watch whether symptoms recurs.

Endoscopic excisional biopsy done for 4 patients with mass in nasal cavity. In that 2 patients were diagnosed to be as pyogenic granuloma, one case of rhinosporidiosis in inferior meatus which excised with help of bipolar cautery at base of stalk and one squamous cell carcinoma of lateral nasal wall mass which later planned for extended medial maxillectomy by open approach.

Out of 5 Polyposis case presented with epistaxis 4 underwent Endoscopic polypectomy. The site of location of polyp was in middle meatus. One case managed conservatively, patient was not willing for surgery. Histopathology confirmed their diagnosis in operated cases.

Endoscopic medial maxillectomy was done for a patient who presented with intermittent epistaxis with nasal discharge and nasal obstruction. Computed tomography confirmed involvement confined to lateral nasal wall with provisional diagnosis as inverted papilloma, patient prepared and endoscopic medial maxillectomy done. Histopathology confirmed diagnosis.

Endoscopic adenoidectomy using angled microdebrider was done in 2 patients out 7 patients and other 5 cases proceeded with conventional adenoidectomy.

TABLE-5

METHOD	TOTAL	PERCENTAGE
Endoscopic Septal Correction	15	25
Endoscopic Excision of Mass	04	6
Endoscopic Polypectomy	04	6
Endoscopic Medial Maxillectomy	01	2
Endoscopic excision of JNA	01	2
Endoscopic adenoidectomy	02	3

SUMMARY AND CONCLUSION

This study was done in order to ascertain the role of rigid nasal endoscopy in diagnosis as well as management of epistaxis

patients. Though anterior and posterior rhinoscopy is done routinely, they have limitations like difficulty in localizing the site of bleeding nasal cavity especially posterior part of septum, lateral nasal wall crevices, and nasopharynx. Along with these limitations, there are high chances for missing conditions like tumors, polyps, other masses in nasal cavity presenting with bleeding as an early symptom, due to improper illumination and anatomical abnormalities obscuring accesses inside the nasal cavity.

Endoscopic examination not only has advantage of giving a better view and illumination but also helps in finding bleeding site accurately. It also helps in management of epistaxis, by various endoscopic guided procedures. It handles tissue with meticulous care.

Thus nasal endoscopy helps not only in the localization of the bleeding points situated especially in the posterior and lateral part of the nose but also in its treatment without any complications.

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