

Original article:

Study to compare the efficacy of intranasal endoscopic cauterary procedure and the traditional nasal packing method in control of epistaxis

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Abstract:

Introduction: There are multiple risk factors for the development of epistaxis and it can affect any age group, but it is the elderly population with their associated morbidity who often require more intensive treatment and subsequent admission. Treatment strategies have been broadly similar for decades. However, with the evolution of endoscopic technology, new ways of actively managing epistaxis are now available.

Material and methods: A study was conducted in Department of Otorhinolaryngology at St. Stephen's Hospital, on 100 patients with epistaxis . Patients presenting in the ENT OPD or Casualty, or referred from other departments in St. Stephen's hospital, New Delhi. Hundred patients of both sexes and all age groups presenting with epistaxis were included in this study.

Results : As per our study, anterior nasal packing was successful in 68% patients on initial attempt. In 18 (18%) out of 100 patients of bleeding could only be controlled by endoscopic cauterisation of the source of the bleeding. 1 (1%) patient, responded to posterior nasal packing. Surgical methods such as Nasal bone reduction and septoplasty were done in 10 (10%) of patients.

Conclusion: We have shown intranasal endoscopic cauterary procedure for epistaxis to be an effective treatment. In our study, it was associated with a significantly reduced hospital admission, complication rate and with no re-presentations.

Introduction:

Epistaxis is one of the commonest ENT emergencies. Although most patients can be treated within an accident and emergency setting, some are complex and may require specialist intervention. There are multiple risk factors for the development of epistaxis and it can affect any age group, but it is the elderly population with their associated morbidity who often require more intensive treatment and subsequent admission. Treatment strategies have been broadly similar for decades. However, with the evolution of endoscopic technology, new ways of actively managing epistaxis are now available.^{1,2}

Considering the benefits of endoscopic procedure for management of epistaxis, it was intended to undertake the proposed study in this hospital. The study compared, the efficacy of the endoscopic cauterization over anterior nasal packing as the treatment modality. ³The parameters taken were

recurrence of bleeding, period of hospital stay and complications associated with these procedures. Further it will add to different studies conducted for the comparison of nasal packing and endoscopic control of epistaxis.⁴

Material and methods:

A study was conducted in Department of Otorhinolaryngology at St. Stephen's Hospital, on 100 patients with epistaxis

Type of study: Descriptive study

Patients presenting in the ENT OPD or Casualty, or referred from other departments in St. Stephen's hospital, New Delhi.

Inclusion criteria

Hundred patients of both sexes and all age groups presenting with epistaxis were included in this study.

Exclusion criteria

Patients presenting with epistaxis resulting from recent nasal or paranasal sinus surgery were excluded from this study.

1. Patients were informed regarding the method of treatment and a written and informed consent duly signed by them was taken.
2. A detailed history was asked, especially history of trauma/fever/sore-throat/foreign body insertion/nose picking/drug intake/bleeding diathesis/hypertension/other illnesses.

Results:

The mean age was 44.27 years of age. Median came to be 45 years of age and mode was 60 years of age. Maximum patients were above 50 years. Total number of patients above 60 years of age were 24 % ($n=24$). The number of patients between 51-60 years of age were 18% ($n=18$). The number of patients between 41-50 years of age were 16% ($n=16$). The lowest number of patients were in the age group 10- 20 years which consisted of 8% ($n=8$).

Patients were treated according to the etiology and other comorbidities. Patients responding to anterior nasal packing were 68% ($n= 68$), while 18% ($n= 18$) patients responded to electrocautery of the bleeding sites. Nasal bone reduction was done in 5% ($n= 5$) of patients, while 1% ($n= 1$) required nasal bone reduction with septoplasty. Septoplasty alone was done in 4% ($n= 4$) of patients. 2% ($n= 2$) did require some treatment and their bleeding was controlled by medical treatment alone. Both posterior nasal packing and suturing, each were required in 1% ($n=1$) of patients. P value came to be 1, which was insignificant.

TABLE 1: TREATMENT MODALITIES IN PATIENTS

Treatment modality	Frequency	Percent
Anterior nasal packing	68	68%
Electrocautery	18	18%
Nasal bone reduction (NBR)	5	5%
Nasal bone reduction with Septoplasty	1	1%
Medical treatment	2	2%
Posterior nasal packing	1	1%
Septoplasty	4	4%
Suturing	1	1%
Total	100	100%

p = 1

As per our study, anterior nasal packing was successful in 68% patients on initial attempt. In 18 (18%) out of 100 patients of bleeding could only be controlled by endoscopic cauterisation of the source of the bleeding. 1 (1%) patient, responded to posterior nasal packing. Surgical methods such as Nasal bone reduction and septoplasty were done in 10 (10%) of patients.

Discussion:

In our study, mean age was 44.27 years of age. Median came to be 45 years of age and mode was 60 years of age. Maximum patients were above 50 years. Total number of patients above 60 years of age were 24 % ($n=24$). The number of patients between 51-60 years of age were 18% ($n=18$). The number of patients between 41-50 years of age were 16% ($n=16$). The lowest number of patients were in the age group 10- 20 years which consisted of 8% ($n=8$).

Treatment options by conservative techniques had expanded over the last 10 years quite significantly.⁵ Presently techniques using modern technology like latest optic and electrical devices have an upper edge over traditional strategies like nasal packing. Nasal packing has an advantage of easy placement, removal and cost benefits. Disadvantage lies in the fact that, it requires considerable training besides. causing significant discomfort to the patient. Above all, there are invitations to severe problems because of the easy traumatization during the packing procedure.^{6,7}

Apart from the high failure rate of up to 26–50%, it is associated with marked discomfort, pain and swallowing difficulty. It can lead to a large number of local and systemic complications. As per our study, anterior nasal packing was successful in 68% patients on initial attempt. In 18 (18%) out of 100 patients of bleeding could only be controlled by endoscopic cauterisation of the source of the bleeding. 1 (1%) patient, responded to

posterior nasal packing. Surgical methods such as Nasal bone reduction and septoplasty were done in 10 (10%) of patients.

Our study showed similarity in this respect to others like in a study done by Muhammad Ismail Khan, it was successful in 78% of patients on initial attempt.^{8,9}

As much as 68% rate of complications has been reported by Wang et al.¹⁰ In a study by Muhammad Ismail Khan et al, infection (sinusitis and acute otitis media) was seen in 6% and 4% of patients after anterior nasal packing and silver nitrate cautery respectively.¹¹ Juselius and Malik, have observed acute otitis media in 0.9-6.8% cases after anterior nasal packing.¹² Facial oedema was noticed following anterior nasal packing by Malik and Okafor in 8.4- 13.3% cases

Conclusion:

We have shown intranasal endoscopic cautery procedure for epistaxis to be an effective treatment. In our study, it was associated with a significantly reduced hospital admission, complication rate and with no re-presentations.

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