Anterior Epistaxis Management Using Various Methods and Their Outcomes

Owais Makhdoomi\textsuperscript{1}, Baba Aijaz Khaliq\textsuperscript{2}, Iftikhar Ali Wazir\textsuperscript{3}, Ihsan Ali\textsuperscript{4}, Rauf Ahmad\textsuperscript{5}.

\textsuperscript{1,3} Postgraduate scholars Deptt. Of Otorhinolaryngology.\textsuperscript{2} Registrar ; Deptt. Of Otorhinolaryngology.\textsuperscript{4} Consultant Deptt. Of Otorhinolaryngology.\textsuperscript{5} Head Deptt. Of Otorhinolaryngology.

Abstract: Epistaxis is one of the most common emergencies in otorhinolaryngology. Epistaxis has vast causative factors which can be local or systemic. However this study was conducted merely to evaluate various methods used to manage anterior epistaxis irrespective of cause mainly nasal packing (gauge or net cell), chemical and bipolar cauterisation with or without use of endoscope. Epistaxis has been broadly classified in following types: anterior epistaxis, posterior epistaxis, primary epistaxis, secondary epistaxis, childhood epistaxis and adult epistaxis.\textsuperscript{1,2,3}

Epistaxis is usually managed by simple conservative methods on OPD basis however some times it can prove fatal. Various methods are evaluated in this study for the management of anterior epistaxis (mainly as day care).

This study was conducted in GMC SMHS hospital Srinagar from June 2015 to December 2015 to analyse various methods used for management of anterior epistaxis. Various methods of managing epistaxis include, manual compression, light pathy packing, anterior nasal packing, Posterior nasal packing, Warm water irrigation, merocell packing, TCA cauterisation, endoscopic BPC, surgical vessel ligation methods.

INTRODUCTION

Bleeding from nose or epistaxis-greek for nose bleed that means “which is leaking on”drop by drop. It is defined as bleeding from inside the nose or nasal cavity. It has been seen that 60\%\textsuperscript{4,5,6} of population will be effected by epistaxis at some point of their life time, with 6\%\textsuperscript{7,8} among them requiring medical attention. This condition has bimodal distribution, with incidence peaks at age younger than 10 years and older than 50 years. As mentioned earlier epistaxis can be anterior or posterior depending on site of origin, with bleeding mostly from anterior part of nose arising from rich arterial anastamosis of nasal septum (kiesselbachs plexus). However posterior epistaxis\textsuperscript{9} usually arises from posterior nasal cavity via branches of sphenopalatine arteries.\textsuperscript{9,10,11} Posterior epistaxis usually occurs behind the posterior portion of middle turbinate\textsuperscript{11} or at the post superior roof of nasal cavity.\textsuperscript{12} In most cases anterior epistaxis is clinically obvious. Epistaxis has vast causative factors which can be local or systemic like infective, inflammatory, traumatic, neoplastic, climatic changes, hematological disorders, cardiovascular causes, liver and renal disease, hereditary hemorrhagic telengactasia\textsuperscript{13,4,5,14,16} etc. However in 80 to 90\%\textsuperscript{4,12} of cases no identifiable cause is found termed as idiopathic epistaxis. Various methods were used to control epistaxis as described above. However packing (nasal) remains time tested one of oldest methods of treating nasal bleeding

Cauterization bleeding from kesselbachs plexus (littles area) is frequently treated with silver nitrate cauterization.\textsuperscript{17} manage the vessels leading to the site before dealing with actual bleeding site. Avoid random and aggressive cauterisation and cautry on opposite side of septum. Electrocautatisation with insulated suction cautry unit can also be used. This method is mostly reserved foe more severe bleeding and bleeding at more posterior sites. The effectiveness of both these cauterisation methods can be enhanced by using rigid endoscopes especially in case of more posterior bleeding sites.

A retrospective study by Newton et all of emergency department management of 350 adult cases of primary anterior epistaxis found silver nitrate cauterization to have a highest treatment success rate of 80\%. The highest rates of patients returning to emergency department occurred after treatment with nasal clips, merocel and with petroleum gauze packing. However the investigators could not say whether the differences
Nasal packing.

Nasal packing can be used to treat epistaxis that is not responsive to cautization. Two types of packing (anterior and posterior) can be placed. A study by Kundi and Raza suggested that in patients with epistaxis removal of nasal pack after 12 hours leads to lower incidence of headache and lacrimation than those removal of pack after 24 hours with no significant difference in bleeding recurrence. The study included 60 patients evenly distributed between 12 hour and 24 hour group. 19

Material and Methods

A prospective study was carried out among OPD patients with epistaxis who were managed in the department of otorhinolaryngology in GMC SMHS Hospital from June 2015 to Dec 2015. These patients were randomly divide in four groups depending on the type of treatment they received viz anterior nasal packing, chemical cautisation with TCA (trichloroacetic acid), bipolar cautisation (BPC) 10 without endoscope using nasal speculum and BPC with use of endoscope. 10, 11 All the patients in this study underwent baseline investigations like CBC hemoglobin level with platelet count, urea creatinine level, blood grouping and coagulation profile. Proper informed consent was taken from all included in this study. Intravenous line was established in all patients and management began with treatment and investigation side by side. Management begins with nasal pinching 3 and use of nasal decongestants (oxymetazoline) drops or same used in cotton pleglets to localise bleeding site. 3, 6 After conforming bleeding is anterior (anterior epistaxis) patients were treated by different methods as described above randomly and distributed in four groups depending on treatment they received. patients with coagulopathic disorders were excluded from this study as they all were hospitalised and managed. All these patients were followed on day 3rd day 7 and 2 weeks following treatment. However one month follow-up was possible in only few cases.

Results

In this study 200 patients were studied. They were randomly divided in 4 groups depending on treatment they received. Each group was allotted 50 patients one group was treated with anterior light nasal packing (pathy packs). Another was treated with chemical cautry and rest two groups with bipolar cautisation with and without use of endoscope. Results obtained were as follows:

<table>
<thead>
<tr>
<th>Method of treatment</th>
<th>No. of patients studied</th>
<th>Recurrence during first two weeks</th>
<th>% age of recurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anterior nasal packing (pathy pack)</td>
<td>50</td>
<td>22</td>
<td>44%</td>
</tr>
<tr>
<td>Chemical cautisation with (TcA)</td>
<td>50</td>
<td>9</td>
<td>18%</td>
</tr>
<tr>
<td>BPC without endoscope</td>
<td>50</td>
<td>7</td>
<td>14%</td>
</tr>
<tr>
<td>BPC with use of endoscope</td>
<td>50</td>
<td>3</td>
<td>6%</td>
</tr>
</tbody>
</table>

This study showed endoscopic management of epistaxis is best of all the approaches evaluated in this study.

Discussion

Patients presenting with epistaxis is the most frequently encountered emergency in day to day ENT practice. It is common in people of all ages but rear in children blow two years. Epistaxis can be anterior or posterior. Anterior epistaxis is most frequent in children and young adults. It is less serious as bleeding point is anterior and assessable to treatment. Its origin is mostly from arterial plexus but occasionally from retrocollumnar vein. All patients included in this study were examined properly with all necessary investigations were done as described above. All these patients were divided in four groups depending on treatment they received. All age group patients with confirmed anterior epistaxis were included in this study. In this study we found use of endoscopic BPC was best of all the rest measures used to treat anterior epistaxis with just 6% recurrence as compared to light anterior packing with highest recurrence rate of 44%. While use of chemical cautry and BPC without help of endoscopic cautisation of bleeders doesn’t show much difference in recurrence rate.

Conclusion

Anterior epistaxis is one of the most common emergencies seen in day to day practise in ENT. People of all ages get affected with fear of death in old patients making this condition a fear with psychological imbalance. Treatment should begin
with proper counselling and discussing the condition properly with patient and attendants. All patients should receive topical decongestants along with nasal pinching as initial modality of treatment. Various modalities used in this study for treating anterior epistaxis were light ant. nasal packing, chemical cauterisation (TCA), BPC without endoscope and BPC with endoscopic help.

Anterior packing has maximum recurrence of all but still used when bleeder can not be properly localised or when other methods fail. Endoscopic BPC is the best modality of treatment with minimal recurrence but needs expertise and knowledge of nasal anatomy. This method has been found to improve quality of life as it decreases recurrence thus reduces psychological impact on life especially in parents and old people. This study concluded endoscopic method is best way of managing epistaxis, so every ENT surgeon especially junior staff, house surgeons and post-graduates should be well trained with this type of technique as most of the patients with epistaxis are managed by junior staff of faculty. Thus knowing this technique better not only will improve quality of life of patients but all reduce psychological stress to patients and care takers especially parents.

References


