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EFFICACY OF CONSERVATIVE MANAGEMENT OF EPISTAXIS

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ABSTRACT

A prospective study to assess the clinical usefulness of conservative management of epistaxis was performed on 1500 patients, including both outdoor as well as indoor patients with epistaxis at ENT Department of Government Medical College Baramulla (Rural medical college hospital). History, type of treatment, hospitalization time and complications were considered. Cautrization (chemical and electric) was employed in 900(60%) patients of epistaxis which was successful in 675(75%) cases. Cases who responded to cautrization were not admitted in the hospital. Anterior nasal packing was done in 825(55%) cases and was successful in 750(90.9%) cases. Posterior nasal packing was done in 75(5%) patients and was successful in 72 patients with a success rate of 96%.All patients of epistaxis with packing were admitted in the hospital. There was no death. This study supports the clinical usefulness of conservative management along with treating the underlying pathology, causing epistaxis.

KEYWORDS

epistaxis, cauterization, packing

INTRODUCTION:

Epistaxis or nasal bleeding is a common clinical problem and is one of the most common rhinologic emergency in most ENT units. Epistaxis has been reported to occur in upto 60% of general population(1,2,3).The condition has a bimodal distribution with incidence peaks at ages younger than 10 years and older than 50 years(1,5,7).Epistaxis appears to occur more in males than in females(3,4). Affected persons do not usually seek medical attention, particularly if the bleeding is minor or self limiting. In rare cases however, massive nasal bleed can lead to death(4,5). Most cases of epistaxis occur in the anterior part of the septum with the bleeding usually arising from Littles area(1,2,3) . Posterior epistaxis generally arises from the Woodrufs plexus in the septum or lateral nasal wall via branches of sphenopalatine artery(6,7). Epistaxis can be classified further as primary or secondary. Primary is idiopathic, spontaneous bleeds without any precipitants(7). Blood vessels within the nasal mucosa run superficially and are relatively unprotected. Damage to this mucosa can result in bleeding. Spontaneous rupture of these nasal vessels may occur occasionally, during coughing, sneezing, straining or lifting heavy objects(7). Secondary epistaxis occurs when there is a definite cause e.g trauma, anticoagulant use or surgery(7).

Both conservative and surgical treatment modalities have been used in the treatment of epistaxis. Conservative treatment conventionally includes cautrization of the bleeding site, ANP (anterior nasal packing) and PNP (posterior nasal packing).The present study was done on 1500 patients of epistaxis with purpose of assessing the efficacy of these various conservative treatment modalities.

MATERIAL AND METHODS:

This study was carried in the department of ENT Associated Hospital Government Medical College Baramulla from Oct 2017 to May 2020. It included 1500 cases of epistaxis managed in the hospital during this period.

All cases underwent a detailed history taking, general physical examination, systemic examination and examination of the nose, throat and ears with special emphasis to identify the site of bleeding. The patients were subjected to investigations of haematological parameters, urine analysis and radiological evaluation. All patients were treated conservatively initially and surgical intervention was done only when needed. The conservative treatment protocol started with cautrization of the bleeding site using either chemical cautry or electric cautry. If cautrization failed or in cases where no definite bleeding could be seen ,ANP was done. When both cautrization and ANP failed, PNP was done. When PNP also failed, sphenopalatine artery ligation was done.

RESULTS:

Chemical cautrization was tried in 800(53.3%) patients and was successful in 600 of them (75%). Electric cautrization was tried in 100 patients(6.67%) and was successful in 75 patients(75%).In the 225 patients where cautrization failed, ANP was done. ANP was also done in 600 other patients where the bleeding was diffuse or where the exact site of bleeding could not be located. Thus ,ANP was done in a total of 825 patients(55%) and was successful in 750 (90.91%) of them. In the 75 patients (5%) where ANP was not successful in controlling epistaxis ,PNP was done, which was successful in 72 patients (96%). In 3 patients where PNP was not successful , endoscopic spenopalatine artery ligation was done which was successful in all the three.

If required, epistaxis patients were hospitalised for an average duration of 5.5 days (ranging from 1 to 21 days).On an average, patients undergoing cautrization did not require hospitalization whereas patients with ANP needed hospitalization for 5 days (+_ 3.5 days).Patients with PNP remained in the hospital for an average duration of 12 days(+_ 6 days).Patients with sphenopalatine artery ligation needed hospitalisation for an average duration of two weeks.

Complications with cautrization were negligeble except one patient who developed sensoneural hearing loss after 24 hours on the side of cautrization which was due to accidental slipping of a silver nitrate crystal through eustachian tube into the middle ear cavity. 8 patients(0.97%) with ANP developed toxic shock like symptoms while 80 patients(9%) developed facial oedema. Acute otitis media was noted in 9 patients (1.09%) of ANP and 4 patients (5.33%) of PNP. Soft palate lacerations due to inadvertent stretching of the thread of the PNP which was retained out of the oral cavity in 27 patients (36%). No mortality due to epistaxis per se was encountered in the present study.

Table 1: Showing Treatment Modalities Used (n = 1500)

Treatment modality	Number of patients	Success percentage	Failure percentage
Chemical cautry	800 (53.33%)	600 (75%)	200 (25%)
Electric cautry	100 (6.69%)	75 (75%)	25 (25%)
ANP	825 (55%)	750 (90.9%)	75 (9.1%)
PNP	75 (5%)	72 (96%)	3 (4%)
Endoscopic sphenopalatine artery ligation	3 (0.2%)	3 (100%)	0

DISCUSSION:

Most causes of epistaxis can be identified readily through a history taking and physical examination. The patient should be asked about the initial presentation of the bleeding, previous bleeding episodes and

their treatment, comorbid conditions and current medications. Al though the differential diagnosis should include both local and systemic causes (1,2,3,4), environmental factors such as humidity and allergens also must be considered (3,5,6). Often no cause for the bleeding is identified.

Self care steps that may be helpful in some less severe cases are:
- Keep the head higher than the level of heart.
- Stay upright, do not lie down.
- Pinch the nostril between thumb and index finger for at least 5 minutes. Repeat, if necessary.
- Apply ice to the nose.
- Blow nose as little as possible.
- keep the room humidified.

Cautrization of the bleeding site can be performed chemically, electrically or with laser (7), althouh we used only chemical cautry and electric cautry. Chemical cautry was successful in 75% patients which is close to 78.6% success rate reported by John et al (8). Cautrization success rate is variable as reported by different authors ranging from 18% - 86.6% (6,9,10). In our study success rate with both chemical and electric cautrization was same. Similar results were observed by Tones et al (14). Cautrization with laser has limitations like high cost and lack of easy availability (7). Thus, It is concluded that since chemical cautry is simpler and of almost equal effectiveness, it would appear to be the treatment of choice for simpler anterior epistaxis.

Nasal packing was used in 55% of patients. ANP was used in 53.3% patients and was successful in 90.9% of the cases while as PNP was tried in 5% cases and was 96% successful which is very close to the observations of Urvashi et al (6). Nicholaides et al (11) reported successful use of ANP in 22.3% cases. Hallberg (12) used ANP alone in 40% cases and PNP in 10.4% cases while as Juselius(13) used ANP in 32.7% cases and PNP in 24.8% cases. Malik and Bhatia (9) reported ANP in almost 50% of cases and PNP in 16.8% cases.

With cautrization (chemical or electric) patients usually did not need hospitalization. However patients with packing, both ANP as well as PNP needed hospitalization. Average hospital stay for ANP was 5 days which is almost similar to observations of Small and Maran (15). In our study , cases with PNP needed hospitalization for an average of 12 days which is nearer to the observtions of Urvashi et al (6).

From our observation of average hospital stay with different treatment modalities, we were able to infer that the cautrization of the bleeding point reduces hospital stay as compared to packing ($p<0.02$).

Acute otitis media has been reported in 0.9 - 6.8% cases with nasal packing (6,9,13). We observed AOM in 1.09% of cases with ANP and 5.33% of cases with PNP. Facial edema was noticed following ANP (6). We also observed facial edema in 98% of patients followin ANP. 8 patients (0.97%) with ANP developed toxic shock like symptoms. Similar observations were made by Urvashi et al (6).Soft palate lacerations were observed in 27 patients (36%) of PNP which is highr than other observations (6,9).

RECOMMENDATIONS:
- Use topical vasoconstrictor and liquid paraffin as first line therapy. Consider local use of topical antibiotic ointment.
- Perform chemical cautry with silver nitrate or trichloracetic acid in cases of anterior epistaxis.
- Consider ANP in cases of anterior epistaxis in patients who do not respond to cautrization and PNP in posterior epistaxis.
- Consider endoscopic sphenpalatine artery ligation in posterior epistaxis when it comes to pain and morbidity associated with PNP.

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