Control Of Epistaxis in a Teaching Hospital

M AHMAD M AMJAD A HAMEED
Department of ENT King Edward Medical Colleg, Lahore.
Correspondence to: Dr Manzoor Ahmed

This is a study of one hundred patients of epistaxis who reported to the department of E N T at Services Hospital, Lahore during the year 1993-94. 74 patients underwent anterior nasal packing in emergency for the control of epistaxis.Another two patients of idiopathic group had to undergo post nasal packing in addition to anterior nasal packing. 05 patients of trauma group needed no active intervention and bleeding stopped only by bed rest.Galvanic cautery was effective for ten patients of idiopathic group. In 09 patients of hypertension lowering of blood pressure to normal was enough to stop the bleeding.
Key Words:-Epistaxis,Hypertension.

Mention of epistaxis had been in the medical literature as far back in the past as fifth century BC. It is quite an alarming symptom requiring an urgent attempt on the part of attending doctor to stop the blood loss so as to allay the anxiety of both the patient as well as the attendants. Various means are employed for the purpose of control of epistaxis. Application of pressure by pressing the nasal ale or through nasal packing "at times ,was the mechanism practiced by Hippocrates. He used to apply cold fomentations to shaved head to achieve the haemostasis. Morgagni [1] ,reportedly used to secure haemostasis by introducing his finger and pressing the area about a finger's breadth more or less from the bottom of the nostril.

The first attempts at arterial ligation to control the bleeding were carried out in 1868,[2].First of all common carotid artery was ligated for this purpose and it was much later that external carotid ligation was attempted for the control of nasal bleeding.Seiffert[3],introduced the ligation of internal maxillary artery via transantral approach and Good year[4], was the first one to tie the anterior ethmoidal artery.

A comprehensive knowledge of the blood supply of nose is of great significance to employ various methods in different situations to secure the nasal bleeding. The blood supply of nose is through internal and external carotid arteries via their respective branches, there being confluence of two systems, particularly at the caudal end of the septum, where a number of arteries anastomose with each other (Little's area). With the exception of Little's area, the attachment of middle turbinate has been regarded by the clinicians as the dividing line between the internal and external carotid distributions[5],.This land mark has served as a guide in deciding the responsible vessel to be ligated in severe cases of epistaxis.

Localization of bleeding point is of primary concern in patients with epistaxis which can be cauterised subsequently either with 25% silver nitrate or hot galvanic flame. Ogura[6], found in a series of patients with epistaxis, that the bleeding point was on the lateral wall in 28 out of 88 cases. Other authors documented the same site for bleeding in almost similar proportions. But in vast majority of patients of arterial epistaxis the most frequent site of bleeding is antero inferior part of nasal septum, known, as Little's area. Pressure, by far ,has been the most effective way of controlling the epistaxis as it was most favoured one in the past as well.

Cautery of bleeding pint has been yet another method of controlling the epistaxis but cautery may have to be repeatedly applied in recurrent cases.

Patients and Methods:-

One hundred patients who reported to the department of E.N.T at Services Hospital, were admitted in the ward. A quick underlying cause was made out on the basis of short history and clinical examination. Emergency measures like pressing the nasal alae, nasal packing, cautery of the bleeding point, lowering the bold presssure, were instituted to secure the haemostasis. Afterwards they were investigated for definite cause.

Results:-

40 patients of trauma group were treated by anterior nasal packing while other five, who had mild bleeding, required just bed rest and observation. Amongst the 24 patients of idiopathic group 08 underwent galvanic cautery under local anaesthesia while two were treated by chemical cautery with 25% AgN03.Anterior nasal packing alone was done in twelve patients of this group while in the other two patients post nasal packing had to be done with Foley's catheter.

Nine patients of neoplasia,07 patients of infective rhinitis 04 patients of bleeding disorders and two patients of miscellaneous group also underwent nasal packing for control of epistaxis. In 09 patients of hypertension control of blood pressure by reapidly acting anti-hypertensive drugs along with sedation and bed rest was enough to achieve the haemostasis.

Discussion:-

Application of pressure on the bleeding surface had been a time honoured way of securing the haemostasis. In the same context pinching the nostrils is the simplest as well as the most effective way of controlling the epistaxis in quite a few patients. This manouver exerts effective pressure on Littles area as well as the retrocolumellar vein. Alternatively a half inch wide strip gauze wrung out of 4% xylocain solution applied to the area will achieve both the surface anesthesia as well the temporary control of bleeding. Afterwards the bleeding point can be cauterised with 25% AGN03 or trichloracetic acid. A further nasal bleeding from the same area can be taken care of by repeated chemical cautery. Alternatively galvanic cautery can be used. But the sight of red glowing electrode, smell of charring meat and the pain, at times, experienced by the patient are factors urging the surgeon to do the same preferably unde general anaesthesia. In this particular study eight patients underwent galvanic cautery while two other had chemical cautery with AgN03 and the bleeding was successfully controlled.

In all these ten patients of idiopathic epistaxis the bleeding point was approachable in the anteroinferior part of nasal septum. However repeated galvanic cautery or cautery on opposite corresponding sites of nasal septum is to be avoided due to fear of perforation.

In patients, where bleeding persists even after the application of above means, the nose should be packed with ribbon gauze medicated with suitable antiseptic such as bismuth-iodide paraffin paste (BIPP).This packing can be left undisturbed for several days without any fear of complications or bad smell. In this particular study 76 patients underwent anterior nasal packing and the bleeding was successfully controlled. According to yet another school of thought this form of nasal packing is both traumatising as well as uncomfortable for the patient. In an attempt to develop a more convenient form of treatment the effect of two vasoconstrictor gels or nasal mucosal blood flow was evaluated. Terlipressin gel was shown to reduce nasal blood flow in a dose dependent way.In a study of 44 patients 50% patients did had the stoppage of bleeding with this gel[7], However, the conventional nasal packing, in contrast, proved effective in all 100% cases of nasal bleed.After nasal packing all the patients need to be sedated to relieve the anxiety. If the bleeding does not stop with anterior nasal packing alone and the trickle continues through the nasopharyngeal route, then post nasal pack needs to be applied in addition to anterior nasal packing. In this particular study two of the above mentioned 76 patients, underwent post nasal packing with Foley's catheter. Application of Foley's catheter is easier to execute and is less uncomfortable for the patient as compared to conventional post nasal plug. A study about the role of Foley's catheter as a mean of post nasal pack in place of traditional posterior packing has documented that it is effective way of controlling severe posterior nasal bleed[8].The inflatable baloon catheters are widely used now in the treatment of severe epistaxis and they are designed to be filled either with air or liquid. Foley's catheters are frequently used as nasopharyngeal packs in conjunction with anterior nasal packing. Paraffin, commonly used with nasal packing, damages the rubber of the catheter resulting in bursting of baloon. This may be a well recognized cause of rebleeding[9],.If the bleeding still continues or it reappears on removal of packs, then the last effort rests on the arterial ligation. In 90% of patients the bleeding is from below the attachment of middle turbinate and they will need ligation of internal maxillary artery. Remaining 10% of patients with bleeding from above the middle turbinate will require anterior ethmoidal ligation. Superselective embolization using polyvinylalcohol particles and microfibrillar collagen has been tried successfully for severe epistaxis caused by fracture of skull bose[10].In our study none of the patients needed arterial ligation.

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