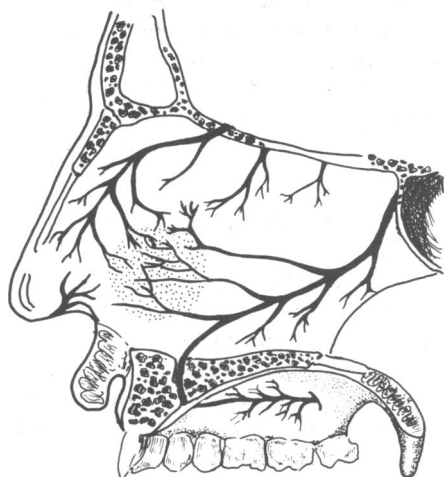


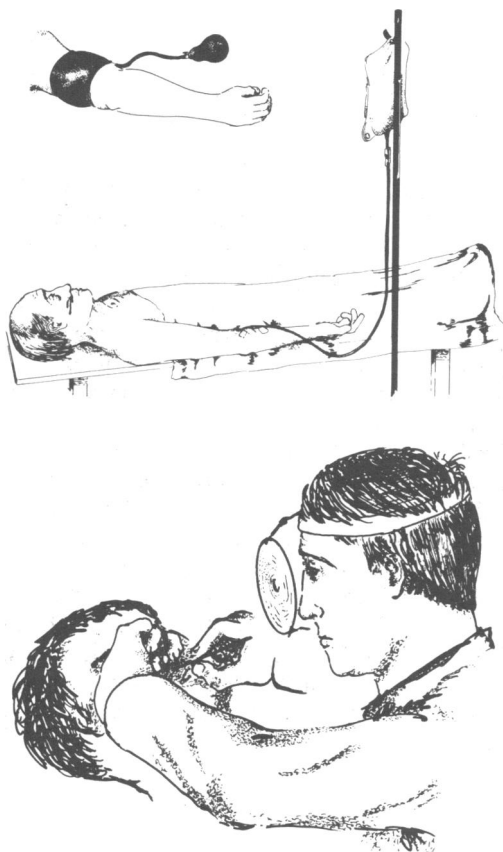
ABC of ENT

HAROLD LUDMAN

NOSE BLEEDS



Most nose bleeds issue from ruptured blood vessels on the nasal septum. In young people the bleeding is usually from a vein just behind the columella. In older patients the bleeding is arterial, from the caudal part of the nasal septum, where there is a region of multiple arterial anastomosis—Little's area. In both groups the cause may be unrecognised, or the bleeding may be due to minimal trauma from sneezing or nose blowing. In elderly patients arterial bleeding is often associated with degenerative arterial disease and hypertension. Rarer causes include clotting defects in blood dyscrasias; local vascular malformations in hereditary telangiectasia; raised venous blood pressure (either generalised in congestive heart failure or localised in superior mediastinal obstruction).

Management

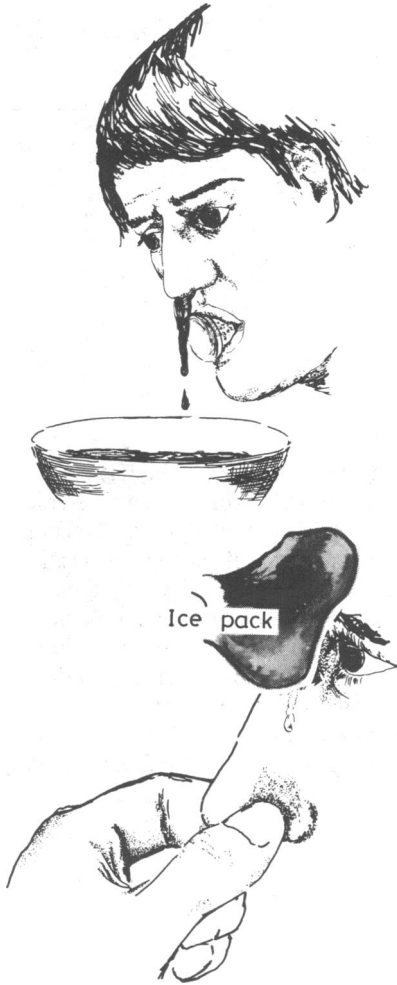
The doctor must (a) assess the effects of blood loss and, if necessary, replace blood by transfusion; (b) identify the source of bleeding within the nose, and try to find the cause; and (c) stop the bleeding.

The effects of blood loss must be assessed before any effort is made to find the source of bleeding and to stop it. An elderly patient who has lost a lot of blood is more likely to die during the next few hours from the effects of the blood loss already sustained than from the results of continuing bleeding. Clinical assessment, including pulse and blood pressure measurements, will indicate whether the patient is shocked. If so, a blood sample should immediately be taken for grouping and cross-matching and intravenous infusion with a plasma expander started.

The position of the patient is important. It is often suggested that a patient with a bleeding nose should be nursed upright to lower the venous blood pressure. That may be useful advice for a young fit patient who has lost a little blood from the nose; but any patient who has suffered extensive blood loss must be kept with the head low to maintain an adequate circulation to the brain.

When the doctor is happy about the patient's general condition, as is usually so on first acquaintance with a young patient, he can attend to the source of the trouble—the bleeding nose.

First aid measures



The patient himself may be able to stop bleeding from the anterior part of the nose by pinching the nostril between a finger and thumb and applying ice packs to the bridge of the nose. If this is not effective then he should sit down and hold a bowl into which the blood can drip. He must be discouraged from swallowing, which would displace the accumulating clot. Swallowing can be prevented most easily by placing a cork between the teeth (Trotter's method).

The doctor should sit the patient, if fit enough, facing him. Ideally illumination should be with a headlight so that both hands can be free. Clotted blood should be removed from the nose with either Luc's forceps or a sucker. As each part of the nasal mucosa comes into view it may be sprayed with cocaine solution (2.5-10%). This helps to stop the bleeding by constricting the blood vessels and it anaesthetises the mucosa so that any later manoeuvre can be performed without discomfort. As clot removal and spraying proceed alternately the nasal interior becomes visible. If he has no headlight the doctor may have to pack the nose "blindly" with ribbon gauze (see below).

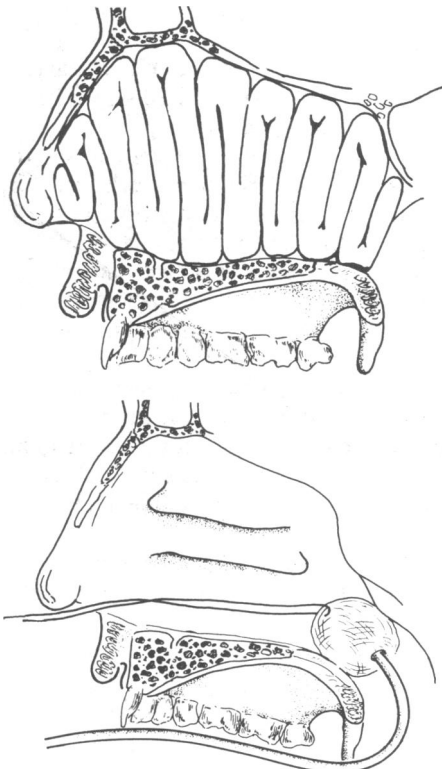
The next measures depend on whether the bleeding has stopped and what has been found in the nose.

If the nose is clear and the bleeding stops no local treatment is needed. The patient should be watched for a while to make sure there is no further bleeding, and bed rest with sedation may be recommended.

If the bleeding continues and the bleeding point is visible the vessels can be cauterised. This is done, after anaesthetising the mucosa with cocaine, by touching the site with a bead of silver nitrate on a stick, a cotton wool probe moistened in trichloroacetic acid, or the point of a red-hot electrocautery point.

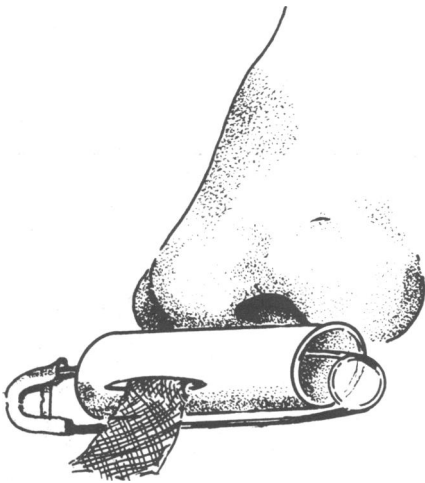
If the bleeding continues and no source can be found it must be controlled by the pressure of a pack in the nose.

Packing the nose



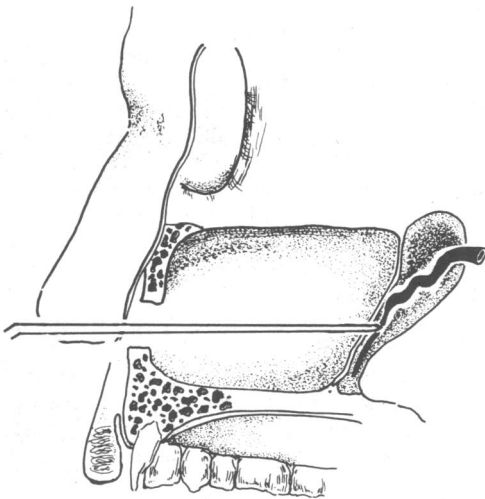
Anterior nasal pack of ribbon gauze fills the nose from the front. The gauze ($\frac{1}{2}$ in or 1 in) is moistened with paraffin or bismuth subnitrate and iodoform paste inserted with Tilley's nasal dressing forceps. The patient may safely be allowed to return home, and the pack may be left undisturbed for two or three days.

Posterior nasal pack—If bleeding continues despite the presence of an effective anterior nasal pack pressure on the walls of the postnasal space is needed. A posterior pack is made from a wedge of gauze as large as the end of the patient's thumb, which is rammed tightly into the posterior choana. The gauze has two firmly attached tapes and is moistened with paraffin or bismuth subnitrate and iodoform paste to lubricate, and hinder infection. This pack has to be inserted with local anaesthesia of the nose and throat or, in some cases, under a general anaesthetic. A thin rubber catheter is passed into the nose from the front until its tip reaches the throat. The end is found at the back of the throat by inspection and is drawn out of the mouth with a pair of forceps. One of the tapes attached to the pack is tied to the end of the catheter. The catheter is then withdrawn from the nose so that it pulls first the tape and then the pack into the postnasal space. A finger must guide the tape around the soft palate to

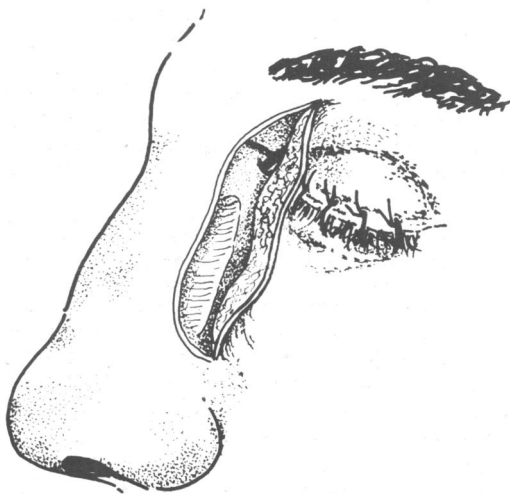


prevent abrasion. The nasal tape is then firmly fastened so that it pulls the pack into the back of the nose and its end is strapped to the cheek. The mouth tape, which will be used to withdraw the pack, is loosely strapped to the cheek, taking care that it does not cut the corner of the mouth. A patient with a postnasal pack in place must stay in hospital. The postnasal pack should be removed after 24 hours because of the risks of infection and damage to the orifice of the Eustachian tube.

Continued bleeding after packing



After removing nasal packs there may be no further bleeding, but bleeding often starts again, either at once or a few hours later. For this reason a patient should not be discharged from care immediately. Repeated bleeding may be controlled by repeated packing. Unfortunately nasal packing, particularly of the postnasal space, is extremely uncomfortable and if prolonged and repeated the patient becomes miserable and the surgeon dispirited. Continued bleeding after removal of a second or third set of packs is best managed by ligating the arterial supply to the nose. The main source of this supply is from the maxillary artery—a branch of the external carotid artery. A minor contribution is from the anterior ethmoidal artery—a source ultimately derived from the internal carotid.



The anterior ethmoidal artery is accessible through an incision around the inner canthus of the eye on the medial wall of the orbit, but since it provides only a small contribution to the blood supply of the nose, it is usually better to ligate one of the other vessels, regardless of the site of the bleeding. For the general surgeon the external carotid artery, approached in the neck, is the obvious choice. For the otolaryngologist ligation or clipping of the maxillary artery in the pterygopalatine fossa is easily achieved, by a Caldwell-Luc approach to and through the posterior wall of the antrum.

Very rarely bleeding may continue despite these measures. Ligation of the other vessel is then usually recommended. As a last resort low doses of radiotherapy to the nasal mucosa may be effective.