

Origin of Nosebleeds and Modern Methods of Clinical Diagnosis

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Abstract: During the survey, they determine the factors that contributed to the development of bleeding (blowing nose, sneezing, picking nose), concomitant diseases and conditions (including pregnancy, cirrhosis, HIV, genetic diseases, tumor process), how long ago the bleeding began, what measures were taken, whether it stops, how often similar cases occur.

Most often, damage to blood vessels occurs in the area of the nasal septum. The development of bleeding from the structures located at the back of the nose often occurs in patients with atherosclerosis, blood diseases, or during surgical interventions on the nose for therapeutic or cosmetic purposes.

Key points: Causes, first aid, treatment, diagnosis.

Frequent and severe nosebleeds that develop against the background of complete well-being can occur in case of high blood pressure (in this case, according to ICD-10, the diagnosis is "hypertensive crisis complicated by nosebleeds").

Anterior tamponade involves inserting a zigzag strip of gauze soaked in petroleum jelly (length can reach 175 cm) into the anterior parts of the nose. Posterior tamponade involves inserting two hard tampons with a long thread from the nasopharynx. A catheter is inserted into the oral cavity through the nasal passage from the front, a tampon thread is attached to it. When removing the catheter from the nose, the nasal choanae are plugged with a tampon. Then it is performed on the front tampon, the free ends of the tampon threads are fixed in the pharynx and nostrils. Tampons are removed on the 4-5th day. To prevent infectious complications and hypoxia, the patient is prescribed oxygen therapy and systemic antibiotics.

Most often, nosebleeds develop in men, because in women, estrogen (female sex hormones) strengthens the walls of blood vessels.

Symptoms of nosebleeds

The day before, the patient may experience the following symptoms: nasal congestion, a feeling of pressure, tightness or pain in the nose.

Causes of nosebleeds:

The causes of this pathological condition:

injuries;

dryness of the mucous membrane;

rhinitis;
vascular pathology;
blood clotting disorder;
surgery;
perforation of the nasal septum due to cocaine use;
liver diseases, AIDS;
neoplasms.

Depending on the intensity of the bleeding, patients may complain of:

nosebleeds;
dizziness;
palpitations, increased pulse;
general weakness, impaired consciousness;
pain in the nasal area.

Diagnosis of nosebleeds

Diagnosis is not difficult and includes an interview with the patient, a general and local examination, laboratory and instrumental research methods (if necessary).

May indicate a pathology of the blood coagulation system:

increased bleeding from the gums, including when brushing teeth;
blood in urine, stools;
tendency to bruise all over the body;
take certain medications (NSAIDs, antiplatelets, anticoagulants).

Bleeding from one or both nostrils of varying intensity was noted during examination. There may be signs of increased bleeding in the body - bruises, telangiectasias.

The doctor examines the front parts of the nose using a lamp, a frontal mirror and a nasal dilator. If the bleeding is not profuse, no further examination of the nasal cavity is performed. If there is a lot of it, the following operations are performed for a more detailed examination and to determine the source of the bleeding:

video rhinoscopy;
posterior rhinoscopy;
endoscopic endonasal examination of the nasal cavity, nasopharynx, paranasal sinuses.

To assess the severity of the patient's condition, blood pressure is measured, heart rate and respiratory rate are calculated. In severe cases, tachycardia, hypotension and hemorrhagic shock may develop.

Disadvantages:

signs of bleeding on the skin;
use of anticoagulants;
development of hemorrhagic shock;
ineffectiveness of treatment with a tampon impregnated with vasoconstrictors, including pressing on a vein;
frequent runny nose for unknown reasons.

The doctor may prescribe the following laboratory tests:

general blood test with determination of hemoglobin, red blood cells, leukocyte formula, platelets, ESR;

general urine analysis;

biochemical blood test with determination of total protein, bilirubin, ALT, AST, creatinine, glucose;

study of coagulation hemostasis with determination of prothrombin time, partial cephalin time, activated cephalin time;

blood group, Rh factor, erythrocyte phenotype.

If an oncological process or a foreign body is suspected, a computed tomography of the skull with contrast and a carotid artery angiogram may be prescribed.

First Aid for Nosebleeds: Dos and Don'ts

Most often, damage to blood vessels occurs in the anterior parts of the nose, accompanied by slight bleeding that easily stops on its own.

If you have a nosebleed, do the following:

calm down;

If the bleeding is severe, call an ambulance;

hold the nose with your fingers for 5 to 10 minutes;

apply cold to the bridge of the nose;

If this is ineffective, moisten the swab with one of the following: oxymetazoline, ephedrine, xylometazoline, hydrogen peroxide and insert it into the nose for another 10 minutes.

It is not recommended to raise your head or lie down, which allows blood to enter the stomach and irritate its mucous membrane. This can cause bloody vomiting. You should not drink coffee, as it causes high blood pressure and recurrence of the disease.

Treatment of nosebleeds

In case of prolonged and severe bleeding, the patient should be treated in the ENT department.

Conservative and surgical methods are used to stop the bleeding. The doctor may cauterize the veins in the front of the nose with silver nitrate or an electric scalpel and insert a foam nasal swab lubricated with antibacterial ointment.

Drug therapy to stop nosebleeds includes:

increase the formation of blood clots and prevent their disintegration (aminocaproic acid, tranexamic acid, etamsylate);

those with anti-inflammatory and analgesic effects (glucocorticoids, non-steroidal anti-inflammatory drugs, analgesics, including opioids);

prevention of the development of infectious complications (penicillin antibiotics, cephalosporins, macrolides, fluoroquinolones);

reduce soft tissue swelling, restore nasal breathing (adrenergic agonists, topical saline solutions and antihistamines);

strengthen mucosal renewal (dexpanthenol).

Surgical treatment is performed in the following ways:

anterior and posterior tamponade of the nasal cavity, insertion of special nasal balloons;

connect the internal and external carotid arteries using a clip;

Endovascular embolization of vessels under X-ray navigation control.

These treatment methods require anesthesiological and resuscitation support (local, topical and general anesthesia can be performed). In case of significant blood loss, transfusion of colloidal and crystalloid preparations and transfusion of blood components are performed.

If blood enters the intestine in patients with severe liver disease (to prevent blood breakdown and ammonia release), a cleansing enema is administered, laxatives, sorbents and non-absorbable antibiotics (neomycin) are prescribed.

During treatment, the patient is not recommended to use clopidogrel, acetylsalicylic acid, heparin or warfarin.

Prevention of nosebleeds

After nosebleeds have stopped, it is recommended to prevent recurrences:

take hair-stabilizing medications (vitamin C);

food enrichment with plant fibers (fruits, herbs, vegetables);

exercise regularly;

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