

# Improvement of Surgical Treatment Methods in Patients with Nasal Pathologies

**Bekmurodzoda Shahrom Yusuf**

Samarkand State Medical University, Department of Otorhinolaryngology No. 2, 1st year clinical resident

**Rasulova KA**

Assistant, Department of Otorhinolaryngology No. 2, Samarkand State Medical University

**Abstract:** Thanks to this, the normal formation of free nasal breathing occurs, the inhaled air is heated and humidified, other protective functions of the nose function normally, and the sense of smell is formed.

The curvature can either result from direct trauma to the nose or develop gradually as a person grows - falls, birth injuries, but this seems unlikely to prove it; this is due to the long development time.

**Key points:** Nasal septum correction surgery, Surgical instructions.

## A prominent ridge of the nasal septum

Nasal breathing disorders can have a very negative effect on the human body. Lack of nasal breathing and even constant breathing through the mouth leads to hypoxia (lack of oxygen) and not only affects well-being, but also contributes to the development of a number of pathological changes.

The nervous, cardiovascular and hematopoietic systems have the greatest effect on oxygen deficiency and can significantly affect the human hormonal system; Patients with chronic lung diseases can be very sensitive to air quality, which is clearly defined by adequate nasal breathing. After all, our nose not only breathes, but also cleans, warms and humidifies the air so that it does not disturb the human respiratory tract and lungs. Growing bodies of children, patients with chronic diseases of the lungs and cardiovascular system, people subjected to intense physical activity, constant stress and intense mental activity are very sensitive to oxygen deficiency.

## Surgery to repair the nasal septum

It is important to understand that operations can eliminate significant functional disorders, that is, they lead to the development of pathologies that cause complaints in the patient or hidden problems in his body. Small deviations of the nasal septum that do not cause problems with nasal breathing or do not contribute to the development of other pathologies are usually not subject to surgical correction.

The purpose and course of the operation is to distinguish the twisted bony and cartilaginous structures of the nasal septum, partially remove it and straighten the rest as much as possible, while preserving, intact or restoring the mucous membrane covering the nasal septum. supporting parts of the nasal septum. The entrance is through the patient's nostrils. There are no external incisions, so the operation leaves no visible scars. Septoplasty of the nasal septum does not change the external shape of the nose, so this intervention is not visible to others.

A "cold" tool (scalpel, etc.) is mainly used to perform the operation. Laser and radiofrequency technologies, popular among many others, are useful.

They are mainly used to repair nasal turbinates, sometimes to make incisions in the nasal septum or to treat cartilage and stop bleeding. In most cases, complete correction of the nasal septum requires work on bone structures, for which laser or any other destructive coagulation technology has no advantage. Nevertheless, we often meet patients who require laser correction of the nasal septum, which is the only modern method, and who are convinced that the cold instrument is a thing of the past. Unfortunately, this is not the case, one can even say the opposite. The laser, which has excellent hemostatic (hemostatic) properties under the influence of high temperatures, burns or "welds" the tissues and still cannot come close to a good sharp scalpel in terms of cleanliness of the incision and treatment time. Leading world clinics "still" use classical instruments to work on the nasal septum, and their standards do not include the mandatory use of a laser during surgery on the nasal septum. But in defense of the laser, we can say that it is very convenient for operations on the nasal turbinates due to its hemostatic effect, although there are many other less effective methods, such as electrical and thermal effects (including cryocoagulation, popular in Russia) and the use of ultrasound and radiofrequency surgical methods.

There are surgical methods on the nasal septum using a special video camera - an endoscope, which is not a necessity, but an option.

The choice of additional equipment during surgery (endoscope, laser, radiofrequency coagulator) is entirely the responsibility of the specialist, not the patient. An incorrect or incorrectly used tool not only does not help, but also complicates the operation. Only the surgeon knows to what extent this or that tool will help in performing the operation.

Almost always, nasal septum surgery (before and after photo) is combined with simultaneous correction of other intranasal structures - the turbinates.

These formations of the nasal cavity greatly affect nasal breathing, and their dysfunction can lead to the development of a pathology of "vasomotor rhinitis". With a deviation of the nasal septum, the nasal turbinates often take on their curved shape and become asymmetrical. In this case, even with their normal functioning without correction, it is difficult to achieve good nasal breathing through surgical intervention on the nasal septum. Since point correction of nasal deposits and nasal septum is used everywhere, doctors often talk about nasal septum correction, that is, correction of these structures in one stage. In some institutions, nose work is immediately included in the price of the operation, while in others it may be a separate item. But in order to restore good nasal breathing, it still remains inseparable from the operation on the nasal septum.

In modern medicine, local anesthesia is not used for full surgery and can only be used for minor corrections.

When relieving pain, such anesthesia does not eliminate unpleasant sensations in the nose (other types of receptors are responsible for them, anesthesia is not affected by them) and is perceived very negatively by the patient during long or large-scale interventions (dentists for these reasons, they prefer to work with the patient for no more than 30-40 minutes - the person gets tired of unpleasant sensations, and interventions in the nasal cavity are perceived as more unpleasant than in the oral cavity). Anesthesia allows the surgeon to concentrate directly on the operation, eliminating the need to be distracted by talking with the patient (which often plays an important role in the patient's peace of mind). Mandatory control of blood pressure during anesthesia helps to control and reduce bleeding during surgery, which has a beneficial effect both on the results of the surgeon's work and on the patient's postoperative well-being due to minimal blood loss.

### **Instructions for surgery:**

The main indications for septoplasty are:

Long-term (permanent) difficulty breathing through the nose

The human body has a high ability to adapt to adverse conditions, including partial adaptation to the deviation of the nasal septum. Many people do not know about this problem, because their body can withstand this load, they are not burdened by age and other chronic diseases. Often, the problem appears gradually, and the person does not immediately pay attention to it. Having started to breathe through the mouth often, including during sleep, having woken up with an irritated or dry throat, having slept poorly, snored, constantly used vasoconstrictor drops or having often gotten sick, he begins to look for trouble and begins to turn to experts. Timely restoration of nasal breathing helps a person to recover or reduce complaints. Creates an opportunity to restore the body - improves not only the functioning of systems directly connected to the nose (throat, lungs), but also affects the nervous and cardiovascular systems.

### **Chronic diseases of the paranasal sinuses**

Correction of the nasal septum can also be performed in patients with chronic inflammatory diseases (sinusitis) who do not have significant difficulties in breathing through the nose. Due to the curvature of the nasal septum, the "incorrect" redistribution of air flows can lead to permanent irritation of the mucous membrane, infection or violation of ventilation of the paranasal sinuses and the occurrence of problems in them.

Good formation of paranasal sinuses (polyps, cysts, mucoceles, pyoceles, etc.).

Violation of ventilation of the sinuses due to significant curvatures of the nasal septum, the direction of air flow inside the nasal cavity not only contributes to the occurrence of chronic inflammatory phenomena of the mucous membrane of the nasal cavity and sinuses, but also contributes to the appearance of benign formations such as cysts or polyps.

massive operations of the paranasal sinuses (polyps of the nasal cavity and paranasal sinuses) or the base of the skull (pituitary adenoma).

When the surgeon works in the deep structures of the nasal cavity and paranasal sinuses, even a slightly curved nasal septum can be an obstacle. Septoplasty is often performed during large-scale operations, including neurosurgical operations, for example, when removing a pituitary adenoma.

### **Headaches for unknown reasons**

Continuous contact of the mucous membrane of the lateral walls of the nasal cavity and nasal turbinates with the protruding parts of the nasal septum (crest, spines) can cause irritation of the nerve ganglia and reflex pain in the head. It is often difficult for both the patient and the specialist to notice this connection. Often, this category of patients begins treatment with a neurologist and goes to the ENT surgeon only after excluding other causes and the ineffectiveness of conservative treatment. Elimination of disturbing factors in the form of a protrusion of the nasal septum, which is in contact with the mucous membrane of the lateral walls, can relieve the patient's pain or even get rid of it.

### **ear diseases (chronic otitis, sticky otitis)**

If there are chronic problems with the middle ear and eardrum, the first step is also recommended to eliminate significant curvatures of the nasal septum. The middle ear cavity, located behind the eardrum, receives air from the nasal cavity through the auditory tube. Deviations of the nasal septum can make it difficult to properly ventilate this space. Chronic changes gradually develop in the form of a perforation (hole) in the eardrum, chronic inflammation, scarring or cholesteatoma appear in the middle ear with a gradual decrease in hearing. Ignoring this problem can lead to ineffective ear surgery. After ear surgery, normal ventilation of the middle ear cavity is especially important and directly affects the effectiveness of treatment. Usually, nasal septum repair is performed as the first stage of ear surgery, 2-6 months before the main surgery. It is not recommended to combine operations on the nose and ears, since nasal breathing does not recover immediately after the operation.

## **Contraindications to surgery**

acute diseases (ARVI, bronchitis, herpes infection, etc.).

The operation is not an emergency, so there is no need to create additional risks due to a cold or other acute illnesses. If you are sick, contact the surgeon and agree to reschedule the operation. Usually, you can postpone the operation for 2 weeks until you are fully recovered.

### **blood clotting disorders**

Blood clotting disorders can be caused not only by blood diseases, but also by the constant use of medications, for example, ThromboASS based on aspirin (acetylsalicylic acid) and others.

Surgery is not recommended for women during menstruation.

This leads to impaired blood clotting and increases blood loss during surgery.

chronic diseases in the acute stage (gastric ulcer, cholecystitis, etc.) and decompensation of chronic diseases (diabetes mellitus, coronary heart disease, hypertension). Expert approval is required, possibly prior preparation.

### **old age**

Surgery is not recommended for older people due to impaired healing processes and recovery of the body. This indicator is considered separately depending on the presence of concomitant diseases in each case. In people over 70 years old, the decision to undergo surgery is made individually.

### **childhood**

The nasal septum participates in the formation of the external nose during the growth of the child, which is most active in adulthood. But due to the same growth, the child has a greater need for normal nasal breathing. Stress caused by high workload and emotional experiences at school also has a negative effect on the body. Oxygen deficiency caused by a significant violation of nasal breathing can have a negative effect during this period. Operations under the age of 16 are performed only after a comprehensive assessment by the doctor of possible positive and negative consequences for the child. Often, correction is carried out only in case of significant breathing difficulties and severe curvature of the nose. The principle of gentle correction is important for the doctor - if the goal is not to have a "perfectly flat" nasal septum, but to improve nasal breathing to "acceptable". In some cases, after the child's growth is complete (20-25 years), additional correction of the nasal septum is possible.

## **How to Prepare for Surgery**

2 weeks ago, stop taking medications that affect blood clotting - anticoagulants (Aspirin, ThromboASS, acetylsalicylic acid, etc.) Before stopping anticoagulants, you should consult a doctor. If it is not possible to stop treatment, inform the surgeon and discuss with the attending physician a possible change in treatment.

in the presence of concomitant diseases (coronary heart disease, hypertension, bronchial asthma, gastric ulcer, etc.), consult a doctor about the possibility of surgical intervention and the need for preoperative preparation.

It is recommended to stop smoking and not drink alcohol 2 weeks before the operation.

for women - stop taking hormonal contraceptives 1 month before the operation or consult a gynecologist. This is especially important in case of varicose veins.

If you have a very dry nose, you should contact the operating ENT surgeon 2-4 weeks before the operation. Dry mucous membranes and visible crusts can have a negative effect on the operation and the postoperative period.

The day before the operation, the patient is admitted to the hospital of the institute and spends the night in the room assigned to him. The next day, according to the schedule of the operation, the

operation will be performed. Immediately before the operation, the patient is anesthetized and falls asleep. During the operation and for some time after it, the patient sleeps (under anesthesia). Immediately after the operation and until the next day 8 am, the patient is in the intensive care unit, where he is constantly monitored by the nurse on duty, seen by the doctor on duty, and his condition is monitored. You cannot leave this room. But from the next day he will be transferred to the ward, where he will stay for another 3-4 days until discharge from the hospital, during which time he will be treated and the procedures necessary for a comfortable recovery will be performed. Usually, nasal cavity tampons installed during the operation are removed on the second day and after another 1-2 days the patient goes home.

In 2 weeks, the main stage of treatment of the nasal septum takes place. However, you need to understand that during this time, the new breathing comfort cannot be fully achieved, and the final nasal breathing begins to form 3-6 weeks after the operation. For free breathing and optimal comfort, the nasal mucosa must be fully processed. Moreover, this healing time depends mainly on the intervention on the lower turbinates, which is performed simultaneously with the correction of the nasal septum, and not on the nasal septum surgery. Working with these structures greatly affects the presence of crusts in the nose after surgery and the patient's full recovery period.

#### Postoperative care and follow-up

- postoperative care in the hospital primarily includes the treatment regimen and monitoring of the therapeutic process by the doctor. The patient does nothing on his own without the surgeon's advice.
- after discharge from the hospital, the patient spends the first week at home. It is recommended to maintain a home diet, increase physical activity, avoid crowded places and follow the recommendations. Often, it is prescribed to wash the nose with a large volume of saline solution up to 1 liter (Delfin, Aqua-Maris, etc.).
- after returning to work, the patient must gradually return to his natural rhythm of life, gradually resume his physical activity

#### List of literature used:

1. Andryev S. et al. Experience with the use of memantine in the treatment of cognitive disorders //Science and innovation. – 2023. – T. 2. – №. D11. – C. 282-288.
2. Antsiborov S. et al. Association of dopaminergic receptors of peripheral blood lymphocytes with a risk of developing antipsychotic extrapyramidal diseases //Science and innovation. – 2023. – T. 2. – №. D11. – C. 29-35.
3. Asanova R. et al. Features of the treatment of patients with mental disorders and cardiovascular pathology //Science and innovation. – 2023. – T. 2. – №. D12. – C. 545-550.
4. Begbudiyev M. et al. Integration of psychiatric care into primary care //Science and innovation. – 2023. – T. 2. – №. D12. – C. 551-557.
5. Bo'Riyev B. et al. Features of clinical and psychopathological examination of young children //Science and innovation. – 2023. – T. 2. – №. D12. – C. 558-563.
6. Borisova Y. et al. Concomitant mental disorders and social functioning of adults with high-functioning autism/asperger syndrome //Science and innovation. – 2023. – T. 2. – №. D11. – C. 36-41.
7. Ivanovich U. A. et al. Efficacy and tolerance of pharmacotherapy with antidepressants in non-psychotic depressions in combination with chronic brain ischemia //Science and Innovation. – 2023. – T. 2. – №. 12. – C. 409-414.
8. Nikolaevich R. A. et al. Comparative effectiveness of treatment of somatoform diseases in psychotherapeutic practice //Science and Innovation. – 2023. – T. 2. – №. 12. – C. 898-903.

9. Novikov A. et al. Alcohol dependence and manifestation of autoaggressive behavior in patients of different types //Science and innovation. – 2023. – T. 2. – №. D11. – C. 413-419.
10. Pachulia Y. et al. Assessment of the effect of psychopathic disorders on the dynamics of withdrawal syndrome in synthetic cannabinoid addiction //Science and innovation. – 2023. – T. 2. – №. D12. – C. 240-244.
11. Pachulia Y. et al. Neurobiological indicators of clinical status and prognosis of therapeutic response in patients with paroxysmal schizophrenia //Science and innovation. – 2023. – T. 2. – №. D12. – C. 385-391.
12. Pogosov A. et al. Multidisciplinary approach to the rehabilitation of patients with somatized personality development //Science and innovation. – 2023. – T. 2. – №. D12. – C. 245-251.
13. Pogosov A. et al. Rational choice of pharmacotherapy for senile dementia //Science and innovation. – 2023. – T. 2. – №. D12. – C. 230-235.
14. Pogosov S. et al. Gnostic disorders and their compensation in neuropsychological syndrome of vascular cognitive disorders in old age //Science and innovation. – 2023. – T. 2. – №. D12. – C. 258-264.
15. Pogosov S. et al. Prevention of adolescent drug abuse and prevention of yatrogenia during prophylaxis //Science and innovation. – 2023. – T. 2. – №. D12. – C. 392-397.
16. Pogosov S. et al. Psychogenetic properties of drug patients as risk factors for the formation of addiction //Science and innovation. – 2023. – T. 2. – №. D12. – C. 186-191.
17. Prostyakova N. et al. Changes in the postpsychotic period after acute polymorphic disorder //Science and innovation. – 2023. – T. 2. – №. D12. – C. 356-360.
18. Prostyakova N. et al. Issues of professional ethics in the treatment and management of patients with late dementia //Science and innovation. – 2023. – T. 2. – №. D12. – C. 158-165.
19. Prostyakova N. et al. Sadness and loss reactions as a risk of forming a relationship together //Science and innovation. – 2023. – T. 2. – №. D12. – C. 252-257.
20. Prostyakova N. et al. Strategy for early diagnosis with cardiovascular diseaseisomatized mental disorders //Science and innovation. – 2023. – T. 2. – №. D12. – C. 166-172.
21. Rotanov A. et al. Comparative effectiveness of treatment of somatoform diseases in psychotherapeutic practice //Science and innovation. – 2023. – T. 2. – №. D12. – C. 267-272.
22. Rotanov A. et al. Diagnosis of depressive and suicidal spectrum disorders in students of a secondary special education institution //Science and innovation. – 2023. – T. 2. – №. D11. – C. 309-315.
23. Rotanov A. et al. Elderly epilepsy: neurophysiological aspects of non-psychotic mental disorders //Science and innovation. – 2023. – T. 2. – №. D12. – C. 192-197.
24. Rotanov A. et al. Social, socio-cultural and behavioral risk factors for the spread of hiv infection //Science and innovation. – 2023. – T. 2. – №. D11. – C. 49-55.
25. Rotanov A. et al. Suicide and epidemiology and risk factors in oncological diseases //Science and innovation. – 2023. – T. 2. – №. D12. – C. 398-403.
26. Sedenkov V. et al. Clinical and socio-demographic characteristics of elderly patients with suicide attempts //Science and innovation. – 2023. – T. 2. – №. D12. – C. 273-277.
27. Sedenkov V. et al. Modern methods of diagnosing depressive disorders in neurotic and affective disorders //Science and innovation. – 2023. – T. 2. – №. D12. – C. 361-366.