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Capillary Hemangioma of the Nasal Septum: A Clinical Case, Rational Tactics of Surgical Treatment

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Abstract: Vascular tumors of the nasal cavity can be presented in various histopathological variants. This article considers the case of a neoplasm of the nasal cavity, diagnosed in a patient in the postpartum period.

According to world literature, during pregnancy and in the postpartum period, 30–45% of women turn to otorhinolaryngologists with such non-specific symptoms as nasal congestion, rhinorrhea, bleeding or anosmia, especially in the third trimester of pregnancy and during lactation, when the reactivity of the oral mucosa the nose is caused by an increased content of estrogens in the blood, which causes dilatation of blood vessels and hypersecretion of the mucosa. Less often, the manifestation of the disease manifests itself with visual impairment, headaches, and a local feeling of fullness in the nose.

For the differential diagnosis of a volumetric formation of the nasal cavity, it is advisable to start the examination with such radiological imaging methods as computed tomography (for women in the postpartum period) and magnetic resonance imaging, which allows planning a rational tactics of surgical treatment. The final diagnosis is established by histological examination.

Also, depending on the presented pathology, the recommended treatment also varies.

Keywords: capillary hemangioma, nasal septum, epistaxis, endoscopic surgery.

Hemangioma is a benign neoplasm of vascular origin with epithelial proliferation. Most often refers to congenital lesions of the skin and oral mucosa, while the nasal cavity and paranasal sinuses are considered an unusual location for hemangiomas. Often in the literature the term "lobular" hemangioma is used in view of the characteristic arrangement of capillaries in the form of a lobular pattern. It is the most common tumor of the nasal cavity. On the head and neck, by location, it occurs in 38% of the mucous membrane of the lips, 7–29% in the nasal cavity (often in the anterior sections of the nasal septum, on the turbinates, cases of development from the maxillary sinus, roof and bottom of the nasal cavity have also been described). It occurs in all age groups, there are several peaks: children and adolescents, women of reproductive age, and then there is a uniform distribution in the group over 40 years old. There are several theories of pathogenesis, more often associated with

traumatic tissue damage and hormonal factors (pregnancy, oral contraceptives). The most striking symptomatic manifestations of capillary hemangioma are unilateral epistaxis and nasal obstruction. Histologically characterized by vascular proliferation in the submucosal layer, in the form of lobules or clusters, consisting of central capillaries and small branching ducts. Treatment is complete removal, preferably by endonasal endoscopic technique. Unfortunately, the recurrence rate after excision can be as high as 15%. The department of otorhinolaryngology of the clinic of the Samarkand Medical Institute has accumulated extensive experience in managing rhinological patients. Over the past 2 years, 15 patients with various vascular neoplasms of the nasal cavity and nasopharynx have been treated in the conditions of the otorhinolaryngological department. We present a clinical case of a patient with capillary hemangioma of the nasal cavity.

Patient Sh., 32 years old, was admitted to the otorhinolaryngological department of the clinic of the Samarkand Medical Institute on an emergency basis with complaints of bleeding from the right half of the nose, significant difficulty in nasal breathing on the right and dry mouthFrom the anamnesis of the disease, it is known that for the first time an episode of bleeding from the right half of the nose occurred at the 38th week of pregnancy, with an increase in systemic arterial pressure to 140 and 80 mm Hg. Art.

The bleeding was stopped with a hemostatic sponge. Delivery, at 40–41 weeks by caesarean section due to increased fetal weight, without complications. Then, 1 month after delivery, a recurrence of nosebleeds (also from the right half of the nose) - she turned to an otorhinolaryngologist on an outpatient basis, preventive cauterization of the vessels of the nasal septum was performed, a clear localization of the source of bleeding was not found. Then relapses of nosebleeds on the right within 3 months 3-4 times (stopping with a hemostatic sponge, independently; while the patient notes that the intensity and duration of nosebleeds increased with each subsequent episode). Indicators of the hemostasis system, the level of hemoglobin in the blood both during pregnancy and after childbirth were within acceptable limits.

One month before hospitalization, an otorhinolaryngologist performed an endoscopic examination of the nasal cavity on an outpatient basis - a polypoid neoplasm was found in the right half of the nose. When performing cone beam computed tomography (CT) of the paranasal sinuses (Fig. 1), a soft tissue shadow (neoplasm) was revealed that fills the posterior sections of the nasal cavity from the middle of the right middle turbinate to the right choana (the structure of the right middle turbinate in the posterior sections is not differentiated). The lateral bone wall of the nasal cavity in the posterior sections of the right maxillary sinus is not differentiated for 20–25 mm. Bone differences in the right pterygopalatine fossa are fragmentary. The anterior sections of the alveolar bay of the right maxillary sinus are darkened due to the soft tissue component. Parietal thickening of the mucous membrane along the anterior wall of the right sphenoid sinus. Pneumatization of the remaining paranasal sinuses is not disturbed. The septum of the nasal cavity is ≪S≫-shapedly curved. The structures of the turbinates on the left are clearly defined [1].

On the day of hospitalization, epistaxis occurred from the right half of the nose against the background of complete well-being (according to the words, the volume of blood loss was about 100 ml). She independently installed a hemostatic sponge in the right half of the nose and applied to the ENT department of the multidisciplinary clinic of the Samarkand State Medical University. She was hospitalized with a diagnosis of "recurrent epistaxis, neoplasm of the nasal cavity" in the otorhinolaryngological department. In the department, under conditions of local application anesthesia (Sol.Lidocaini 10% 2 ml) of the nasal mucosa under the control of the endoscope (at an angle of 0o), bloody clots were removed from the right half of the nose. At the level of the anterior end of the right middle turbinate, a formation is visualized emanating from the middle nasal passage, bleeding profusely during probing (Fig. 2).

Taking into account the neoplasms of the nasal cavity revealed during the endoscopic examination of the nasal cavity and CT scan of the paranasal sinuses dated January 16, 2022, for the purpose of further diagnostic and differential search, a multislice CT scan of the paranasal sinuses and neck was performed, followed by intravenous bolus contrast enhancement and dynamic scanning to determine the size and blood supply of the formation, evaluation of bone destruction (Fig. 3).

According to the results of image reformation (MPv, vr) in the projection of the right nasal passage, a volumetric heterogeneous tissue formation with a pronounced vascular network of irregular shape is determined, unevenly actively accumulating a contrast agent, axial dimensions of 3.0 × 2.5 cm, vertical size up to 3.0 -3.5 cm. Education causes the destruction of the medial wall of the right destruction of the nasal septum, spreading to the left nasal passage. The pathological process includes the middle and, to a greater extent, the lower nasal concha on the right, can be traced fragmentarily. The fibrous anterior wall of the right main sinus, the walls of the adjacent cell of the ethmoid labyrinth is thinned. The defect of the bone part of the hard palate on the right under the lower nasal passage is determined. The tissue component extends into the lumen of the nasopharynx on the right, causing its deformation. The fistula of the right maxillary sinus is blocked, on the left it is free, preserved. The nasal cavity on the left is free. Pneumatization of the frontal sinuses, left maxillary sinus, cells of the ethmoid labyrinth on the left completely, on the right - partially, in the upper sections is preserved. The nasal septum was initially spiky deviated to the right at the level of the right inferior turbinate. No focal and infiltrative changes, changes in pathological density were detected in the brain. No additional masses were found in the neck area. Lymph nodes of the neck (up to 0.5 cm), visible sections of the mediastinum, submandibular groups (up to 0.6 cm) are not enlarged against the background of unchanged fiber. Defects in the filling of arterial vessels in the scanning area, areas of pathological expansion were not detected. Taking into account the data of spiral CT scan of the paranasal sinuses with contrast and abundant vascular supply of the tumor, it was decided to selective preliminary embolization of a. Sphenopalatina dextra, and with direct catheterization, the need for embolization of the same-named artery from the opposite side was established (to minimize collateral circulation). Under local anesthesia, after puncture of the right femoral artery and insertion of an introducer, selective angiography of the right and left external carotid arteries was performed, a hypervascular formation of 2.0 × 3.0 cm was detected in the projection of the nasal cavity (Fig. 4).

Performed selective catheterization a. Sphenopalatina dextra et sinistra feeding the formation and their embolization with microspheres of 300–500 μm until blood flow stasis, no contrast enhancement of the formation through the anastomoses was noted during repeated angiography.

The second and main stage of treatment was endoscopic removal of the neoplasm. To access the middle sections of the nasal cavity, a submucosal resection of the nasal septum was initially performed with preliminary anemization and infiltration of the mucous membrane (Fig. 5, 6). After isolation and removal of curved sections of the quadrangular cartilage in the posterior sections of the nasal cavity, a neoplasm was visualized, abundantly vascularized, coming from the submucosal layer of the nasal septum on the right. Then, using a bipolar cauter at a power of 24 W, obliteration of the feeding vascular pedicle of the formation was performed, and it was removed. Also, small tuberous areas of the mucous membrane of the septum of the nasal cavity were treated with a cautery along with the growth of the neoplasm for 1-2 cm closer to the vestibule of the nasal cavity and in the posterior parts of the nasal septum. Hemostasis with hemostatic swabs in both halves of the nose. The surgical material was sent for histological examination (Fig. 7, 8).

In the postoperative period, the patient received prophylactic hemostatic and systemic antibiotic therapy. Tamponation of the nasal cavity was performed on the 2nd day after the operation under the control of a rigid endoscope (at an angle of 0o) [2]. Nasal saline irrigation therapy is then recommended for 1 month. An endoscopic examination of the nasal cavity was performed 1 month after the operation (Fig. 9).

According to the histological conclusion, the neoplasm was represented by a capillary hemangioma (Fig. 10).

Conclusion

Capillary hemangioma is the most common vascular tumor of the nasal cavity and nasopharynx. However, in the differential diagnosis of vascular neoplasms in the nose, one should not forget about various histological variants, which determines further treatment tactics. Preoperative embolization is a necessary step in the surgical treatment of vascular tumors, which allows to reduce the risk of

intraoperative blood loss and, which is important for the operating surgeon, to clearly visualize the surgical field during the intervention. In the outpatient practice of an otorhinolaryngologist, it is necessary to remember the oncological alertness of all neoplasms of the nasal cavity and nasopharynx, imitating absolutely benign processes, such as hypertrophy of the nasopharyngeal tonsil and polypous process. Timely diagnosis of these conditions will allow qualified medical care in the early stages of the disease.

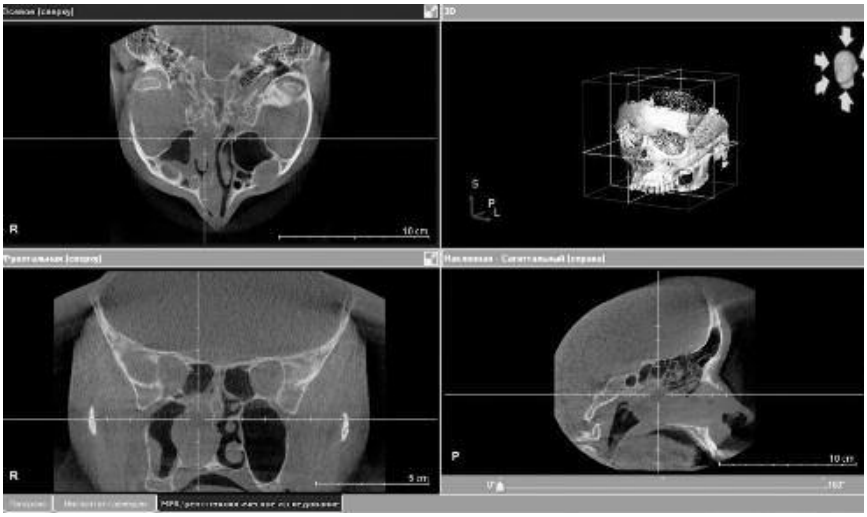

Figure 1. CT scan of the paranasal sinuses before surgery.

References

1. Karpishchenko C.A., Zubareva A.A., Chibisova M.A., Shavgulidze M.A. Tsifrovaiaob"emnaiatomografiia v otorinolaringologii. Prakticheskoerukovodstvo. SPb.: Dialog, 2011. [in Russian]
2. Karpishchenko S.A., Vereshchagina O.E., Stancheva O.A. Posledstvii arinologicheskikh operatsii. Folia ORL et PR. 2016; 22 (1): 91–4. [in Russian]
3. Karpishchenko S.A.,Vereshchagina O.E., Osipenko E.V. Dobrokachestvennye novoobrazovaniia okolonosovykh pazukh. Prakt. meditsina. 2015; 87: 2: 104–8. [in Russian]
4. Lutfullaev G.U. Diagnosis and treatment of benign tumors of the pharynx // Abstract of the dissertation of a doctor of medical sciences. Tashkent. 2012. p. 17.
5. Lutfullaev G.U., Safarova N.I., Nematov U.S., Correction of endogenous intoxication in patients with vascular tumors of the nose.// Journal of Problems of Biology and Medicine. 2021, no. 5 (130). p. 73-78.
6. Tamaki A, Babajanian E, D'Anza B, Rodriguez K. Lobular capillary hemangiomas: Casereport and review of literature of vascular lesions of the nasal cavity. Am J Otolaryngol 2017; 38: 363–6.
7. Лутфуллаев, Г. У., Лутфуллаев, У. Л., Валиева, Н. К., Кобилова, Ш. Ш., & Валиева, С. Ш. (2020). Гигантская фибропапиллома ушной раковины. Клинические наблюдения. Вопросы науки и образования, (18 (102)), 28-32.
8. Лутфуллаев, Г. У., Кобилова, Ш. Ш., Неъматов, У. С., & Мусурмонов, Ф. Ш. (2019). Опыт применения локальной иммунокоррекции в лечении экссудативного среднего отита у больных с доброкачественными опухолями носа, околоносовых пазух и носоглотки. Вестник КГМА им. ИК Ахунбаева, (2), 55-57.
9. Лутфуллаев, Г., Кобилова, Ш., Хамраев, Ф., & Асророва, Ф. (2015). Усовершенствование лечения больных с юношеской ангиофибромой носоглотки. Stomatologiya, 1(3 (61)), 149-151.

10. Lutfullayev, G. U., Lutfullayev, U. L., & Kobilova, S. H. SH., Ne» matov US Distance Learning Experience in the COVID-19 Pandemic [Internet]. Problemy pedagogiki= Problems of Pedagogy. 2020; 4 (49).
11. Lutfullaev, G., Lutfullaev, U., Kobilova, S., Safarova, N., & Valieva, N. (2021). Exudative Otitis Media-Early Symptom of Junior Nasopharyngeal Angiofibroma. Annals of the Romanian Society for Cell Biology, 111-114.
12. Lutfullaev, G., Lutfullaev, U., Nematov, U., Hamraev, F., & Fayzullaev, D. (2021). Clinical Characteristics of Vascular Tumors of ENT Organs. Annals of the Romanian Society for Cell Biology, 104-110.
13. Лутфуллаев, У., Кобилова, Ш., & Неъматов, У. (2020). ОПЫТ ИСПОЛЬЗОВАНИЯ ПЛАТФОРМЫ ZOOM В ДИСТАНЦИОННОМ ОБУЧЕНИИ В УСЛОВИЯХ ПАНДЕМИИ COVID-19. Журнал кардиореспираторных исследований, 1(SI-1), 59-59.
14. Лутфуллаев, Г. У., Лутфуллаев, У. Л., Неъматов, У. С., & Сафарова, Н. И. (2020). Случай из практики: гемангиома полости носа у беременной женщины. Вестник науки и образования, (10-4 (88)), 89-92
15. Валиева, Н., Неъматов, У., & Махмудова, Н. (2014). Отогенный менингит. Журнал проблемы биологии и медицины, (3 (79)), 93-94.
16. АНТОНИВ, В. Ф., КОЛОДИЙ, Н. В., АКСЕНОВ, В. М., & ЛУТФУЛЛАЕВ, У. Л. (1991). Способ хирургического лечения заболеваний среднего уха
17. Шокировна, Қ. Ш., Умриллаевич, Л. Ғ., ВАЛИЕВА, Н. К., & ХАМРАЕВ, Ф. Х. БУРУН, БУРУН ЁН БЎШЛИҚЛАРИ ВА БУРУН–ҲАЛҚУМ ХАВФСИЗ ЎСМАЛАРИДА ЭКССУДАТИВ ЎРТА ОТИТ. БИОМЕДИЦИНА ВА АМАЛИЁТ ЖУРНАЛИ, 85.
18. УТФУЛЛАЕВ, У., ВАЛИЕВА, Н., ХАМРАЕВ, Ф., ВАЛИЕВА, С., & АБДУРАХИМОВА, А. БОЛЕЗНЬ ВЕГЕНЕРА В ПРАКТИКЕ ОТОЛАРИНГОЛОГИИ.