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SPECIFIC CHARACTERISTICS OF PATHOLOGICAL CHANGES OF THE NOSE BARRIER IN ADOLESCENT CHILDREN WITH A PREMORBID BACKGROUND

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Relevance of the study. Despite the certain achievements of modern medicine in the field of otorhinolaryngology, diseases of the nose and paranasal sinuses occupy the first place among the pathologies of the upper respiratory tract [1]. Unfortunately, the treatment of most of them requires surgical intervention. The most common complaint of patients with this pathology is respiratory failure, diseases of the nose and paranasal sinuses [7,9]. The curvature of the nasal septum disrupts its natural and rational architectonics and natural airflow [2,7].

A deviated nasal septum is the most common cause of respiratory distress. It is detected in 68% of the population during routine examinations and contributes to the increase in chronic respiratory diseases [5,8].

One of the most pressing problems in otorhinolaryngology is the curvature of the nasal septum and its complications [2,4]. According to the studied literature sources, the prevalence of nasal septum curvature in adults ranges from 70.0 to 96.5% [3], while in children of early childhood, nasal septum curvature is extremely rare and is associated with the specific features of its structure, inconsistencies in the growth of the nasal septum and the corresponding anatomical formations [3,6], and in newborns it occurs from 1.45 to 6.3% [4,9]. The formation of nasal septum curvature is based on exogenous and endogenous factors. The increase in nasal septum curvature with age is associated with the different growth of its bone and cartilage parts during the development [4,10].

The purpose of the study :

It consists in studying the characteristics of the clinical course of the curvature of the nasal septum in children with a premorbid background and improving the treatment taking into account the morphological changes.

The main part.

Research methods and methods. The basis of this research work is the data of examination and treatment of 121 children aged 10 to 17 years, who were diagnosed with a deviated nasal septum. The results of treatment and examination of these children were analyzed in the otolaryngology department of the Bukhara Regional Children's Multidisciplinary Medical Center for 2020-2025. The main criteria for including patients in our study were the presence of a deviated nasal septum, difficulty breathing through the nose, frequent headaches, complaints of respiratory diseases and impaired sense of smell. All children underwent a comprehensive clinical, laboratory, X-ray and endoscopic examination used in otolaryngology. The patients underwent a detailed study and collection of complaints and anamnesis, as well as an objective examination.

Research results

To study and analyze the clinical features of nasal septum deviation in adolescents with premorbid background, 121 adolescents aged 14 to 17 years, treated with the diagnosis of "nasal septum deviation", were examined. Congenital or acquired curvature of the bony or articular parts of the nasal septum is accompanied by nasal septum deformation and impaired nasal breathing. To assess the effectiveness of the planned study, sick children were divided into 3 groups according to the type of treatment.

Group 1 **(traditional) included** 32 children with a diagnosis of nasal septum deviation who were treated with traditional, generally accepted medical treatments . No premorbid diseases were observed in the patients included in this group during the examination. They received traditional, standard treatment. Surgical treatment - septoplasty was performed depending on the clinical radiological form of the disease.

Group 2 **(main)** included 46 sick children with a diagnosis of nasal septum curvature, all of whom had premorbid comorbid diseases. They traditionally received etiopathogenetic therapy against premorbid diseases against the background of therapy specified in the treatment standards . Splints and merocele were used as local treatment. The general principle of treatment was based on the etiopathogenetic nature of the disease occurring on a premorbid background, and an individual approach and necessary treatment procedures were performed.

Group 3 **(comparative - control)** also included 43 sick children diagnosed with nasal septum curvature, all of whom had premorbid - concomitant diseases. They received traditional therapy, as indicated in the treatment standards. As local treatment, levomekol ointment, liniment and nasal cavity washing with 0.9% isotonic sodium chloride solution were used.

When analyzing patients operated on with a diagnosis of nasal septum deviation by age and gender, the following was found: in the analysis by groups, the traditional group of younger adolescents (10-14 years old) consisted of 11 (9.1%) patients, of whom 5 (4.1%) were girls and 6 (4.9%) were boys (Table 1). The traditional group of older adolescents (15-17 years old) consisted of 21 (17.3%) patients, of whom 6 (4.9%) were girls and 15 (12.4%) were boys . In this group, there were twice as many boys as girls, and it should be recognized that the high reliability of the difference ($p<0.05$) is associated with the number of observations.

Table 1. Distribution of data on patients with deviated nasal septum by age and gender

Gender	**Young teenagers (10-14 years old)** (n,%)			**Older teenagers (15-17 years old)** (n,%)		
	traditional	main	control	traditional	main	control
Girl	5 (4.1%)	7 (5.8%)	6 (4.9%)	6 (4.9%)	17 (14.0%)	13 (10.7%)
Boy	6 (4.9%)	8 (6.6%)	9 (7.4%)	15* (12.4%)	15 (12.4%)	15 (12.4%)
total:	11 (9.1%)	15 (12.4%)	15 (12.4%)	21 (17.3%)	31 (25.1%)	28 (23.1%)
general (n=121)	**41 (34.2%)**			**80 (65.8%)**		

** confidence level (r<0.05)*

When analyzing the patients who underwent surgery with a diagnosis of nasal septum deviation among the main group of patients by age and gender, the following was found. The main group consisted of younger adolescents (10-14 years old) with a total of 15 (12.4%) patients, of whom 7 (5.8%) were girls and 8 (6.6%) were boys. The main group consisted of older adolescents (15-17 years old) with a total of 31 (25.1%) patients, of whom 17 (14.0%) were girls and 15 (12.4%) were boys . Here, older adolescents were twice as likely to be younger than younger adolescents, and the significance of the difference ($p<0.05$) was related to the number of observations. Adolescents of this age can be explained by their critical attitude towards their physical condition and physical activity.

When analyzing patients who underwent surgery with a diagnosis of nasal septum deviation among patients in the control group by age and gender, the following was found. In the control group, younger adolescents (10-14 years old) accounted for a total of 15 (12.4%) patients, of whom 6 (4.9%) were girls and 9 (7.4%) were boys. Older adolescents (15-17 years old) accounted for a total of 28 (23.1%) patients in the control group, of whom 13 (10.7%) were girls and 15 (12.4%) were boys . Here, older adolescents are almost twice as numerous as younger adolescents. Overall, among young adolescents

(10-14 years old), 41 (34.2%) cases were observed among the total number of examined patients, with 23 (19.1%) boys and 18 (15%) girls among this age group, with boys being the majority in this age group (Figure 1).

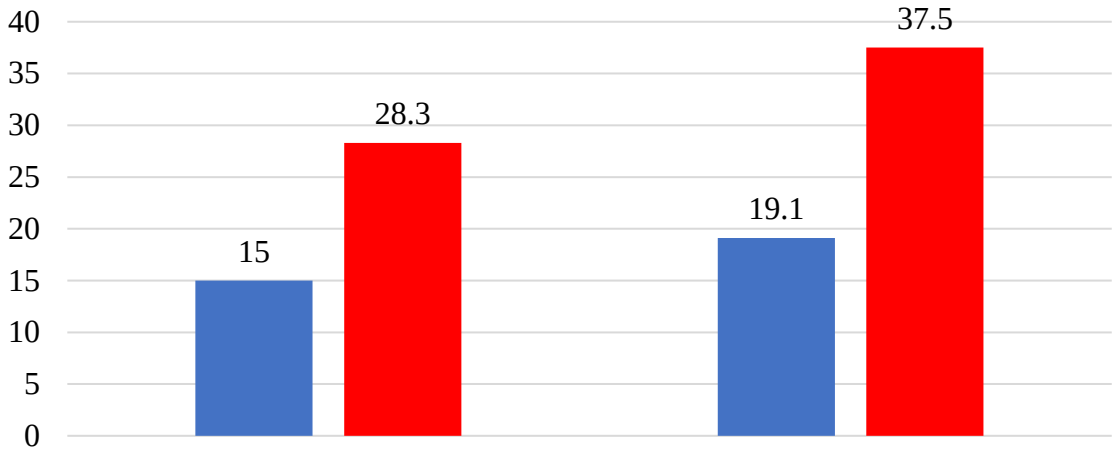


Figure 1. Distribution of patients with nasal septum curvature by age and gender

Based on the data obtained, it can be said that adolescents with a deviated septum at this age can be critically assessed and commented on their physical activity and physical condition. When analyzing the distribution of patients operated on with a diagnosis of a deviated septum into groups by age and gender, it was observed that this indicator was distributed almost equally in all groups.

The presence of concomitant diseases - premorbid background - was analyzed among the patients of the control group in patients treated with a diagnosis of nasal septum curvature. The following diseases and syndromes were mainly identified as premorbid background diseases (Table 2). Hypertrophic rhinitis was detected in 29 (24.0%) cases among the children of the control group, and in 31 (25.6%) cases among the children of the main group.

Vasomotor allergic rhinitis as a premorbid background disease was detected in 12 (10.0%) patients in the control group, and in 10 (8.3%) patients in the main group. Adenoids - pathological growth of lymphoid tissue of the nasopharyngeal tonsils in the nasal septum curvature as a premorbid disease was detected in 13 (10.7%) patients in the control group , and in 22 (18.2%) patients in the main group. Chronic tonsillitis as a premorbid disease was detected in 2 (1.6%) patients in the control group , and in 5 (4.1%) patients in the main group, the reliability of the difference between the groups ($p<0.01$) is associated with the number of observations.

Chronic sinusitis was detected in 2 (1.6%) patients in the control group and 1 (0.8%) in the main group. Mild anemia was observed in both comparison groups - in 4 (3.3%) cases, which can be explained by the fact that this pathology is rarely performed in children with a deviated nasal septum. Premorbid background disease - chronic bronchitis - was observed in 2 (1.6%) cases in the control group and in 3 (2.5%) cases in the main group, while nasal polyps were diagnosed in 2 (1.6%) patients in the control group. Some diseases can occur simultaneously with other pathologies or as a predisposing factor. The occurrence of two or more of these pathologies in combination was observed in 21 (17.3%) cases in the control group and in 29 (24.0%) patients in the main group.

Table 2. Distribution of premorbid background according to the occurrence of diseases in patients with nasal septum curvature

No.	Nosology	Groups (n , %)	
		control	main
1	Hypertrophic rhinitis	29 (24.0%)	31 (25.6%)
2	Vasomotor allergic rhinitis	12 (10.0%)	10 (8.3%)
3	Adenoids	13 (10.7%)	22 (18.2%)
4	Chronic tonsillitis	2 (1.6%)	5 (4.1%)*

5	Chronic sinusitis	2 (1.6%)	1 (0.8%)
6	Mild anemia	4 (3.3%)	4 (3.3%)
7	Chronic bronchitis	2 (1.6%)	3 (2.5%)
8	Nasal polyp	2 (1.6%)	-
9	Two or more encounters	21 (17.3%)	29 (24.0%)

In conclusion, it can be noted that there is almost no difference in the number and percentage of concomitant diseases between both groups of patients with premorbid background. According to this indicator, the groups are equally distributed.

When analyzing the shape of the curvature - deformation in patients treated with a diagnosis of nasal septum deviation against the background of a premorbid disease , the following were observed (Figure 2).

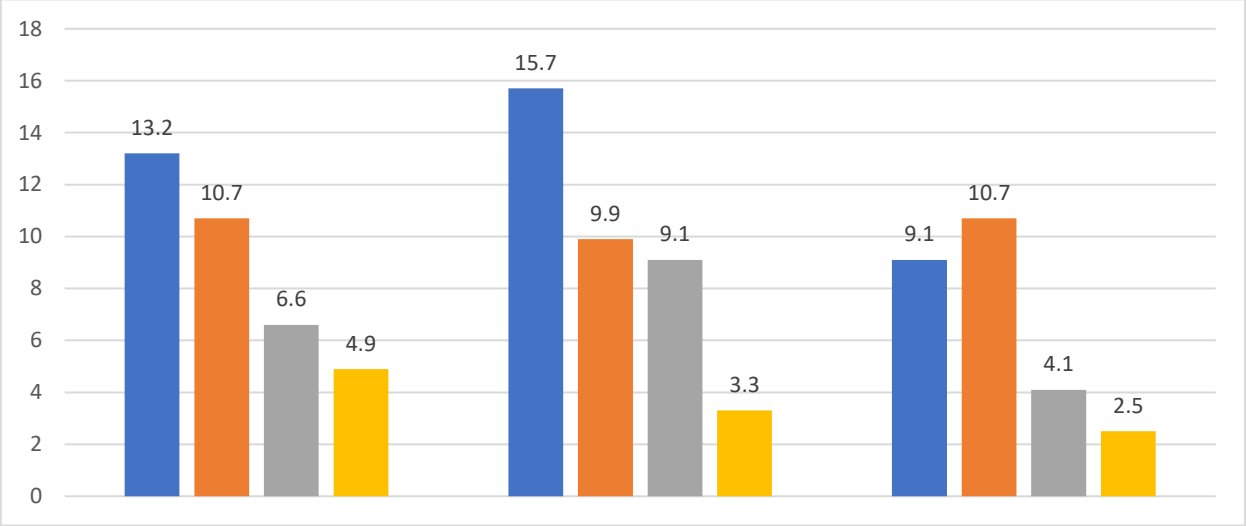


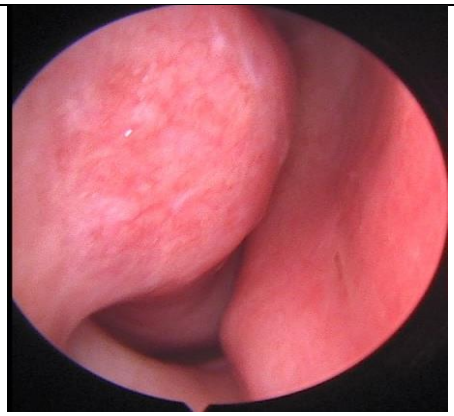
Figure 2. Distribution according to the form of deformation in the curvature of the nasal septum against the background of premorbid disease

In patients treated with a diagnosis of nasal septum curvature against the background of premorbid disease, the “comb” curvature-deformation form was detected in 16 (13.2%) cases in the control group, in 19 (15.7%) cases in the main group of patients, and in 11 (9.1%) cases among patients treated by traditional methods, which amounted to 46 (38.0%) cases among patients diagnosed with nasal septum curvature against the background of a common premorbid disease. The “comb” curvature-deformation form is a complex deformation of the nasal septum, characterized by covering the entire length of the septum (Fig. 3-4). The background of premorbid disease further aggravates the course of pathology.

This condition is most common among patients treated for a deviated nasal septum on the background of a premorbid disease.

Figure 3. Nasal septum curvature "Comb" shape R-image		Figure 4. Nasal septum curvature "Comb-shaped" shape endoscopic image

In patients treated with a diagnosis of nasal septum deviation against the background of a premorbid disease, the “S”-shaped curvature - the deformation form (Figures 5-6) was detected in 13 (10.7%) cases in the control group, 12 (9.9%) in the main group of patients during observation, and 13 (10.7%) among patients treated traditionally, and 38 (31.4%) among patients diagnosed with nasal septum deviation against the background of a common premorbid disease.

		
Figure 5. Nasal septum curvature "S" shape R-image		Figure 6. Endoscopic image of an “S”-shaped deviation of the nasal septum

"S"-shaped curvature - a form of deformation is included in the complex deformation of the nasal septum and is characterized by covering the entire length of the nasal septum. Against the background of premorbid diseases, it further aggravates the course of the pathology.

In patients treated with the diagnosis of the “Ticansimon” form of nasal septum curvature (Fig. 7-8) against the background of premorbid disease, this curvature-deformation form was detected in 8 (6.6%) sick children in the control group, in 11 (9.1%) patients in the main group, and in 5 (4.1%) cases in the traditional group. Among the total of 121 examined patients, the “ Ticansimon” form of nasal septum curvature was detected in 24 (19.8%) patients. observed in a child patient.

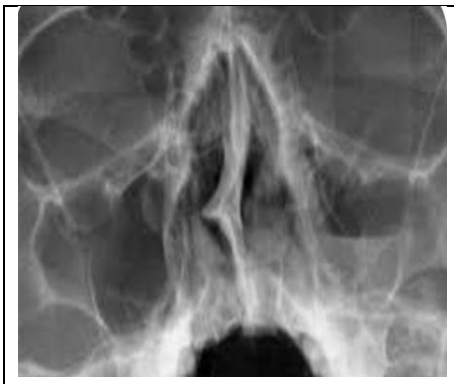
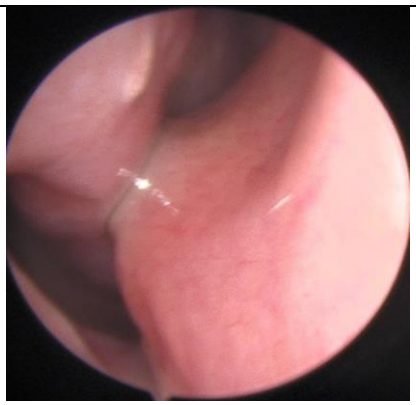
		

Figure 7. Nasal septum curvature "Prickly" shape R-image		Figure 8. Endoscopic image of curvature of the nasal septum "Prickly" shape

The “Tykansimon” curvature-deformation form of the nasal septum is one of the uncomplicated deformations of the nasal septum and is characterized by covering a certain part of the nasal septum length. Against the background of premorbid diseases, it further aggravates the course of the pathology.

S-shaped curvature of the nasal septum (pictures 9-10) in patients with a premorbid disease, this curvature-deformation was detected in 6 (4.9%) children in the control group, in 4 (3.3%) patients in the main group, and in 3 (2.5%) cases in the traditional group. 13 (10.7%) of the 121 examined children had nasal septum curvature "S"-shaped. observed in a child patient.

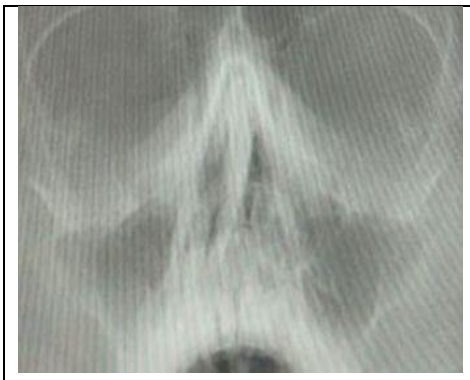


Figure 9. The curvature of the nasal septum is "S"-shaped, R-image

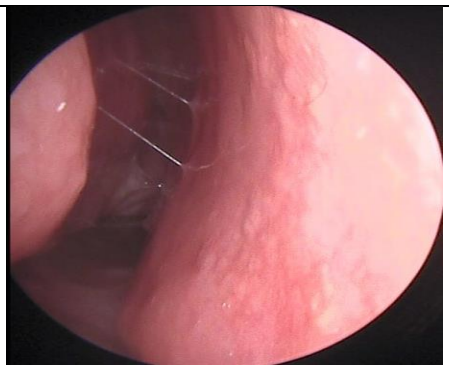


Figure 10. An endoscopic image of the curvature of the nasal septum "S"-shaped

Based on the data studied, it can be concluded that when analyzing the occurrence of nasal septum curvature - deformation form against the background of premorbid disease by groups, the most frequent occurrence of nasal septum curvature against the background of premorbid disease was the "Comb" shape - 38.0%, followed by the "S"-shaped nasal septum curvature in 31.4%.

The following data were obtained when analyzing the relative causes of the curvature of the nasal septum against the background of premorbid disease - the shape of the deformation . Post -traumatic factors as relative causes of nasal septum curvature - deformation form were noted in 19 (15.7%) cases in the control group, in 19 (15.7%) patients in the main group, and in 15 (12.4%) children in the traditional group. A total of 53 (43.8%) of 121 children were examined for the relative causes of nasal septum curvature against the background of premorbid disease. (Fig. 11).

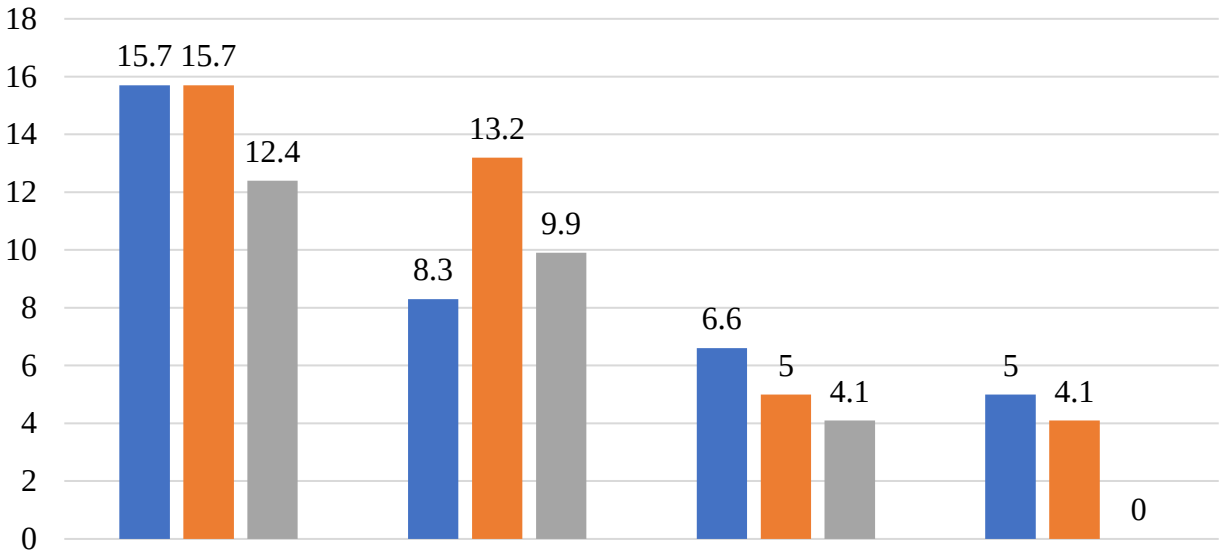


Figure 11. On the background of premorbid disease, the curvature of the nasal septum - the distribution of the relative causes of the shape of the deformation by groups

Against the background of premorbid disease, when the relative causes of nasal septum curvature - deformation form were analyzed by groups, the relative causes of nasal septum curvature - deformation form could not be determined, in the analysis of unclear factors , it was noted in 10 (8.3%) cases in the control group, in 16 (13.2%) patients in the main group, and in 12 (9.9%) patients in the traditional group. observed. A total of 38 (31.4%) among 121 children who were examined for

the relative causes of nasal septum curvature against the background of premorbid disease recorded in this case. The relative causes of the curvature of the nasal septum - the shape of the deformation, qualitatively, congenital factors were noted in 8 (6.6%) cases in the control group, in 6 (5.0%) patients in the main group, and in 5 (4.1%) children in the traditional group. A total of 19 (15.7%) cases were recorded among 121 children who were examined for the relative causes of the curvature of the nasal septum against the background of premorbid disease.

Conclusion. Relative causes of nasal septum curvature - deformation form as a factor were qualitatively rickets complications in 6 (5.0%) cases in the control group, in 5 (4.1%) patients in the main group, and in the traditional group this condition was not observed. Relative causes of nasal septum curvature - deformation form against the background of premorbid disease were observed in a total of 11 (9.1%) cases among 121 children. Based on the data obtained, it can be concluded that when analyzing the occurrence of relative causes of nasal septum curvature - deformation form against the background of premorbid disease by groups, the most common post- traumatic factors were observed in 53 (43.8%) cases.

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