

## Study of the Prevalence of Dentoalveolar Anomalies in Children with Torticollis (WRYNECK)

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### ABSTRACT

Torticollis (wryneck) is one of the most common abnormalities, ranking third among congenital abnormalities. Not recognized and untreated in time torticollis leads to the occurrence of various deformities of the dentition. The result of examination of 457 children aged 3 to 14 years and older showed that the frequency of dentoalveolar anomalies is aggravated depending on the severity of the underlying disease. Therefore, timely detection of torticollis and dentoalveolar anomalies in this contingent of children and providing them with the necessary preventive care helps to reduce the number of dentoalveolar anomalies and shorten the rehabilitation period.

**KEYWORDS:** *dentoalveolar anomalies, congenital muscle torticollis, preventive measures*

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Torticollis (wryneck) according to S. T. Zatsepin, Alder (1963), R. F. Bashkinova (1974), V. A. Skiban (1995) is one of the most common anomalies and ranks third among other congenital pathologies. It is the result of congenital and acquired causes. Not recognized and untreated in time, torticollis quickly leads to a limitation of the mobility of the head, the occurrence of various deformities of the dentoalveolar region. This pathology in young patients often proceeds imperceptibly due to pastiness, swelling of soft tissues and the fullness of the child. This disease does not threaten the patient's life, but in advanced cases it leads to pronounced asymmetry, which depressingly affects the patient's psyche, causing severe mental suffering, as well as dysfunction of the dentition. Taking into account the urgency of this problem, on the basis of clinical observation of 457 patients with torticollis at the age of 3 to 14 years and

older children, we studied the frequency of occurrence of dentoalveolar anomalies.

**Purpose of the study:** To study the incidence of dentoalveolar anomalies in children with congenital torticollis (wryneck), depending on age.

**Research materials and methods:** To achieve this goal, clinical, anthropometric, radiological (OPG, Teleradiology), photometric, electromyographic studies of mimic and masticatory muscles were carried out, which made it possible to identify details of the morphological and functional deviations of the dentition in the examined patients.

In accordance with the task of the study, the patients were distributed according to the frequency of occurrence of dentoalveolar anomalies depending on age (the table №1).

**Dentoalveolar anomalies in children with congenital torticollis. Tablitsa № 1**

Age, years	Amount of children		Anomalies			Prevalence of dentoalveolar anomalies in %
	General	With teeth anomalies	Individual teeth	Dental rows	Bite	
3	38	32	28,1±7,20	27,3±7,42	5,7±3,02	67,3 ±8,1
5	42	38	29,7±6,9	28,3±7,1	10,9±5,1	69,21±5,3
7	36	33	28,4±7,20	26,3±7,8	11,3±5,2	92,9 ±4,5
9	66	42	44,1±7,56	18,5±9,2	20,9±0,1	62,9 ±5,3
10	47	34	42,8±8, 0	21,8±7,1	22,7±6,7	72,0 ±6,2
11	44	35	44,3±8,4	22,4±7,25	20,5±6,02	78,0 ±5,9
12	60	54	41,1±6,85	20,1±6, 4	9, 7±4,12	89,0 ±4,3
13	62	40	42,3±7,5	18,2±4,5	9,3±4,32	68,2 ±5,8
14	62	42	43,2±2,45	22,1±2,1	8,5±4,35	67,5 ±5,7
Itogo	457	387	54,5±1.28	31,6±7,1	9,1±1,82	73,2 ±2,15



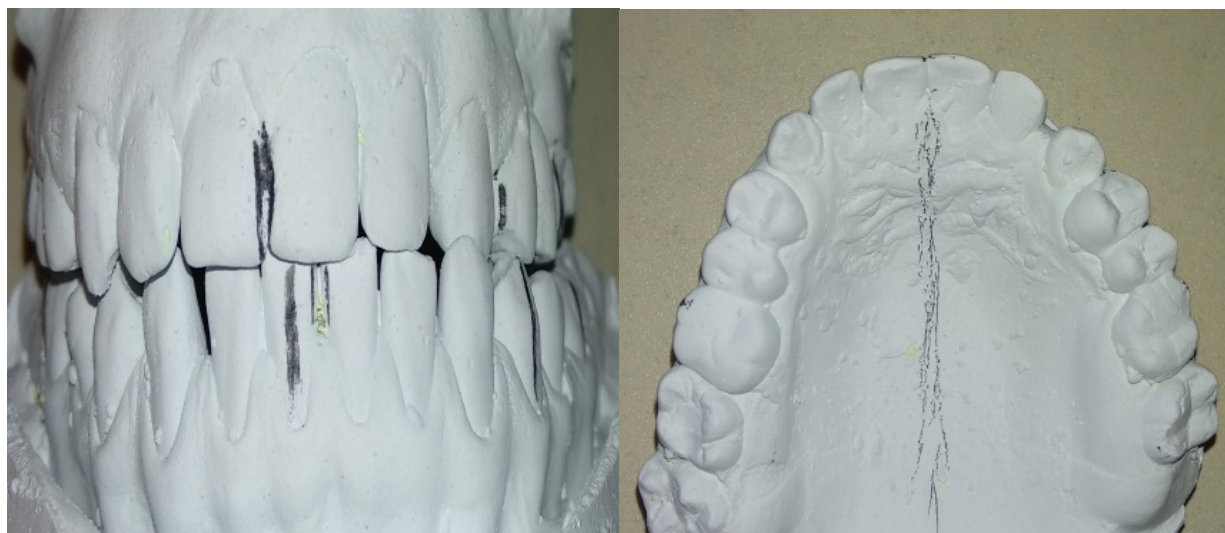
**Pic. 1 The appearance of a patient with torticollis.**



**Pic.. 2-1. X-ray data of a patient with torticollis.**



**Pic.. 2-2. X-ray data of a patient with torticollis.**



**Pic. 3. Control models of a patient with torticollis.**

The analysis of the data obtained shows that in the first place in terms of frequency of occurrence are anomalies of individual teeth (54.5%), in the second place - anomalies of the dentition (20.1%) and in the third place - anomalies of the occlusion (9.1%). The table also shows that the greatest percentage of anomalies occurs in children 5-7 years old and increases at 12 years old, which is apparently associated with periods of active growth of the jaws. It is pertinent to note that in patients with torticollis, there is no process of self-regulation of dentoalveolar anomalies.

According to the severity of the underlying disease, the patients were divided into three groups to identify the relationship of torticollis with dentoalveolar anomalies. The first group (272 children) consisted of children with a mild form, the second group (106 children) with an average form and the third group (79 children) with a severe form of torticollis.

Based on the study of morphological and functional changes, we have established that the frequency of dentoalveolar anomalies in children has a direct correlation with the severity of the underlying disease. As the analysis of the condition of the dentition shows, orthopedic traumatologists pay almost no attention to changes and complications from the teeth and jaws, which is the main reason for poor results.

Considering the above, we have proposed a preventive and therapeutic measure, which consists in the following:

1. Rehabilitation of ENT organs to restore and normalize the function of nasal breathing.
2. Elimination of bad habits (biting cheeks, lips, tongue or any objects with lateral teeth).
3. Grinding of the tubercle of unworn milk canines.
4. Timely prosthetics for early tooth extraction.

5. Timely teeth sanitation and proper hygienic oral care.
6. Correct position of the baby's head during sleep.
7. Normalize the function of swallowing.
8. Appointment of regular myogymnastic exercises to stimulate the growth of underdeveloped areas of the jaw and hypercorrection of the head.
9. Manufacturing of orthodontic appliances, taking into account the type of anomalies, the age of the child, the severity of the underlying disease.

Thus, timely detection of dentoalveolar anomalies and subsequent prophylactic and individual orthodontic treatment of this contingent of children makes it possible to reduce the rehabilitation period and increase the number of positive results in patients with torticollis (wryneck).

### Conclusion

1. The frequency of dentoalveolar anomalies has a direct correlation with the severity of the underlying disease.
2. The process of self-regulation of dentoalveolar anomalies is absent in children with torticollis.
3. Complex treatment of children with torticollis is necessary, i.e. along with the treatment of torticollis, it is necessary to treat dentoalveolar anomalies.
4. To organize orthodontic care in the Republican Children's Orthopedic Center for children with torticollis both before and after surgical interventions.

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