



Localization of Diseases of the Temporomandibular Joint in Children of the City of Bukhara and its Outskirts

Bakaev J.N.

Bukhara State Medical Institute named after Abu Ali ibn Sino

Abstract Occlusive disharmony, abnormal dentition in childhood, lead to the formation, against the background of these pathologies, of social maladaptation and violation of the psychological status. Therefore, studies of the detection of pathologies of the temporomandibular joint, as well as optimal adaptive capabilities of the body, are indicated as significant in childhood and adolescence. The article defines the pathology of the temporomandibular joint and reveals the optimal adaptive capabilities of the body, in adolescence, the city of Bukhara and its outskirts.

Keywords: temporomandibular joint, orofacial muscular hypotension, anomalies of dentition, muscular syndrome of pain dysfunctions.

Relevance. Disease of the temporomandibular joint (TMJ) occurs in 25-75% of the inhabitants of our planet, and all kinds of functional disorders are assigned to 85% [1, 2, 3]. Research aimed at studying the causes of temporomandibular joint pathologies of a functional nature has determined the dispersion in the rates of their dissemination among people.

According to the assertion of the researchers, there are 14-40% of people with TMJ dysfunction [4, 15, 21], other researchers have identified 19-63% of people, with a large percentage (35-40%) among adolescents [5, 16, 20].

In a study of 639 university students, a symptom complex of mandibular dysfunction was determined in 447 students, and 31 students required comprehensive therapy [6, 17, 18].

In children and adolescents, this pathology was noted in 14-20% [7]. It should be emphasized that 50% of people with characteristic signs of this pathology, ignoring and not paying attention to the crunching and clicking in the joint, do not consult a doctor [8]. Many researchers have not found a fundamental difference in the generative division of this pathology [9,10], but other researchers have found that this pathology occurs exclusively in the female population, which accounted for 70-80% of the total population examined [10,11].

Contrary to many discussions regarding the etiopathogenetic factors of this pathology, by the example of TMJ pain dysfunction syndromes, 4 main mechanisms of the genesis and formation of these abnormalities have been identified to date: occlusal dysfunction, orthophasic muscle hypotonia, morphological disorders of the TMJ, negative and spiritual experiences, and individual disorders [12, 22].

Occlusal disharmony, abnormal dentition in childhood leads to the formation, on the background of these pathologies, social disadaptation. Therefore, the research of the identification of TMJ pathology and optimal adaptive capacity of the organism is significant in childhood and adolescence.

The purpose of the study is to identify TMJ pathologies and optimal adaptive capacity of the organism in children and adolescents of Bukhara city and its suburbs.

Material and methods of the research. To fulfill the set tasks 290 schoolchildren were examined in the outskirts of Bukhara, namely, in secondary school № 6 of Karakul district (main group), 132 (42 %) of them were girls and 158 (58 %) were boys (Table 1). The schoolchildren were divided into 2 groups: Group 1 - 7-12 years old - 186 (64%) and Group 2 - 13-18 years old - 104 (36%).

Pupils of secondary school No. 6 of the Karakul district (main group)

Age	Total	
	abs	%
7-12	186	64 %
13-18	104	36%
Total	290	100%

Pupils from secondary school №16 in Bukhara were included in the comparison group of 220 pupils, of whom 112 (52%) were girls and 108 (48%) were boys. They were also divided into 2 groups: Group 1- 7-12 years - 116 (56%) and Group 2- 13-18 years - 104 (44%).

Comparative analysis of the obtained data was carried out using Chi-square criterion (Pearson).

Students of secondary school #16 in Bukhara (comparison group)

Age	Total	
	abs	%
7-12	116	56%
13-18	104	44%
Total	220	100

Results of the study and their discussion. As a result of the analysis it was found out that 34 % of pupils of secondary school № 6 of Karakul district and 36 % of pupils of secondary school № 16 of Bukhara revealed TMJ pathology of functionally isolated character. These indexes are much higher than the data given in the research and in them it is 14-20% [6]. It was found that in group 1 pupils of secondary school №6 of Karakul district have more pathologies of TMJ of functionally separated character than pupils of secondary school №16 in Bukhara. This allows us to assume that the students of secondary school №6 of Karakul district have signs of TMJ pathologies much earlier than the students of secondary school №16 of Bukhara city.

In all groups, TMJ pathologies of a functionally isolated nature were significantly more frequent among female pupils than among male pupils, and many researchers have stated the same [2, 10-12, 14].

At pupils of secondary school № 6 Karakul district, predominantly revealed intercuspidal displacements midline - in 76 (26,5%) examined, and with increasing age there was an increase in the index, so in group 2 there is a twofold increase (42%), compared with group 1 (21%). Moreover, this pathology was observed more often among female pupils in 51 (38,02%), and among male pupils in 25 (16%); among pupils of secondary school №16 in Bukhara this pathology was observed much less often (4,28%), so in group 1 two (1,02%), and in group 2 four (3,26%) of all surveyed pupils.

Muscle soreness during massaging movements of the own masticatory, temporal, external and internal wing muscles was determined in 139 (48%) students. And pupils of the 1st group have 42 (22,82%) of pain on palpation and pupils of the 2nd group have 97 (93,2%), in addition to that 81 (61,28%) of females and 58 (37,24%) of males had more pain on palpation. In Bukhara city secondary school №16 this pathology was noted much less than 30.12% of cases, and with increasing age there was an increase of indicator, so in group 1 9.82%, and in group 2 20.30% and it was noted more in female gender.

In 72 (24.82%) pupils of secondary school No. 6 of Karakul district, clicks in the joint were noted in two groups almost equally regardless of the age period. For example, in group 1, 37 (19.92%) and in group 2, 35 (34.02%). I would like to note that girls had much more articular clicks in 17,02% and boys less frequently in 7,80%. And pupils of secondary school №16 of Bukhara city joint clicks in group 1 were noted in 7.18% of pupils, and in group 2 these indicators were slightly higher 19.02% and most of all in females (20%), and in males they were revealed in 6%.

Mouth opening disorders were detected in 20 (7%) pupils of secondary school №6 of Karakul district. It should be noted that we did not identify any clear differences in both age and gender aspects. So in the 1st group these disorders were identified in 6 (3,93%), in the 2nd group - in 14 (13,92%), while 4,32% of boys and 2,68% of girls. But pupils of secondary school №16 of Bukhara city had more of these disorders, in group 1 - 21.75%, in group 2 - 68.85%. At the same time, this pathology was noted less frequently for boys - 10.02% than for girls - 48.78%.

In 96 (34%) pupils of the secondary school № 6 Karakulski district with detected TMJ pathology of functional - isolated character according to the 1st dysfunctional sign had 19%, according to the 2nd - 13%, according to the 3rd - 1%, according to the 4th - 1%.

Anomalies of the dentoalveolar system were detected in 182(63%) of the examined pupils of secondary school No. 6 of Karakul district. Deep incisal overlap occurred most in 72 (40%), dystopia in 66 (36.82%), biprognathia in 18 (9.98%), close dental position in 20 (11%), buccal bite in 1 (0.98%), distal bite in 3 (1.98%), mesial bite in 4 (2.2%) cases.

And dental and maxillary anomalies were found in 133 (60.87%) students of secondary school №16 of Bukhara city. Deep incisal overlap - 62 (46%), close dental position - 55 (41.08%), buccal bite - 4 (3.89%), distal - 12 (9.88%) cases were most common.

Results of the study and their discussion. As a result of the carried out analysis it was found out that 34 % of pupils of secondary school №6 of Karakul region and 36 % of pupils of secondary school №16 of Bukhara city have revealed the pathologies of TMJ of functionally isolated character. These indexes are much higher than the data of similar researches and in them it is 14-20% [6]. In group 1 pupils of secondary school №6 of Karakulsky district had more functionally separated TMJ pathologies than pupils of secondary school №16 in Bukhara. This allows us to assume that the students of secondary school №6 of Karakul district have signs of TMJ pathologies much earlier than the students of secondary school №16 of Bukhara city.

In all groups, TMJ pathologies of a functionally isolated nature were significantly more frequent in female pupils than in male pupils; this was also confirmed by many researchers [2, 10-12, 14].

Among the pupils of secondary school No. 6 of the Karakul district, intercrestal displacements of the midline were predominantly found - in 76 of 290 surveyed pupils (26.5%), and with increasing age an increase in the indicator was also noted, so in group 2 a twofold increase was noted (42%), compared to group 1 (21%). Moreover, this pathology was observed more often among female pupils in 51 (38,02%), and among male pupils in 25 (16%); among pupils of secondary school №16 in Bukhara this pathology was observed much less often (4,28%), so in group 1 two (1,02%), and in group 2 four (3,26%) of all surveyed pupils.

Muscle soreness during massaging movements of the own masseter, temporal, external and internal wing muscles, was determined in 139 (48%) students. And pupils of the 1st group had 42 (22,82%) pain on palpation, and pupils of the 2nd group had 97 (93,2%) pain on palpation, in addition to that 81 (61,28%) of females and 58 (37,24%) of males. The figure for pupils of secondary school №16 of Bukhara city is 30.12%, but at the same time the increase of age was observed in the 1st group - 9.82%, and in the 2nd group - 20.30%, and it was noted more among females.

The pupils of the secondary school № 6 of Karakulskiy district had clicks in the joint in two groups almost equally regardless of the age period. Thus in group 1 - in 37 (19,92 %) and in group 2 - in 35 (34,02 %). I would like to note that girls had much more articular clicks 17,02% and boys less frequently 7,80%. And pupils of secondary school №16 of Bukhara city joint clicks in Group 1 were noted in 7.18% of pupils, and in Group 2 these indicators were slightly higher 19.02% and most of all in females (20%), and in males they were revealed in 6%.

Mouth opening disorders in pupils of secondary school No. 6 of Karakul District, were rare, and in pupils of secondary school No. 16 of Bukhara City these disorders were noted more. In all likelihood, we did not determine any convincing validity of special signs of TMJ pathology in terms of both age and gender.

At the same time, this pathology outlines a deep scientifically grounded study and requires more extensive and detailed research approaches. We assume, that the before said will simplify doctor-dentist the initial revealing of pathologies of TMJ functionally - isolated character that will positively affect psychosomatic condition of the patient, which in turn will influence growth and development of all organism, agree because it is easier to reveal and treat illness in an early stage rather than in neglected one.

Conclusions.

1. In group 1 pupils of secondary school №6 of Karakulsky district have more functional and isolated TMJ pathology than pupils of secondary school №16 in Bukhara. In pupils of secondary school №6 of Karakul district, the signs of TMJ pathologies occur much earlier than in pupils of secondary school №16 of Bukhara city.

2. In all groups, TMJ pathologies of a functionally isolated nature were significantly more frequent in female pupils than in pupils.

3. we did not determine any special signs of TMJ pathology both in the age and gender aspects.

4. Anomalies of dento-jaw system were found in 63% of surveyed pupils of secondary school № 6 of Karakul district, and dental-jaw anomalies were found in 60% of surveyed pupils of secondary school №16 of Bukhara city. It should be noted that anomalies of the dento-alveolar system in both schools increased with age, and the highest rates were found in the teenage groups, i.e. 2 groups.

REFERENCE

1. Алиев Н.Х., Гаффаров С.А., Идиев Ф.Э. Чакка-пастки жаг бугими меъёрий фаолияти ва патологияси механизмлари асослашнинг тамойиллари // Тиббиётда янги кун – Бухоро, 1(29) 2020.- С132-135.
2. Бакаев Ж.Н., Олимов С.Ш. Биопотенциалы жевательных мышц при мышечно-суставных дисфункциях ВНЧС, до и после лечения. // «Журнал медицина и инновации» // № 4 декабрь. 2021., С. 431-439
3. Н.Х. Алиев, ШМ Бокиев, АШ Рахимов, ФИ Ибрагимова. Ортопедическое лечение больных с деформацией челюстно-лицевой области, осложненной частичной адентией зубов // Молодежь-практическому здравоохранению 2018.-С.49-51
4. Пузин М.Н., Вязьмин А.Я. Болевая дисфункция височно-нижнечелюстного сустава. – М.: Медицина, 2002. – 158 с.
5. Рабухина Н. А., Семкин В. А., Аржанцев Н. П., Лобзин О. В. Современные подходы к диагностике и лечению дисфункции ВНЧС // Стоматология. - 1994. - №4. - С. 26-28.
6. Aliev N.H. Clinical and functional methods of assessment and diagnosis of the pathological condition of the temporomandibular joint // Тиббиётда янги кун – Бухоро, 1(33) 2021. Январь-Март. 375-380 бет.
7. Azimova, S. S., Saidov, A. A., & Ibragimov, F. I. (2021). Medical and Psychological Approach in the Early Diagnosis and Treatment of Cutaneous Bite in Children. Annals of the Romanian Society for Cell Biology, 16137-16142.
8. Bakayev J. N., Yunusova U. A. Substantiation of New Diagnostic Methods for the Formation of Retention of Upper Permanent Canines in Dental Anomalies // Middle European Scientific Bulletin. – 2022. – Т. 22. - P. 149-157.
9. Bakaev Zhasurbek Nazhimdinovich. Musculoskeletal dysfunction of the temporomandibular joint, indicators of electromyographic examination, before and after treatment of complicated dental and maxillary anomalies // European Journal of Modern Medicine and Practice. Vol. 2 No. 3 (2022) EJMP ISSN: 2795-921X. - P. 103-107.
10. Bakayev J. N., Yunusova U. A. New views in the diagnosis and clinic of temporomandibular joint dysfunction // Middle European Scientific Bulletin. Volume 23, April 2022, P. 46-52
11. Bakaev Jasurbek Najmidinovich, Olimov Sidik Sharifovich. Electromyographic studies of masticatory muscles before and after treatment for musculo skeletal TMJ dysfunctions. /Europe's Journal of Psychology (EJOP) // 2021, Vol. 17(3), - P. 114-122.
12. Bakaev Zh.N., Olimov S.Sh. Treatment and prevalence of abnormal eruption of permanent canines (Literature review) / Middle EuroDean Scientific Bulletin // VOLUME 7, December 2020, ISSN 2694-9970, – P. 16-19.
13. Bakaev Zh.N., Olimov S.Sh. New views on diagnostic methods for the formation of retention of the upper permanent canines (LITERATURE REVIEW) / International Journal on Integrated Education // Volume 3, Issue XII, December 2020, e-ISSN : 2620 3502, p-ISSN : 2615 3785, – P. 129-135.
14. **Gafforov S.A.**, Aliev N.H. Improvement of diagnostic methods and treatment of parafunction of chewable Muscles in pain syndromes of a high-Lower jaund joint // Journal of Advanced Research in Dynamical and Control Systems. ISSN: 1943-023X. Volume 12,07- special issue. -P.2102-2110. 2020

15. **Gafforov S.A.**, Aliev N.H. Improving the methods for the diagnosis of nonarticular pathology of the temporomandibular joint // Journal of Critical Reviews. ISSN-2394-5125. VOL 7 ISSUE 18, 2020 - P. 875-880.
16. J.N. Bakaev, S. Sh. Olimov. Modern approaches to diagnosis, etiology and pathogenesis of the upper permanent canine retention formation (Literature Review) / European Journal of Molecular & Clinical Medicine // Volume 07, Issue 03, 2020, ISSN 2515-8260 – P. 3815-3830.
17. Khabilov, N. L., & Nusratov, U. G. (2019). Features dental care for patients with type 2 type depending on disturbance of Kidney function. Asian Journal of Multidimensional Research (AJMR), 8(10), 18-24.
18. Nusratov, U. G. (2020). ANALYSIS OF ORAL HEALTH AND QUALITY OF LIFE OF GROUPS OF PATIENTS WITH TYPE 2 DIABETES AND CHRONIC KIDNEY DISEASE. PalArch's Journal of Archaeology of Egypt/Egyptology, 17(6), 14385-14393.
19. Saidov, A. A. (2020). Hygienic condition of the oral cavity during orthodontic treatment of children with temporomandibular joint dysfunction. The Pharma Innovation Journal. Indiya, (9), 6.
20. Zhumaev, A. K. (2020). Partial defects of dental rows results of the questionnaire and clinical assessment of the condition of removable prostheses. Middle European Scientific Bulletin, 6, 94-97.
21. Zhumaev, A. K. Of Partial Defects of the Dental Rows of Dynamic Study of the State of the Mucosa of the Oral Cavity in the New Conditions of Functioning. International Journal on Integrated Education, 3(12), 61-63.
22. Gavish A., Halachmi M., Winocur E., Gazit E. Oral habits and their association with signs and symptoms of temporomandibular disorders in adolescent girls // J. Oral. Rehabil. - 2000. - Vol. 27., №1. - P. 22-32.