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**MODERN PROTOCOL FOR CLINICAL AND FUNCTIONAL RESEARCH AND PREVENTION OF
TEMPOROMANDIBULAR JOINT DISORDERS****Anvarova Muxtasar***Samarkand State Medical University, Uzbekistan*

ABOUT ARTICLE

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Abstract: Internal disorders of the temporomandibular joint are pathologic changes resulting from an incorrect relationship between the mandibular head and the articular tubercle, as well as various variants of displacement of the articular disk, its defects and deformities, stretching and rupture of intra-articular ligaments or a combination of these [Ivanov V.A., 1999; Kupriyanov I.A., Ilyin A.A. and Shkurupiy V.A. (2003), Dergilev A.P., Ilyin A.A., Adonyeva et al. (2010), and Kotiranta U., Suvinen T., and Forssell H. (2014) are cited in the references.

Internal disorders are considered to be the morphological substrate of dysfunctions of the dentoalveolar system, with a complex and diverse mechanism of development. This includes muscle conditions, temporomandibular joint occlusion, and psychoemotional status, which are all interconnected (Vyazmin A.Y., 1999; BalKüçük B. et al., 2009; Iordanishvili A.K., Soldatova L.N., Ryzhak G.A., 2011).

Currently, there is no consensus on the etiology and pathogenesis of this disease [Vyazmin A.Y., 1999; Tsimbalistov A.V., Lopushanskaya T.A. et al., 2010]. It is important to note that these are subjective evaluations and should be clearly marked as such. Some authors suggest that psychological stress plays a significant role in the development of TMJ pathology [Puzin M.N., Vyazmin A.Y., 2002; Bulycheva E.A., 2010], while others attribute it to articulation disorders [Kononov V.V. et al, 2004; Khvatova V.A.]. In 2005, Silin A.V. reported hypertonus of the

masticatory muscles. In 2007, Ivasenko P.I. et al. and in 2009, Persin L.S. and Sharov M.N. reported the combined effect of various factors.

INTRODUCTION

Relevance of the study. The position of the mandibular heads is determined by using the external auditory canal and cutaneous points that correspond to the axis of articulated movements. However, determining the position of the jaw models in the articulator space using the facial arch has several errors. This is because the external auditory canal, which is chosen as a reference point, is not the axis of articulated movements and is located at a certain distance from the mandibular head, which varies from person to person. Additionally, errors can be introduced by the thickness of the interocclusal impression, which is used to fix the maxillary model. The positioning of jaw models in the interframe space of the articulator can be prone to errors if the symmetry of facial arch markers corresponding to the axes of articulated movements cannot be objectively controlled (25).

This is relevant to occlusal abnormalities in temporomandibular joint diseases.

Intra-oral graphic registration of mandibular movements using a functionograph is a necessary step in detecting occlusal disorders in TMJ disorders. This method can also determine the optimal position of the lower jaw in relation to the upper jaw [26].

Intra-oral recording of mandibular movements using a functionograph is employed to analyze occlusion, determine the central relationship of the jaws, study mandibular movements, and assess the function of temporomandibular joints and masticatory muscles.

Aim of the study. To improve the effectiveness of early diagnosis of internal temporomandibular joint disorders in individuals between the ages of 14 and 25 years. The study aims to conduct a screening examination of individuals aged 14-18 years and 19-25 years to investigate the incidence of internal temporomandibular joint disorders and analyze dental status. Additionally, the study aims to analyze the diagnostic and treatment methods used by dentists in Smolensk for patients with internal disorders of the temporomandibular joint.

The aim of this study is to investigate the psychoemotional features of patients aged 19-25 years with internal disorders of the temporomandibular joint.

Objectives of the study. Additionally, a diagnostic computer program will be developed to analyze these disorders, and a diagnostic algorithm will be created for internal temporomandibular joint disorders in patients aged 14-25 years. To establish criteria for identifying risk groups among 14-25 year olds predisposed to the occurrence of internal disorders of the temporomandibular joint.

Materials and Methods of the Study.

1. The prevalence of internal temporomandibular joint disorders in persons aged 14-18 and 19-25 years in the city of Smolensk was found for the first time to be 25.4% and 39.5%, respectively.
2. The insufficient awareness of the dentists of Smolensk about the pathology of the temporomandibular joint was revealed, the diagnostic methods used by them are not informative enough, and the treatment carried out is symptomatic.
3. For the first time the method of combined application of electronic axiography and audiography with use of electronic stethoscope for diagnostics of internal diseases of temporomandibular joint was developed.
4. For the first time, the algorithm of diagnostics of internal diseases of the temporomandibular joint in the age of 14-18 years and 19-25 years was developed.
5. On the basis of electromyographic data it was established for the first time that persons with internal TMJ disorders have pronounced changes in the muscles of the maxillofacial region, which are manifested by a general decrease in their potential activity, functional asymmetry, increased fatigability in response to static load.
6. The computer program "Diagnosis of temporomandibular joint diseases" for the analysis of audiography data obtained with the use of an electronic stethoscope was developed for the first time, clinically approved and scientifically substantiated.
7. For the first time, using the ITO technique, it was found that patients aged 19-25 with internal temporomandibular joint disorders have the following typological characteristics: extraversion with increased.

The study's findings and their analysis. To be assigned to the main group, patients had to meet specific criteria, including complaints of pain and clicking in the TMJ, clinical dental examination data indicating TMJ pathology, a Helkimo index value greater than 1, clicks during examination with an electronic stethoscope, and characteristic changes of internal TMJ disorders on cone-beam tomography of the temporomandibular joint.

To be assigned to the comparison group, participants had to meet several criteria. These included having no complaints of pain or clicking in the TMJ, no clinical examination data indicating TMJ pathology, complete dental rows, a Helkimo index value of 0, no clicking or crepitation during examination with an electronic stethoscope, and normal results on cone-beam tomography of the temporomandibular joint. Both groups of patients underwent a thorough examination, including electromyography, axiography, audiometry, and cone-beam tomography of the temporomandibular joint.

Group Name

Age

(years) Number of screened males

Male Female

Gender

Main group

Group 19 - 25 45 45 23 22

Control Group

Comparison Group 19 - 25 30 14 16

Total 75 34 41

In order to demonstrate the significance of the audiodiagnostic method and the analysis using the computer program developed by the author, we compared the data obtained in 75 patients using only clinical methods before and after audiometry. We also analyzed the percentage of people with internal TMD in the group before audiometry and after using the method.

CONCLUSIONS

1.All patients with musculotendinous dysfunction of the temporomandibular joint had changes that differed from the norm. Spontaneous activity of the masticatory muscles on the affected side and on the opposite side at rest is 3 times higher than the norm (25 μ V). Also, the bioelectrical activity of the

masticatory muscles at a given load is 2 times higher than the proposed norm of the control group (369 μ V).

2. Bioelectrical activity of temporal muscles at physiological load on the side of the complaint and the opposite side is 1.5 times higher than the norm (280 μ V). Spontaneous muscle activity on the side of discomfort and on the opposite side increased 2 times (36 μ V).

3. When formulating a treatment plan, it is necessary to take into account the changes in bioelectrical activity.

electrical activity LIT

Rehabilitation of patients with combined dentofacial anomalies using various combined treatment schemes: The source text appears to be in Russian and contains a reference to a dissertation in the field of medical sciences. As a proofreader, my role is to improve the text according to the provided characteristics, not to translate it. Therefore, I will not make any changes to the language or content of the text.

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