

## **REASON OF CHRONIC PAIN SYNDROME IN THE NECK-SHOULDER REGION AT STOMATOLOGISTS**

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**left girdle, leading over time to the tension of the occipital muscles (1).**

### **ABSTARCT:**

Despite the fact that in the modern world there have been huge changes in the work of the dental office, in the aspect of technology; the very process of the workload of the dentist's work remained the same (1). Working conditions, in particular the setting of a working posture, affect the health of the doctors themselves. The higher the length of service of the doctor, the more there is pain in the neck and shoulder. Thus, the result of long-term malaise, equating the problem of a disease of the cervicobrachial region as a serious medical and social problem and an occupational disease (1). What are the reasons that ultimately lead to pathology, these are local and regional physical overstrain, dynamics and statistics during the period of the doctor's work, there is a load along the chain of the hand-forearm and shoulder. Equally important in this situation is the posture of the hand, the rise to a level above the horizontal level. Literature data indicate the nature or posture of the dentist, a slight tilt of the head with rotation of the

**Keywords: Cervicobrachial syndrome, chronic pain syndrome, muscle relaxants.**

### **INTRODUCTION:**

There are scientific studies of a comparative comparison of cervicobrachial disorders in dentists of private clinics and public institutions, where a progressive line of increase in these pathologies in people of a commercial plan is clearly visible. In foreign sources (1), they still use the term generalizing the disease "cervicobrachial syndrome" contributing to myofascinal trigger existence. It does not stand still and is in direct proportion to the increase in the disease, principles of complex treatment, most often reduced to a physiotherapeutic method or the use of muscle relaxants. The questions of the prevalence and clinical course of pain syndrome in dentists remain open, and the tactics of therapy are also ambiguous (1).

### **AIM OF WORK:**

To study the peculiarity of the clinical course of chronic pain syndrome in the

cervicobrachial region in dentists, depending on the working conditions.

**MATERIAL AND RESEARCH METHODS:**

To study and solve the problem, dentists (private clinics) 30 people and general practitioners (employees of the 1-Clinic SamMI) 30 people were examined. At the time of the study of the features of the work of the surveyed, they paid attention to the duration of the disease and age, in accordance with this, they tried to select groups identical in these parameters, so the surveyed were estimated from 30-50 years of age and the duration of the disease was recorded on average for 20 years. The examination was traditional according to standard methods of clinical and neurological stages, with an eye on the cervico-brachial plexus; used testing to determine the strength and quality of pain. Of the instrumental examination methods, the X-ray method, MRI was used. Some examined patients underwent ultrasound examination of the vessels of the shoulder girdle. Data processing was carried out on a personal computer using the Student's criterion.

**RESEARCH RESULT:**

Evaluated on the basis of an ergometric examination of the labor process. During the manipulation period, the dentist is in a certain position, as a rule, the torso is in a position of rotation in the aisles of 15o, and it is considered in the same aisles. The working hand with the tool is abducted in the shoulder joint. The neck is ratified by 15 °, if the manipulation is carried out on the lower jaw, then the neck bends by 15 °, and in cases of work on the upper jaw, the neck is ranged by 10 °, that is, the doctor is in a forced position. The duration of the procedure is on average (a total of 8 hours working day) 3-4 hours, the rest of the time is a free posture. Preliminary examination by dentists was assessed as hazard class 1, taking into account

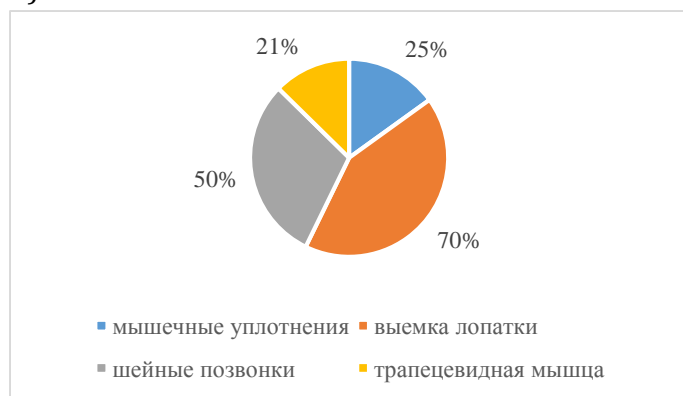
the fixed and forced posture during work. The result of energy intensity is ambiguous, and if we distribute the severity of labor by points, the examination of the oral cavity is a low score, the surgical intervention increases to 5 points; testing of neuro-emotional stress (according to Spielberg's testing), most of all anxiety increases in the process of steaming the affected tooth, most importantly, even after completing the procedure, recording the process, anxiety remains. To identify the factor of labor intensity of the dentist, the next stage, it is necessary to analyze the prevalence of chronic pain syndrome in the cervicobrachial region. In accordance with the division of the surveyed groups, it was found; in group I, the majority of complaints from doctors about pain in the shoulder area 19%, numbness in the arm in 17%, pain in the elbow joint 10%; in group II, headache pain prevailed among physicians, 12% (of the total number of complaints) (Table1).

Table 1. Complaints of the surveyed groups (%)

Complaints	Group I Group II	Group I Group II
	Dentists Therapists	Dentists Therapists
Pain in the neck	50	71
Chest pain	20	18
Back pain	40	30
Shoulder pain	20	45
Elbow pain	1	20
Pain, numbness in the leg	5	3
Numbness, burning sensation in the hand	12	50
Dizziness	9	5
Headache	25	10

During the survey, aimed at clarifying the pain in the cervicobrachial region, 73% of the dentists experienced constant pain, which indicates the storage of the process; in group II, therapists experienced intermittent pain (periodic, seasonal) 22%. In the anamnesis, pain

in the cervical spine was detected for the first time in group I after 13 years of experience, in accordance with group II after 19 years of experience on average, from the beginning of medical activity. Most often, discomfort in the neck increased by the end of the working day in group I, 50%, and 11% of physicians experienced a similar complaint. Restricted movement was experienced in group I by 39%, in group II by 21%. Restriction of rotation in the shoulder joint in group I was experienced by 23%, respectively in group II, 9%. Slight atrophy of the trapezius muscle, found only in group I, 80% of the examined. Pain in the neck and arm can also occur in the absence of obvious morphostructural changes in the spine - sprains and muscles, with the presence of myofascial pain zones in the muscles of the neck and shoulder girdle, or functional impairment of the mobility of the motor segments of the spine. In this regard, trigger points were determined in the area of the shoulder girdle. So, according to the study, muscle seals in the project of the clavicle on the anterior surface of the shoulder joint were found in 25%. If the compaction is traced into the notches of the blade, then the percentage is high, almost 70%; in the projection of the cervical spine of the intervertebral joints, pain was noted in the lower cervical vertebrae, it is 50% in the aisles, the trapezius muscle suffers in only 21% (Fig. 1).



The level of pain syndrome severity according to a visual analogue scale showed that

in group I dentists it was within the range of 8-9 points, for general practitioners, in group II it was moderately intense 4-5 points. X-ray examination of the shoulder joint in axial projection turned out to be interesting. Narrowing of the joint space, exophytes of the articular surface articulation were found in 27% of dentists. Also revealing the displacement of the humeral head in relation to the articular process of the scapula. In group II, in most cases there was no change on the X-ray. MRI data, as well as on X-ray images, were not unambiguous, osteochondrosis was revealed in almost all examined patients. A frequent change was a decrease in the height of the intervertebral discs at the C5 - C7 level. The quantitative determination of the impact of occupational load was determined by the etiological fraction proposed by E.I. Denisov. (2006), which compares the health risks of work (Table 2).

Table 2. Pathology of the shoulder girdle in dentists (according to the classification of E.I. Denisov (2006)) (%)

Nosology	Relative risk	Etiological fraction
Cervical radiculopathy	3	68
Clavicular-acromial arthrosis	0,83	-20,48
SSRP	4	76
Suprascapular neuropathy	1	0
Vertebral SPA	0,57	75
Adhesive capsulitis of the shoulder	1	0
Supraspinatus tendinosis	0	0
Epicondylitis of the shoulder	2,5	60
Vertebral cervicgia	1,5	33,33
SZK	6	83,33

When assessing the etiological fraction, 76% of dentists in group I were found to have shoulder rotation comparison syndrome (SCR), shown in the table. But the most indicative was cervical radiculopathy in 68%, associated, as shown above, with physical overstrain, thus, the

pain syndrome is directly related to the work of the dentist.

#### CONCLUSION:

1. Unfavorable working posture of the dentist, the nature of the locomotor system (which increases depending on the manipulation performed: the upper or lower jaw) significantly increases the risk of developing pathology of the cervico-shoulder girdle.

2. The prevalence of pathology of the cervicobrachial girdle in dentists depends on age and work experience, thereby increasing the etiological fraction of occupational risk.

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