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State of dental morbidity rate among passenger car attendant of Chernivtsi railroad centre of Lviv railroad

Abstract: 3661 railroad men are employed by Chernivtsi railroad centre of Lviv railroad, of which the car attendants constitute the largest part— 484 (13,2%). working temperature range, noise and vibration, dust content, enhanced level of air microbial contamination inside the cars, disturbance of sleep and rest schedule, physiological and neuro-emotional tension. The increase of dental morbidity rate among people whose professional activity is connected with chronic exposure of their organs to occupational hazards is associated with the increase of chronic concomitant physical diseases, changes in antioxidant-prooxidant system of mouth cavity tissues, microbial equilibrium, and toxic hypoxia. Various harmful factors of the working environment influence the employees in the process of their working career that is why the working conditions are considerably determined by the presence of industrial hazards.

Keywords: carious process and, teeth, uncarious defects, oral cavity, filled, complicated caries, extracted teeth, dispensary observation, caries index, planned oral cavity sanitation.

The occupational hazards are determined as working environment conditions which in case of irrational organization of work affect the employees' health and their working ability. Depending on the nature of the occupational hazards origin they are divided into: hazards associated with labour process which are caused by the irrational labour organization (excessive tension of the nervous system, tension of visual organs, hearing organs, great labour intensity, etc.); hazards associated with the occupational process created by the technical deficiencies of the operating machinery (industrial dust, noise, vibration, hazardous chemicals, radiation). In Ukraine, on the average 7,5–8 thousand professional diseases are registered annually, which itself shows the complexity and ambiguity of the estimates to use these indicators for making conclusions and taking organizational and administrative decisions.

The research work aimed at identifying the forming patterns of health of the passenger car attendants under the influence of occupational factors for the purpose of scientific justification of low-cost and effective health improvement are of great importance since prolonged exposure of the organism to harmful factors worsens health and results in contraction

of various diseases that adversely affects the performance of official duties by the employees.

The aim of the research. To examine the state of dental hard tissues, to assess the intensity and peculiarities of clinical manifestations of both carious process and noncarious affects of dental hard tissues among the passenger car attendants of Chernivtsi station.

Materials and research methods. To solve the tasks we have examined 52 people, including 30 passenger car attendants of Chernivtsi station (treatment group) and 22 employees not exposed to harmful factors (experimental group). All patients were divided into four age groups and examined according to recommendations of World Health Organization on dental examination. Teeth assessment was conducted according to CFE (caries, filled, extracted) index. We have conducted the research of dental disease among passenger car attendants in four age groups — group I— 19–24 years old, group II— 25–34 years old, group III— 35–44 years old and group IV— 45 years old and older. The treatment group was formed in each age category consisting of employees directly involved in the occupational process, and the control group including

employees not involved into the production cycle. 52 people were examined altogether.

In the process of examining the dental hard tissues and the quality of their treatment we, except the total CFE index, have conducted a detailed analysis of its components, namely we have taken into account the number of teeth with uncomplicated and complicated caries concerning the C-caries index. The teeth with complicated caries, in their turn, were divided into those which can be treated and those subject to extraction.

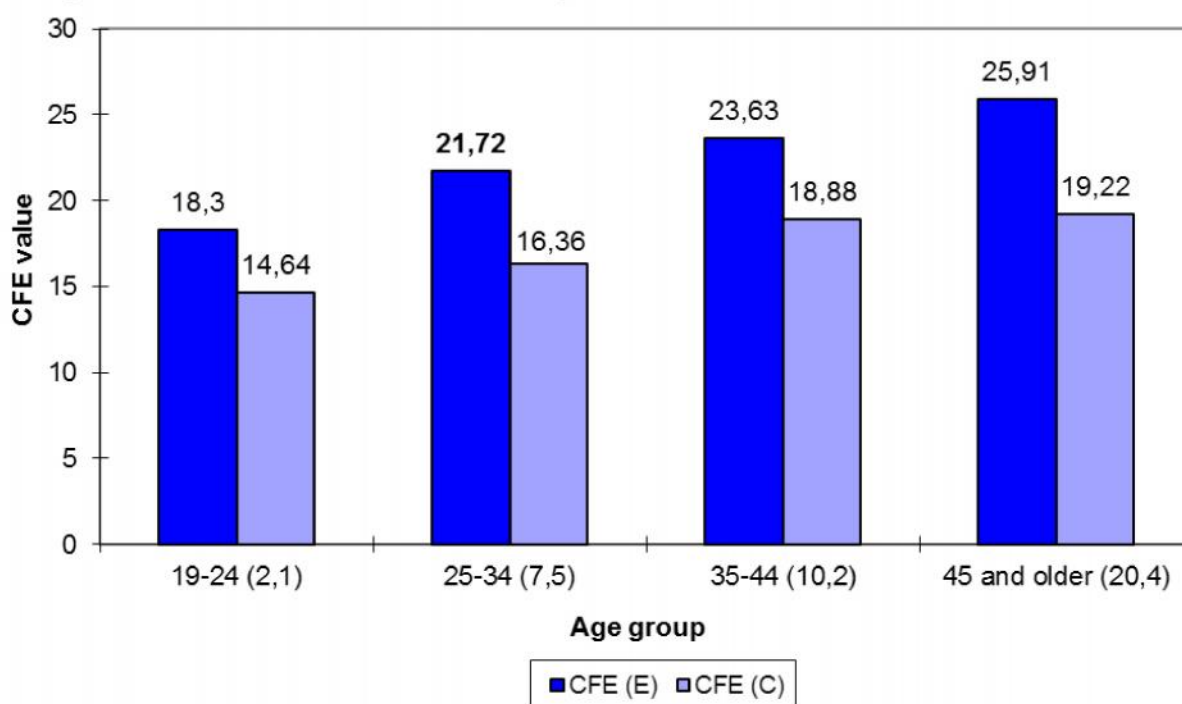
F (filling) index components included the number of fillings that required replacement, including:

broken fillings and restoration; fillings and restoration on approximal surfaces with poor contact points and overhanging edges.

The crownworks were allocated into a particular group, singling out the unsatisfactory ones (mainly including the absence of the contact points and presence of overhanging edges) from their total number.

“E” component included the absent teeth during examination.

The results of the examination were subjected to statistical analysis.



Research results and their consideration.

We have investigated the state of dental health of the passenger car attendants depending on their age and length of service. The prevalence of caries among the car attendants is 100% throughout all age groups. The intensity of teeth affection is 20 teeth in the treatment group in the age of 19–24 years old, reaching almost 26 teeth per one examined person in the age of 45 years old and older. The growth rate of affected teeth is not great, but stable — about two affected teeth in each age group. CFE index is almost 20% less in the control group throughout all age groups and the growth of affected teeth is half less than in the control group.

The number of teeth affected by caries (C) within CFE structure in the treatment group increases from

2,5 (12,50%) in the age of 19–24 years old to 6,42 (26,52%) in the third age group (35–44 years old) and in the fourth age group (45 years old and older) reduces to 4,77 (18,37%). This decrease is happening due to the increase in the number of extracted teeth. In the treatment group “C” component of CFE index is stable within four affected teeth in all age groups except young employees where it is 2,4 affected teeth.

The number of filled teeth in the treatment group is reduced by half from 15,0 in the first age group to 7,52 in the fourth group. In the experimental group “F” component of CFE index is stable throughout all age groups and is within 12–13 fillings per one examined person.

The intensity indicator for odontoclasia is caused by the number of extracted teeth. In the

treatment group the proportion of extracted teeth (E) according to CFE index in the first age group is 12,30% and increases to 40,37% in the fourth age group (52,67%), i. e. it is more than four times bigger. The number of extracted teeth in the control group is 2,5 times less.

The number of extracted teeth in the treatment group significantly exceeds the number of treated teeth with age. One extracted tooth at a young age corresponds to six treated teeth, and one extracted tooth corresponds to only 0,5 treated one in the fourth age group. In the control group throughout all age groups (except group I where one extracted tooth corresponds to 13 treated ones) one extracted tooth corresponds to three — four treated teeth.

Conclusion. The treatment and control groups in the process of their examination were diagnosed having complicated caries that indicates insufficient level of oral cavity sanitation. However, this index in the treatment group is bigger than the analogous one in the control groups throughout I, II, III age groups by 3,90; 5,18; 2,63 times ($p < 0.05$) respectively, and in group IV the number of teeth with complicated caries 0,28 times exceeds such number in the treatment group ($p > 0.05$) compared to the control one. The complicated caries in the control group is gradually developing till 34 ($p > 0.05$), and in the third age group (till 44) it abruptly increases by three in comparison with the first age group. Further, with age increasing it remains at the same level ($p > 0.05$). The development dynamics of the complicated caries in the treatment group looks differently — firstly increase of the number of teeth with complicated caries is diagnosed with double speed at the age till 34 ($p < 0.05$), then the number of the affected teeth is approximately at the same level from 34 to 44 ($p > 0.05$), after 44 sharp decrease of the affected teeth by 2,5 times is diagnosed ($p < 0.05$). We have conducted analysis of the state of the teeth to be treated and extracted in order to assess the complexity of the teeth affection by complicated dental caries.

As the research results show, the number of teeth with complicated caries to be treated in the first age group both throughout the treatment and control groups is the same and 1,75 times approximately exceeds the number of teeth to be

extracted. In the second age group the number of teeth to be treated and extracted in the treatment group is almost the same and throughout the control group the number of teeth to be treated twice exceeds the number of teeth subject to extraction. In the fourth age group the percentage of teeth to be treated both in the treatment and control groups is 10–15% less than of teeth to be extracted.

This indicates approximately the same lack of dental care request by the examined people, as well as insufficient quality of treatment.

Slight increase in the number of filled teeth in the treatment group is observed throughout the first to the third age groups (from 0,66 to 1,66), with following decrease in the IV group to 1,6. The treatment group showed such increase only in the second group to 3,33, and the third and fourth age groups showed almost double decrease in the number of filled teeth.

In addition, the quality of the fillings is rather low as at the age of 19–24 the control group showed that 17,37% of fillings require their replacement, and this figure reaches 57,64% in the treatment group. At the age from 25 to 34, the number of low quality fillings further increases by 17,33% in the treatment group, and by 18,27% in the control group. The older age group showed the increase in the number of low-quality fillings in both groups up to 50%, and their total number is reduced.

The extent of dental health service among the total number of the examined people is very low, almost 50% of initial carious affection is not treated. The quality of the fillings is “unsatisfactory”. The combination of these two indicators shows the complete lack of routine dental treatment. The treatment is only carried out at 30% rate of the required extent upon the appeal for such treatment. In our opinion, such a situation arose due to the absence of clinical examination of the employees of the enterprises with hazardous production factors.

The analysis of the number of extracted teeth, on the one hand, characterizes the quality and scope of dental care rendered to the patients. On the other hand it characterizes fast progress of pathological processes in the hard tissues of the tooth and parodontium resulting in their complete loss.

With age, the treatment group is characterised with significant increase of the number of extracted teeth and the dynamics of this growth is much faster than in the control group.

Thus, the increase of the extracted teeth in the treatment group is almost twice higher than in the control group ($p < 0.05$), and proportion of the extracted teeth within CFE in the treatment group is one and a half times higher than in the control group.

The degree of caries expansion among the passenger car attendants is 100% in all age groups, the number affected teeth with caries depending on the length of service and age ranges from 20,0 to 25,97. Only half of teeth affected by caries is treated. De-

pending on the age from 12% to 53% of teeth are extracted.

Lack of prevention programs at high caries affection of teeth and its complications, high prevalence of diseases of parodontitis results in the increase of the need for therapeutic, surgical and orthopedic treatment. In this respect the treatment exclusively upon appeal is conducted.

We recommend restoring the programs of dental diseases prevention that would include dental education of the employees, learning the rules of sensible nutrition, learning the rules of the mouth cavity hygienic care, secondary prevention (planned oral cavity sanitation), dispensary observation.

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Predicting severity of paranoid schizophrenia

Absrtact: Clinical symptoms, course and outcomes of paranoid schizophrenia are polymorphic. 206 cases of paranoid schizophrenia were investigated. Clinical predictors were collected from hospital records and interviews. Quantitative assessment of the severity of schizophrenia as special indexes was used. Schizoid, epileptoid, psychasthenic and conformal accentuation of personality in the premorbid, early onset of psychosis, paranoid and hallucinatory-paranoid variants of onset predicted more expressed severity of paranoid schizophrenia. These prognostic factors can be taken into account in clinical practice.

Keywords: paranoid schizophrenia, clinical predictors, exacerbations index.

Schizophrenia is one of the most important challenges for modern clinical psychiatry. About 2 million people are diagnosed with schizophrenia each year, worldwide [1, 162]. Paranoid schizophrenia is the most common clinical form of schizophrenia [2, 407]. Clinical symptoms, course and outcomes of paranoid schizophrenia are polymorphic [3, 122–130]. Paranoid schizophrenia now changed due to the clinical and therapeutic pathomorphosis, reported in the literature [4, 28–78]. Psychiatrists from many different countries have been researching course and outcome of schizophrenia and continue to search for markers of prognosis in schizophrenia [5, 173–182; 6, 62–68; 7, 263–268]. Adequate and timely of therapeutic and rehabilitation depend on the accuracy prognosis of development options of the schizophrenic process.

Objective: To search for clinical predictors of severity and activity of paranoid schizophrenia.

Materials and methods

The study involved 206 patients with paranoid schizophrenia (97 women, 109 men; age range — from 18 to 60 years inclusive, the average age in years = $31,2 \pm 0,71$). All patients were Russian by nationality, with different duration of the disease, admitted for treatment in psychiatric hospitals of Saratov region over the exacerbation of the schizophrenic process. The main selection criteria were verified by a hospital examination the diagnosis of paranoid schizophrenia «F20.0» (according to the diagnostic criteria of ICD-10), somatic well-being. The presence of comorbid psychiatric disorders, traumatic brain injury history and the refusal to cooperate in the interview were exclusion criteria of this study.

Medical history and demographic data were collected from hospital records and clinical interviews. The diagnosis of a mental disorder was defined by the diagnostic criteria of

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