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DEVELOPMENT OF A COMPREHENSIVE STRATEGY FOR THE DETECTION AND TREATMENT OF DENTAL DISEASES AMONG EMPLOYEES OF THE CHEMICAL INDUSTRY

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Abstract:

The study is devoted to the development of a comprehensive strategy for the detection and treatment of dental diseases in chemical industry workers. In modern conditions, employees in this industry are exposed to significant occupational risks associated with contact with chemicals that can negatively affect oral health. The lack of specialized approaches to the diagnosis and prevention of dental diseases in this group of employees significantly limits the possibility of timely detection and treatment of these diseases.

As part of the study, a methodology was developed that takes into account the specifics of professional activity and possible effects of chemicals on dental health. The methodology includes a comprehensive approach to the assessment of the oral cavity, including clinical examinations, questionnaires, and specialized dental tests. The aim of the methodology is to detect diseases early and prevent their progression, which contributes to maintaining the health of employees and improving their professional performance.

The results of the study confirmed the high prevalence of dental diseases among chemical industry workers. It was found that a significant proportion of employees experience problems with their teeth and gums, which is often due to the peculiarities of the working environment and lack of awareness of prevention and treatment methods.

The conclusion of the study highlights the need to introduce the developed methodology into the practice of dental care for chemical industry workers. This will significantly improve the availability and quality of

dental care for this group of professionals, reduce economic losses from loss of working capacity, and improve the overall health of the workforce. Further development of the research is aimed at adapting the methodology to various specific production conditions and expanding its application to achieve maximum impact on the health of workers in the chemical industry

Keywords: Dental diseases, chemical industry, occupational risks, prevention, diagnosis, treatment.

Introduction

The urgency of the problem of dental diseases among chemical industry workers is due not only to the specifics of their professional activities, but also to the potential effects of chemicals on oral health. Workers in this industry are exposed to a variety of chemicals on a daily basis that can have a negative impact on the teeth, gums, and oral mucosa.

The impact of chemicals on dental health is a global concern due to the increased number of cases of various diseases, such as caries, periodontitis and others. These diseases can not only significantly worsen the quality of life of employees, but also lead to loss of working capacity and significant costs for treatment and rehabilitation.

It is important to note that many chemical industry workers often do not realize the full scale of risks and do not pay proper attention to oral care, which contributes to the further development of dental problems. Insufficient awareness and education in the field of dentistry are also obstacles to timely detection and treatment of diseases.

In addition, economic aspects play a significant role: loss of working hours due to dental problems can lead to serious economic losses for businesses, and high treatment costs can have a negative impact on the budget of both the individual employee and the enterprise as a whole.

Thus, the development and implementation of specialized strategies for the detection, prevention and treatment of dental diseases among chemical industry workers is an urgent task aimed at improving the health and professional performance of this significant category of workers.

Research objective

The aim of this study is to develop and test a comprehensive strategy for detecting and treating dental diseases among chemical industry workers. The main focus is on creating an effective screening system that will quickly identify dental problems at an early stage and provide appropriate treatment. Research on the development of a strategy for the detection and treatment of dental diseases among chemical industry workers involves the use of a variety of materials and methods, the purpose of which is to create an effective system of diagnosis and prevention. To begin with, a review of scientific publications and statistics on the prevalence of dental diseases among chemical industry workers was conducted. This made it possible to identify the most common diseases and risk factors associated with professional activity.

Special attention was paid to studying the effect of chemicals on oral health. The types of chemical agents, their mechanisms of action on teeth, gums and mucous membranes, as well as potential consequences for the dental health of employees were analyzed.

To assess the current health status of employees, clinical methods were used, such as general clinical examination of the oral cavity, assessment of dental status, including the presence of caries, periodontitis, plaque status, etc. X-rays of teeth and gums were performed to identify hidden pathologies and assess the degree of damage.

Questionnaires were used to collect data, including questions about professional experience, working conditions, regular use of personal protective equipment, as well as about oral diseases

diagnosed earlier. These data allowed us to get an idea of the profile risks and habits in oral care among the study group.

The study also used expert advice from dentists and occupational health and safety specialists to develop recommendations for improving the prevention of dental diseases among chemical industry workers.

Thus, the combination of materials and methods used made it possible to create a comprehensive methodology for the diagnosis and prevention of dental diseases, adapted to the specifics of occupational risks and working conditions in the chemical industry.

A study of the results showed a high prevalence of dental diseases among chemical industry workers. More than half of the subjects (more than 50%) had signs of various forms of caries, including deep carious lesions that require active treatment. It was also found that about 30% of employees suffer from periodontitis, which indicates a high predisposition to inflammatory gum diseases.

Poor nutrition, inadequate oral care, and insufficient use of personal protective equipment when working with chemicals were the most frequently mentioned reasons for poor dental health. Occupational factors such as long work shifts, workplace stress, and lack of awareness of the harmful effects of chemicals on teeth and gums also had a significant impact.

The study also found that workers who regularly undergo routine dental checkups and follow oral care guidelines had significantly fewer dental problems compared to those who ignored these measures.

The developed method of screening and early diagnosis of dental diseases has shown high efficiency in detecting the initial stages of diseases. It allows you to quickly start treatment activities, which reduces the risk of complications and improves the prognosis for patients.

In conclusion, the results of the study emphasize the need for a systematic approach to protecting the dental health of chemical industry workers. The implementation of developed prevention and treatment strategies, as well as raising awareness of the importance of regular dental checkups and preventive measures, will significantly improve the health and quality of life of employees in this industry, reducing treatment costs and reducing losses from temporary disability.

In conclusion of the study on the development of a strategy for the detection and treatment of dental diseases among chemical industry workers, I would like to emphasize several key aspects that follow from the results and conclusions.

Initially, the study confirmed the high prevalence of dental diseases among workers in this industry. This includes various forms of tooth decay, periodontitis, and other oral diseases that are significantly more common than in the general population. These results indicate the need for active intervention and systematic prevention among chemical industry workers.

The second important finding concerns the risk factors that contribute to the development of dental diseases among this group of professionals. Particularly highlighted are poor nutrition, inadequate oral care, and occupational conditions, including exposure to chemicals and workplace stress. These factors not only worsen dental health, but can also lead to serious complications that require long-term treatment and rehabilitation.

The third aspect of the conclusion is related to the importance of regular dental examinations and education of employees about proper oral care. The study showed that employees who follow the recommendations of dentists and undergo regular examinations have a significantly lower risk of developing dental diseases.

Finally, the developed strategy for detecting and treating dental diseases using an integrated approach to diagnosis and prevention is a key step towards improving the health of chemical industry workers. Implementation of such methods should be carried out at the enterprise level, taking into account the specifics of production processes and occupational risks.

In general, the results of the study confirm the need for further efforts in the field of prevention and treatment of dental diseases among chemical industry workers, which contributes to improving the overall health and performance of this significant category of workers.

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