

INFLUENCE OF HARMFUL FACTORS OF POULTRY FARMS ON THE STATE OF THE ORAL CAVITY OF WORKERS OF POULTRY FARMS

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ABSTRACT

The extremely high prevalence of diseases of the dentition and periodontium in the working population requires special attention to the conditions and nature of human labor activity and their impact on health. Of no small importance in this regard is the improvement of the organization of dental care for the able-bodied population, including workers in poultry farms, who also face a certain group of harmful factors.

KEYWORDS: *Ecology, Hygienic Requirements, Working Conditions, Production Factors, Manual Labor, Poultry Farming.*

INTRODUCTION

In the process of intensive development of modern agriculture, the study of the role of harmful and health-related factors of the production environment is timely and very important. Unfavorable working conditions contribute to the formation of various pathological processes in the human body. One of the intensively developing branches of agriculture in recent years is poultry farming [1]. The high concentration of poultry and its lack of walking led to the emergence of specific unfavorable factors of industrial poultry farming. In the air environment of this production, high concentrations of dust with a complex composition, various harmful gases, as well as bacterial and fungal contamination were determined. At the same time, many indicators exceed the MPC or MPC established by GOST for the air in the working area. The long-term influence of a complex of production factors, simultaneously with the deterioration of the health of workers, can lead to pathological changes in the oral mucosa (OR), periodontal diseases, hard dental tissues (Videneeva AA. 2002 [2], Artamanova VG. 1997 [3], Valieva ET, 2009 [4], Balkarov AO, 2009 [5])

The extremely high prevalence of diseases of the dentition and periodontal system in the working population requires special attention to the conditions and nature of human labor activity and their impact on health. Of no small importance in this regard is the improvement of the organization of dental care for the working population, including workers of poultry farms, who also face a certain group of harmful factors (Basko VN, 2009 [6], Kabirova MF., 2008 [7], Masyagutova LM, 2011 [8]).

The aim of the study was to study the dental status of workers in poultry farms in the Bukhara region of the Gijduvan region of the Republic of Uzbekistan.

The object of the study was the poultry farm LLC Parranda Savdo, Gijduvan district, Bukhara region.

Materials and methods of research

145 people of LLC Parranda Savdo Poultry Farm, Gijduvan district, aged 25 to 54 years, were examined. All were broken down by length of service: group 1 — workers with experience up to 5 years (20 people); 2nd group - from 5 to 10 years (75 people). The control group consisted of 40 people living in the same area who were not employees of the poultry farm. The survey was conducted in accordance with WHO recommendations (1985). The state of hard tissues of teeth, periodontal tissues and oral mucosa was assessed .

The results of the study were subjected to variational-statistical processing according to the Student-Fisher criterion.

Research results

During a comprehensive dental examination of poultry farm workers, the level of oral hygiene according to the OHI-S index in the control group was 1.6 ± 0.11 , in the group with experience from 1 to 5 years - 1.7 ± 0.14 , in the group with experience from 5 to 10 years - 2.1 ± 0.07 and control groups, $p < 0.05$). The level of oral hygiene in the control, first and second groups was assessed as unsatisfactory.

When examining the dentition, a high intensity and prevalence of dental caries was established among those examined in the second clinical group, and in the first group, this index indicated an average prevalence of dental caries. In the first group, the KPU index was 9.1 ± 0.03 , in the second — 12.3 ± 0.08 . KPU of the control group was 9.4 ± 0.02 (differences in the data of the second group are significant relative to the first and control groups, $p < 0.05$).

Determination of the PMA index made it possible to assess the degree of inflammation of periodontal tissues. In the group of workers with an experience of up to 5 years, $3.1 \pm 0.02\%$ of the examined patients did not have inflammation in periodontal tissues, a mild degree of inflammation was determined in $51.1 \pm 0.05\%$; in the group with an experience of 5 to 10 years, a mild degree of inflammation was diagnosed in $31.6 \pm 0.40\%$, and no persons with intact periodontium were identified (significant differences, $p < 0.05$). The average degree of periodontal inflammation in the 1st group was determined in $38.4 \pm 0.02\%$, in the 2nd group - in $56.8 \pm 0.04\%$ of the examined (significant differences, $p < 0.05$). Severe inflammation in the group with experience up to 5 years was diagnosed in $7.4 \pm 0.02\%$, from 5 to 10 years — in $11.6 \pm 0.08\%$ (significant differences, $p < 0.05$). Thus, with an increase in the length of service at the poultry farm, a decrease in the number of persons with intact periodontium was established. In the control group, the absence of inflammation in periodontal tissues was determined in $9.7 \pm 0.14\%$, a mild degree of inflammation in 50.4 ± 0.04 , an average degree of inflammation in $35 \pm 0.6\%$, and severe inflammation only in $4.9 \pm 0.02\%$ of the examined (differences are significant relative to the main groups, $p < 0.05$).

In the course of a comprehensive dental examination of workers exposed to harmful factors of poultry production, pathological abrasion was more common among non-carious lesions, which amounted to $49.5 \pm 4.4\%$. More often, pathological abrasion was determined on the anterior teeth

and amounted to $81.7 \pm 4.6\%$. In the control group, this pathology was diagnosed in $28.8 \pm 2.1\%$ of cases (differences are significant relative to the main groups, $p < 0.05$).

The second most common non-carious lesion was a wedge-shaped defect — in $6.9 \pm 1.6\%$ of workers; in the control group, this figure was the same - $6.2 \pm 4.3\%$. Hyperesthesia of I and II degree occurred approximately equally, both in workers and in the control group, and amounted to $32.4 \pm 4.6\%$ of cases. Non-carious lesions appeared in workers after 5 years of work or more, in the control group, non-carious lesions were determined in the second age group, in the first group there were isolated cases.

When examining the COP, a high frequency of diseases among workers in this industry was revealed. They were diagnosed in $84.5 \pm 3.2\%$ of the examined workers, in the control group — in $4.8 \pm 0.4\%$ (significant differences, $p < 0.05$). At the same time, with an increase in work experience, there is a significant increase in the incidence of pathology of the SOR. Among the complaints concerning the ROP, the following prevailed: itching, burning, redness and swelling of the red border of the lips. In addition, in $69.0 \pm 1.55\%$ of the workers of the poultry farm, when collecting anamnesis, chronic concomitant diseases were established in the form of allergic rhinitis, rhino-sinusitis, skin-allergic dermatitis, chronic allergic bronchitis and bronchial asthma.

Cheilitis of allergic etiology occupies the leading place in the group of COR diseases among workers of LLC Poultry Farm "Parranda Savdo" in Gijduvan region. In workers with experience up to 5 years, cheilitis was diagnosed in $26.3 \pm 2.4\%$ of workers, in the group with experience from 5 to 10 years - in $66.7 \pm 0.07\%$ (significant differences between the indicators of the main groups, $p < 0.05$). In the control group, cheilitis was diagnosed in $11.1 \pm 2.4\%$ of the examined (differences are significant relative to the main groups, $p < 0.05$). The high prevalence of allergic cheilitis among workers and the increase in the frequency of its diagnosis with an increase in work experience in a poultry farm can be explained by the high sensitivity of the body, oral mucosa and red border, in particular, to adverse production factors, which in most cases are allergens for the human body.

A large number of workers were diagnosed with traumatic lesions of the COR, which were detected in $65.6 \pm 2.44\%$ of the main group. In the control group, the frequency of this pathology was assessed as high and amounted to $31.3 \pm 6.73\%$ of the examined (differences are significant relative to the main groups, $p < 0.05$).

In $19.0 \pm 1.12\%$ of workers with more than 10 years of experience, foci of hyperkeratosis were determined on the buccal mucosa. In the control group, this pathological process was found in $4.6 \pm 0.13\%$ (significant differences compared to the main groups, $p < 0.05$). Cases of aphthous stomatitis were not detected in the group of workers with experience up to 5 years; in workers with experience from 5 to 10 years, aphthous stomatitis was diagnosed in $3.6\% \pm 1.12$ workers. All examined aphthae were in the stage of epithelialization. In the control group, this pathology was not detected (significant differences relative to the main groups, $p < 0.05$).

Thus, a comprehensive dental examination of the workers of JSC Poultry Farm "Parranda Savdo" revealed a high prevalence of diseases of the hard tissues of the teeth of carious and non-carious origin, inflammatory diseases of periodontal tissues, the red border of the lips and the oral mucosa compared with the control group. At the same time, lesions of the oral mucosa were

of an allergic nature. Based on the anamnesis, it was found that 69% of the workers of the poultry farm have chronic concomitant diseases in the form of allergic rhinitis, rhino-sinusitis, allergic skin dermatitis, chronic allergic bronchitis and bronchial asthma. All these data indicate a significant adverse effect of poultry production factors on the state of the oral cavity of workers. It is necessary to develop algorithms for the diagnosis, prevention and treatment of dental diseases in this category of workers.

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