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MORPHOLOGICAL SUBSTANTIATION OF QUESTIONS ABOUT PATHOGENESIS, PREVENTIVE [MEASURES AND TREATMENT OF INTOXICATION BY THE CHEMICAL FACTORS OF MODERN COTTON GROWTH

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МОРФОЛОГИЧЕСКОЕ ОБОСНОВАНИЕ ВОПРОСА О ПАТОГЕНЕЗЕ, ПРОФИЛАКТИЧЕСКИЕ МЕРЫ И ЛЕЧЕНИЕ ИНТОКСИКАЦИИ ОТ ХИМИЧЕСКИХ ФАКТОРОВ РОСТА СОВРЕМЕННОГО ХЛОПКА

УДК: 614.2:616-057-092-084-08(213.14)

В научной статье рассмотрены проблемы здоровье сельского населения, освященные в литературных источниках республики и зарубежных стран. Полученные сведения позволяет утверждать, что состояние здоровя сельских озмственных тружунников, прежде всего, зависит от особенностей условий труда и образа их жизни. В связи с чем, данная проблема должна быть под постоянным контролем врачей лечебно - прафилактических учреждении и иодлежит мониторированию с использованием современных научно – методических подходов.

In the scientific article have been considered the problems of health of rural population, treated in the literary sources of the Republic and of foreign countries. Obtained information allows to declare, that the state of health of agricultural workers depends first of all on peculiarities of conditions of work and their way of life. In view of the above this problem should be under the constant control of physicians of medical and prophylactic establishments and is to be subjected to monitoring with the use of modern scientific and methodical approach.

In accord with the Resolution of the Government of the country to develop the agrarian sector, arrangements have been worked out to apply the cotton cluster to farming in the South of Kazakhstan.

The main health measures in any agricultural production, including the growth of cotton, should be concentrated on the improvement of living conditions as well as the optimization of routines of work and rest, which will then be able to improve the social and medical welfare of the workers. The acuteness of the problem before us is caused by a number of disadvantages in its professional / industrial and medical origins as well as negative tendencies towards changing demographic parameters and the level and the structure of ailments of people who work in this area of activity [1,2].

Despite the development of the industrial base of cotton growth which as a result essentially facilitates and improves working conditions in this enterprise, there are some specific negative features such as the influence of climatic geographical conditions, wide use of various toxic pesticides in the production of cotton, application of manual lab our, no mechanical production etc.

At the same time, the role of such factors as the effect of used pesticides, including their content in the air breathed by workers, and also in foodstuffs and in drinking water, has not been investigated yet. Thus, one of the significant influences on the health of workers growing cotton and of other people who live in the cotton growth areas, is extensive and poorly regulated application of chlorine and phosphor organic pesticides . Some fragmentary investigation conducted into work hygiene and into the influence of pesticides on the health of the cotton workers does not make it possible to optimize the clinical, hygienic and physiological state of their working conditions on a scientific basis.

Taking into account this data, it is extremely important to study the influence of pesticides on the health of the workers and population living in the given region as well as on people who are subject to the influence of these chemical factors. Up to now this problem has been studied mainly from a position of proficiency pathology; nowadays it has developed into an ecological pathology for the population of the cotton growing regions of our country.

The action of chlorine and phosphor-organic pesticides on population health is characterized by a prolong period of imagined well-being, but the changes in body function are carried out due to biomechanical, molecular, sub cellular and cellular reorganization. It is necessary to study the prenosological condition, which is the period of adaptation to the influence of toxic substances, on the rate of cellular regeneration of the liver and other internal organs.

Thus, the urgency of the given research is caused by carrying out an adequate morphological approach to a hygienic estimation of the effects of pesticides used in cotton farming on the human body.

The purpose of the investigation was to study experimentally the influence of the chemical factors of modern cotton production on the cellular regeneration of organs and tissues with the subsequent calculation of the efficiency of the use of nonspecific and specific methods of correction of this toxic action on the human body.

To attain this aim we have undertaken the following tasks:

1. To study the sanitary and hygienic working conditions of modern cotton farming and its associated illnesses, having compared the parameters of illnesses with the concentration of major pesticides in a working region.

2. In acute, sub acute and chronic conditions, to conduct an experiment on various kinds of laboratory animals with a purpose of estimating the volume and time of cellular reorganization of the liver, kidney and other internal organs.

3. To show the interrelation between structural and metabolic changes and to find out the separate important parts of the pathogenesis of intoxication by pesticides.

4. To study, with the help of morphological research methods, the influence of specific and nonspecific methods on the current experimental acute, sub acute and chronic intoxication by pesticides, estimating the changes in cellular regeneration.

5. On prolonged exposure to pesticides it is important to compare integrated parameters of the condition of laboratory animals with the kinetics of accumulation of chemical substances in the internal organs and their discharge.

This scientific planned research will have a definite scientific originality and practical value, which will be expressed in the following ways:

- For the first time experimentally, the morphological features of cellular and intracellular regeneration of the liver, kidney and other internal organs will be investigated. The parameters of intracellular regeneration and criterion of an estimation of the aging of cells and degrees of toxic influence of pesticides will have been determined.
- The major parts in pathogenesis of the revealed infringements will be determined and the efficiency of correction of the negative effect of toxins will be estimated. On the basis of the experiment data, and sanitary, hygienic and clinical observations, the methodical recommendations for early diagnostics and preventive measures against pesticide intoxication will be worked out.

These scientific findings will be introduced into the educational process at the neurology department with a course of proficiency pathology as well as at the path-anatomy and hygiene departments.

Thus, this given program of scientific research has a great relevance, and also it has the necessary methodical and scientific base for being realized in the facilities of the South Kazakhstan State Medical Academy.

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