Influence of Contamination of Environment on the State of Health of Population in Southern Aral Sea Area

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Abstract: *In the article the results of research of influence of contamination of environment are presented on the state of health of population in Southern Priaralie. It is set that contamination of atmospheric air salt-dust by a bearing-out from the bottom of dried-up part of the Aral Sea area, and duststorms result in the diseases of breathing organs among a population.*

Keywords: Southern Priaralie, surrounding environments, contamination, drinking-water, prognostication of morbidity

1. Introduction

Presently the health of population is examined as a the system is a formative factor in the system "A man is an environment" and as a criterion of quality of environment [1, 3, 7]. Ecologically the state of air environment becomes most unhappy, water sources, soil, are muddy also. Quality of health of man largely depends on quality of environment of his habitation.

Every large region, with certain environmental conditions and type of the economic mastering, deserves the special attention. Importance of regional ecological analysis consists in that his results have the large applied value. Except it, the ecological state of regions determines the global state of natural components. The ecological problems of region are related to the large concentration of population, transport and industrial enterprises, with formation of anthropogenic landscapes very distant from the state of ecological equilibrium [7].

The primary purpose of work is establishment of factors rendering negative influence on the health of population. Knowledge in this area must serve the additional instrument of affecting processes of management by quality of environment in interest's maintenance and strengthening of health of population.

2. Material and Methods

Lately on a background changing socio-economic and ecological terms and also worsening of quality of life is observed negative changes in a state of health of population of region of Southern Priaralie. In-process used medical-biological and retrospective analysis of statistical data of medical establishments of Republic of Karakalpakstan. Mathematic-statistical methods were also used: cross-correlation, dispersible analysis.

3. Results and their Discussion

Presently there is a large number of the works sanctified to research of influence of quality of drinking-water on the state of health of population [1, 4, 7]. Researches of the last years show that quality of drinking-water renders considerable influence on the health of population. About influence of environment on the state of health of population judge on the coefficients of correlation between the degree of expressed of factor and index of quantitative description of health. In ecological researches practice of selection and even absolutizing of role became stronger one at the underestimation of other factors and denial of complexity of influence of environment on the whole [5].

The analysis of results of long-term fact sheets (for 2010-2019) on general morbidity among a population showed that index of general morbidity of population resident in the region of Southern Priaralie increases. Muddy water plays a large role the origin of infectious diseases. Most meaningful at development of illnesses of organs of digestion and urogenital system, totality of chemical ingredients (nitric group, sulfates, general inflexibility).

Contamination of atmospheric air a salt-dust by a bearing-out from the bottom of dried-up part of the Aral Sea area, and dust storms result in intensifying of chronic diseases especially of breathing organs: chronic bronchitis, bronchial asthma, tuberculosis [1, 3].

The conducted analysis educed reliable cross-correlation connections between the levels of some parameters of composition of drinking-water and atmospheric air with general morbidity of adult and child's population of Karakalpakstan. So we are educe correlative connection with composition of atmospheric air, namely with dioxide of sulphur loosely-coupled cross-correlation interface (R=0,18), with dioxide of nitrogen (R=0,66), with dustiness of the ground layer of air (R=0,54).

Quality of drinking-water also correlates with general morbidity of population: with chlorides in water, (R=0,43) and with sulfates in water (R=0,73). General morbidity of child's population is closely with quality of drinking-water (with sulfates in water of R=0,83 and with chlorides in water of R=0,52). Cross-correlation connection is educed with contamination of atmospheric air: with dioxide of nitrogen (R=0,58), with a dust (R=0,53). Environment, although consists of separate components, operates as

single unit, influence of unit always more than influence of sum of separate parts thus.

From data of researchers, a structure and dynamics of separate nosology forms of diseases on Republic of Karakalpakstan are subject to strong growth of indexes: innate anomalies, ischemic heart trouble, hypertensive illnesses, ulcerous illness of stomach, cancer of gullet, illnesses of the peripheral nervous system [2, 6].

The prognosis of primary and general morbidity of population conducted by us showed in the region of Southern Aral Sea area, that actual values of levels of general morbidity of population practically fully or close coincided with the prognosis values of indexes on next classes: to illness of organs of breathing (percent % of rejection = 0,7), illness of the nervous system (percent % of rejection = 1,6), illnesses of the endocrine system (percent % of rejection = 3,8).

During researches we are spare more attention to the account of influence of subjective circumstances on the dynamics of row of statistical indexes, characterizing morbidity of population, including the use of methodologies of account and registration of separate forms of diseases, methodology of exposure of illnesses on the early stages.

Thus, contamination of environment and change of ecological situation in the region of Southern Aral Sea area are the established fact. At development of stabilizing events, measures on softening of ecological situation it is necessary to come from main criteria: the rational use of water and landed resources, improvement of quality of surface-water, decline of the chemical loading on a region, improvement of terms of residence of population.

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