DESCRIPTION OF THE EPIDEMIOLOGY AND RISK OF MAJOR NONCOMMUNICABLE DISEASES (NCDS) IN RURAL POPULATIONS

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Introduction. In the current era of the "third renaissance", the issue of developing modern approaches to improving the control system over major noncommunicable diseases (NCDs), the development of its theoretical and scientific foundations remains an international priority. Even though the trend of NCDs has not only stabilized, but has become increasingly relevant and is predicted to take on a pandemic character in the near future.

The use of artificial intelligence (AI) in medical practice, in particular in NCDs, is already a fact, its new and promising direction in health care, as a "unique tool" that shows great potential in the prevention, diagnosis and therapy of NCDs, has been proven in recent years in research [11; 14; 13; 17; 10; 6; 16; 5; 7].

According to the results of a survey of doctors, the integration of AI into medical practice "helps the doctor as an additional tool" (28%), "fundamentally changes medicine" (5%), "fundamentally changes medicine, but the role of doctors will remain central" (67%) [3].

According to WHO, metabolic syndrome and obesity are responsible for up to 44% of CVD and 23% of CVD [15]. According to V.S. Krysanova and P.A. Kelekshaev (2020), approximately 4.72 million deaths (on average per year) are associated with metabolic syndrome and obesity [1].

A meta-analysis for Russia from 1980 to 2016 (333 causes of death and 84 risk factors were included in the analysis) confirmed that 48.5% of deaths in Russia in 2016 were caused by metabolic risk factors [9]. Metabolic syndrome is a risk factor for cardiovascular diseases, cancer, CVD, and neurological disorders [8].

Obesity also attracts attention by increasing financial costs: in some countries, 8% of the health system budget is spent on obesity-related diseases. Patients with obesity are twice as likely to receive medication compared to patients without obesity.

70% of the costs of NCDs, 23% of the costs of HCC, and 9% of the costs of cancer are associated with the presence of obesity [12]. The increase in costs

associated with obesity and obesity (up to 31.8% in healthcare costs and 68.1% in costs associated with reduced productivity) has also been noted in other studies and reviews [18; 2; 3; 4].

The negative epidemiological situation with non-communicable diseases, according to the presented data, has worsened and become more serious due to the lack of adequate management and control systems. In this regard, it is important to change and improve the preventive system for controlling the risk of NCDs, based on epidemiological results and conclusions and with priorities at the regional/territorial population level, and this area is receiving attention as a relevant scientific topic worldwide.

The general conclusion can be summarized as follows: the development of a customer-centric system for digital prevention is a relatively new concept, although this approach is gaining momentum worldwide.

The purpose of the study is to improve the screening and control system for major non-communicable diseases in the rural population of Andijan in a special epidemiological study.

Material and methods

Object of research a representative sample of 2,446 rural residents was taken from the Pakhtaabad district of Andijan region.

Subject of the study general clinical-laboratory, biochemical and screening methods for venous blood and serum of the population, as well as instrumental methods for the epidemiology of AKI.

Research methods. The study used epidemiological, general clinical, laboratory, biochemical, instrumental, and statistical research methods.

Results

In the surveyed rural population, the main non-communicable diseases (NCDs) are mainly confirmed and observed in 5 types: cardiovascular diseases (CVDs), respiratory diseases (RHDs), chronic kidney diseases (CKDs), diabetes mellitus (DM) and cancer diseases (CNDs). Table 1 and Figure 1 describe the epidemiology and risk of NCDs in the rural population. They show that the prevalence of NCDs is 10.9% in adults; the low-risk population is 10.5%, and the high-risk population is 11.1% [X2 = 0.548; P>0.05; RR= 1.102; 95% CI = 0.852 – 1.425].

The prevalence of AG is observed at 17.7%; those in the low-risk group - 17.4%, those in the high-risk group - 18.0% [X2 = 0.153; P>0.05; RR= 1.043; 95% CI = 0.845 - 1.288].

From the analysis of the obtained data, it is clear that the frequency of detection of OSOK in the examined population is 75%; the population with OSOK in the low-risk group was confirmed with a prevalence rate of 7.7% and high-risk groups - 7.1% [X2 = 0.333; P>0.05; RR= 0.913; 95% CI = 0.671 - 1.243].

CTCP is confirmed and recorded at a detection frequency of 3.7%; low-risk groups - 3.3% and high-risk populations - 4.1% [X2 = 0.953; P>0.05; RR = 1.234; 95% CI = 0.808 - 1.884].

Glomerulonephritis is observed in this population with a frequency of detection of 0.4%; those in the low and high risk groups are detected in accordance with the prevalence rates of 0.27% and 0.5% [X2 = 0.838; P>0.05; RR= 1.833; 95% CI = 0.491 – 6.844].

Pyelonephritis is characterized by a registration rate of 1.7%, including those in the low and high risk groups are confirmed with prevalence rates of 1.9% and 1.4%, respectively [X2 = 0.935; P>0.05; RR= 0.728; 95% CI = 0.381 – 1.189].

The following analytical data (Table 1 and Figure 1) are devoted to the prevalence rates of diabetes mellitus in the adult population of the village.

It was confirmed that QD – 1 is confirmed at a detection frequency of 1.9%, low and high risk groups – 1.7% and 2.0% [X2 = 0.161; P>0.05; RR= 1.128; 95% CI = 0.626 – 2.032].

The detection frequency of QD2 is described as 11.3%, 10.4% and 12.5%, respectively [X2 = 2.657; P>0.05; RR= 1.233; 95% CI = 0.958 – 1.585].

The detection frequency of tumor diseases is 4.7%; the detection rates of low and high risk groups are described as 4.1% and 5.3% [X2 = 1.723; P>0.05; RR= 1.287; 95% CI = 0.882 – 1.876].

It can be concluded that among the AJC, the highest prevalence rates are recorded for UIC, diabetes mellitus, and NAC. The lowest frequencies are confirmed for BSC (R<0.001).

Conclusion

In the rural population aged 18–89 years, multiple risk factors are identified with the following prevalence rates: 2 risk factors – 22.9%, 3–4 risk factors – 46.4%, 5–6 risk factors – 17.0% and 7–9 risk factors – 2.2%. Multiple non-communicable diseases (polypathy) are characterized by 9 different components in the general population, men and women: “NCD + NCD” – 3.7%, 1.6% and 2.1%; “NCD + QD2” – 4.6%, 1.6% and 2.7%; “NCD + BSK” – 0.7%, 0.0% and 0.7%; “NCD + AG” – 3.5%, 1.4% and 2.1%; "YUIK + QD2" - 2.2%, 1.2% and 1.0%; "YUIK + OSOK" - 1.4%, 0.7% and 0.7%; "YUQK + NAK + QD2" - 1.0%, 0.6% and 0.4%; "YUQK + NAK + BSK" - 0.1%, 0.0% and 0.1%; "YUQK + NAK + QD2 + BSK" - 0.0%,

0.0% and 0.0%; "YUIK + AG + OSOK + QD2" - 0.2%, 0.1% and 0.1% [X2 = 2.418; P>0.05; RR= 5.019; 95% CI = 0.522 – 48.187].

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