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**МАТЕРІАЛИ V ВСЕУКРАЇНСЬКОЇ НАУКОВОЇ КОНФЕРЕНЦІЇ СТУДЕНТІВ,
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DIABETES IN THE STRUCTURE OF CHILDREN'S ENDOCRINE SYSTEM DISEASES IN SUMY REGION

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Diabetes is a serious threat to social and economic welfare not only in our country. Every 10 – 15 years the number of people who suffer with diabetes is doubled. According to the International Diabetes Federation, in 2015 the number of patients with diabetes worldwide estimated 415 million people, of which – 59.8 million from Europe, 29.6 million from South and Central America, 44.3 million from North America and 14.2 million from Africa. According to the data of the Center for Health Statistics of the Ministry of Health in Ukraine on 1 January 2016 the total number of patients with diabetes in Ukraine is 1.2 million people, of which nearly 8.5 thousand is children.

The purpose of the work. Setting the prevalence of diabetes type 1 in the structure of endocrine system diseases among children in Sumy region and compare it with the national average.

Materials and methods. It was analyzed the data of patients aged 0 – 17 years with endocrine disorders who have been treated at the Sumy Region Children's Clinical Hospital during 2014/2016 years. It was conducted statistical processing for 1000 of children.

Research results. The structure of the class prevalence of endocrine system diseases over the period 2014 – 2016 contains: in the first place is diffuse goiter of I type, the second – obesity, the third – diffuse goiter of II – III types, the fourth – diabetes. Analyzing the statistics of sickness and prevalence in comparison with the Ukrainian index it was marked the decrease in prevalence of diffuse goiter (2015 – 16.82, 2016 – 14.57, Ukraine – 38.04). Meanwhile prevalence of nodular goiter in Sumy region in 2015 is 0.42; in 2016 – 0.36, and in Ukraine – 0.29. The prevalence of obesity in Sumy region in 2015 is 12.48, in 2016 – 11, 5, that is at the level of Ukrainian index for 2015 – 13.5. The incidence of diabetes in Sumy region in 2014 is 0.10, in 2015 and 2016 – 0.13, which is almost at the level of Ukrainian index for 2015 – 0.15.

While analyzing the prevalence of diabetes it was marked the trend to increasing the indicator: in 2014 – 0.92, in 2015 – 0.99, in 2016 – 1.06, as for Ukraine the index for 2015 is 1.11. In 2016 can be mentioned

complications of diabetes which contain: in the first place polyneuropathy – 0.12, retinopathy – 0.03 and nephropathy – 0.02.

Conclusions. In the structure of prevalence of the endocrine system diseases the first place takes diffuse goiter, the second – obesity, the third – diffuse goiter II-III type, the fourth – diabetes. Nevertheless, the prevalence in the region is lower than in comparison with the Ukrainian index. Neuropathy, retinopathy and nephropathy are dominated among the complications. Rising the diabetes prevalence and consequences of disease complications made the research of this pathology in children of primary importance.

EXPLORING OF GENETIC FACTORS OF PATHOGENICITY AND ANTIBIOTICS RESISTANT OF STAPHYLOCOCCUS AUREUS

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Relevance of the article. Staphylococcus aureus (*S. aureus*) is an opportunistic pathogen of human and animal skin and nasal mucous membrane but sometimes they can cause infections affecting many organs. In human this pathogenic microorganism can cause skin infections such as boil, carbuncle, and furuncle. *S. aureus* can also cause several diseases such as bacteremia, endocarditis, osteomyelitis and toxic shock syndrome, scalded skin syndrome and Staphylococcal foodborne diseases (SFD).

Objective. Analysis of modern literary sources for evaluation of hazard factors *S. aureus*.

Some *S. aureus* are methicillin-resistant (MRSA) and vancomycin-resistant, and infection caused by these resistant strains may be fatal because of lack of alternative antibiotics. MRSA has been well known for being resistant to β -lactam antibiotics, which are the most common antimicrobial agents used to fight against staphylococcal infection. Researchers reported that methicillin resistance in staphylococci was carried by a specific mobile genetic element (MGE) called staphylococcal chromosome cassette *mec* (SCC*mec*). *S. aureus* produces extracellular proteins and toxins, that are major factors of pathogenicity. The most important toxins are called Staphylococcal enterotoxins (SEs). There are 17