

DEPUTY EDITOR-IN-CHIEF'S PREFACE TO ISSUE 4, 2024

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Dear readers!

September is always associated with the beginning of an interesting, productive period, filled with new ideas, projects, and accomplishments. Knowledge is collected bit by bit from various sources, creating a solid foundation for new research and directions in the development of medicine. Following the general trend, the autumn issue of *Acta biomedica scientifica* has incorporated the most relevant research and reviews of the latest innovations.

First of all, I would like to draw your attention to several articles devoted to such a serious disease as tuberculosis. This area of medicine requires the closest attention. Authors from Irkutsk (**Zhdanova S.N. et al.**) analysed 732 strains and found an increase in the level of multiple drug resistance to 67.4 % with an increase in the proportion of pre-extensive drug resistance. This is due to the dominance of the Beijing genotype due to an increase in the proportion of B0/W148 and Central Asian Outbreak subtypes with a stable overall level of Central Asian Russian and other Beijing strains. In its turn, the study of other authors (**Khromova P.A. et al.**) showed a tolerant association of the incidence rate not only with tuberculosis mycobacteria of the entire Beijing family, but also with its aggressive subtype B0/W148 in the areas of high prevalence of this disease.

The locality is important not only in the study of the spread of tuberculosis, but also in research in the field of gynecology. Authors from the Murmansk region (**Grigorieva E.I., Martynova A.A.**) conducted a study of the characteristics of the menstrual cycle in girls living in this area. The onset of menarche is noted at a later age compared to girls living in other regions of Russia and neighbouring countries, and is accompanied by symptoms such as heavy and painful menstruation, abnormal uterine bleeding, primary amenorrhea, polycystic ovary syndrome, etc. The results showed that only slightly more than 20 % of girls do not have gynecological pathology, which to a certain extent indicates a low level of reproductive health. Also, the authors from Irkutsk (**Babaeva N.I. et al.**) conducted a study aimed at identifying the main modifiable factors associated with uterine myoma in women of reproductive age in the Baikal region, including in certain ethnic groups. Such factors were not only Asian ethnicity, but also the age of menarche of 12–13 years, the age of the study participants of 40–44 years, the presence of menopausal symptoms, and the presence of adenomyosis.

Burnout and motivation play an important role in intensive workloads and concomitant diseases. The authors from Irkutsk (**Popova K.M., Kuzmin M.Yu.**) developed a program to reduce burnout levels "OsNOVA" for medical workers. The results of participation of doctors and nurses were analysed using relevant questionnaires. As a result, it was found that the program is most effective for those who initially had a high level of burnout. A decrease in the level of professional burnout is characterized by increased awareness and productive coping strategies. The effect of the completed program lasts for another three months and significantly improves the quality of life of participants.

Motivation was studied by the authors from Irkutsk (**Votineva A.S. et al.**) using the example of adolescent girls with obesity. Primarily hospitalized adolescents demonstrated a higher motivation for treatment than adolescents admitted to hospital for the second time. Secondly admitted adolescents experienced a sense of guilt, remorse, anxious suspiciousness, and fear of failure. The dominant type of motivation for treatment in both groups consisted of the attitudes of achieving symptomatic improvement, receiving a "secondary gain" from the disease, and other motivation (passive position).

Returning to the issue of concomitant diseases, I would like to draw your attention to the article by authors from Nizhnevartovsk (**Kolyadko P.V. et al.**) on the evaluation of the results of the effectiveness of laparoscopic longitudinal gastrectomy and gastric bypass with one anastomosis in patients with morbid obesity and type 2 diabetes mellitus. Longitudinal gastrectomy and mini-gastric bypass operations in groups of patients with morbid obesity and type 2 diabetes mellitus demonstrate almost similar bariatric results in the medium term. Both methods allow achieving compensation for type 2 diabetes mellitus with equal efficiency within 3 to 12 months after surgery.

And the last thing I would like to mention in this article is children's health. Children are the future of the nation, so the health of each individual little citizen is such an important and responsible task. Selective exome screening of newborns is the most effective tool for identifying signs of such serious diseases as neoplasms, epilepsy, congenital heart defects, etc. The authors from Moscow and Irkutsk (**Dokshukina A.A. et al.**) examined a child as part of a regional pilot project, from whose venous blood sample DNA was isolated, whole exome sequencing was performed, and a chromosome microarray analysis was performed. As a result, data were obtained in favour of the presence of a previously undescribed duplication of Xq12q13.2, confirmed by the reference method. In this case, one can assume such probable outcomes as congenital malformation, epilepsy, and psychomotor retardation. The use of this method makes it possible to predict the course of the disease, the tactics of observation and treatment, as well as the tactics of medical and genetic counselling and examination of the proband's family for the purpose of planning subsequent pregnancies and the birth of healthy offspring.

Summing up the work on this issue, we can confidently say that the issue turned out to be informative and interesting, which is undoubtedly the merit of our authors and reviewers. We would like to wish our colleagues further interesting projects, bright discoveries and professional achievements!

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