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ТИББИЁТДА ЯНГИ КУН НОВЫЙ ДЕНЬ В МЕДИЦИНЕ NEW DAY IN MEDICINE

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ANALYSIS OF THE DETECTION STATUS OF PRIMARY IMMUNE THROMBOCYTOPENIA IN THE SURKHANDARYA REGION

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✓ Resume

Objective: To investigate the detection status of primary immune thrombocytopenia in the Surkhandarya region.

Materials and methods: The research material consisted of data from the analysis of medical records of patients diagnosed with ITP in medical institutions of the Surkhandarya region from 2012 to 2024. Methods included clinical, laboratory, morphological, and statistical studies.

Results: Based on a retrospective analysis to assess the status of primary detection of ITP among the adult population of the Surkhandarya region, we identified an unsatisfactory state of hematological services associated with a shortage of hematologists in the region's primary healthcare system.

Keywords: immune thrombocytopenia, detection, Surkhandarya region, age category, gender characteristics.

SURXONDARYO VILOYATIDA BIRINCHI IMMUN TROMBOTSITOPENIYA ANIQLASH MAZMUNI TAHLILI

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✓ Rezyume

Maqsad: Surxondaryo viloyatida birlamchi immun trombositopeniyani aniqlash holatini tekshirish.

Materiallar va usullar: Tadqiqot materiali Surxondaryo viloyati tibbiyot muassasalarida 2012 yildan 2024 yilgacha ITP tashxisi qo'yilgan bemorlarning tibbiy ma'lumotlarini tahlil qilish ma'lumotlaridan iborat. Usullar klinik, laboratoriya, morfologik va statistik tadqiqotlarni o'z ichiga olgan.

Natijalar: Surxondaryo viloyatining katta yoshli aholisi o'rtasida ITPni birlamchi aniqlash holatini baholash bo'yicha o'tkazilgan retrospektiv tahlil asosida viloyatdagi birlamchi tibbiy yordam tizimida gematologlar yetishmasligi bilan bog'liq gematologik xizmatlarning qoniqarsiz holati aniqlandi.

Kalit so'zlar: immun trombositopeniya, aniqlash, Surxondaryo viloyati, yosh toifasi, jins xususiyatlari.

Relevance

Primary immune thrombocytopenia (ITP) is an autoimmune disease caused by the production of autoantibodies to platelet membrane structures and their precursors - megakaryocytes (MKC), which lead not only to increased platelet destruction but also to inadequate thrombocytopoiesis. It is characterized by isolated thrombocytopenia with a blood platelet count of less than $100 \times 10^9/L$ with or without hemorrhagic syndrome of varying severity [2, 5, 12].

Studies on the epidemiological characteristics of ITP have shown that the prevalence of the disease varies significantly from 4.5 to 20 per 100,000 population, with the frequency of occurrence among hemorrhagic diatheses averaging 25%. In half of these cases, thrombocytopenia is accompanied by hemorrhagic manifestations [7, 8].

According to American scientists, the incidence of ITP is 1.5-2.0 per 100,000 children, and the frequency per 1 million children and adults reaches 125 cases per year [10, 11].

A population study (2021) showed that the incidence of ITP in France was 2.9 per 100,000 population [4].

A Japanese population study reported disease registration with a frequency of 2.16 per 100,000 people per year. Unlike other studies, it found that the peak age-related incidence occurs in the eighth decade of life [6].

Thus, according to the results of various large-scale epidemiological studies, the frequency of ITP occurrence in different countries among individuals of different races, age categories, and genders is highly variable and uneven. At the same time, the presented data allow us to define these diseases as widespread, occurring among all age groups of the population.

Objective: To investigate the detection status of primary immune thrombocytopenia in the Surkhandarya region.

Materials and methods

The study was conducted based on a retrospective analysis of medical records of patients with an established diagnosis of ITP who sought medical attention at medical institutions in the Surkhandarya region from 2012 to 2024. The age of patients with ITP ranged from 19 to 80 years (median age 41.2 ± 3.9 years). Among the entire group of patients with ITP, men constituted 62 (23.2%), and women 205 (76.8%). The male to female ratio was 1:3.3.

The diagnosis of ITP was established taking into account international criteria (2019) based on the results of clinical examination of patients, laboratory test data (complete blood count, bone marrow aspirate) [9]. The main diagnostic criteria for ITP were:

- isolated thrombocytopenia with a level of less than $100 \times 10^9/L$, determined by sequential Fono counting in two peripheral blood tests;
- an elevated or normal number of megakaryocytes (MGC) in the bone marrow aspirate, provided there are no morphological anomalies or pathologies in other hematopoietic lineages;
- absence of diseases (splenomegaly, systemic hematological disorders, connective tissue diseases, liver diseases, thyroid diseases, viral hepatitis, chronic infections, and other autoimmune diseases) leading to the development of secondary thrombocytopenia [9].

Data on the population of the Surkhandarya region for the period from 2012 to 2024 were obtained from the website of the Statistics Agency of the Republic of Uzbekistan (<https://stat.uz/ru/ofitsialnaya-statistika/demography>). Statistical processing of the results was carried out using the "Statistic for Windows, 2017" standard statistical software package.

Results and discussion: Based on a retrospective analysis of the assessment of the primary detection rate of ITP per 100,000 adult population in the Surkhandarya region, it was revealed that the detection of primary ITP patients was quite low, especially from 2012 to 2019 (Figure 1).

Thus, while the overall registration rate of newly diagnosed patients in 2012 was 0.97, it sharply decreased to 0.03 cases in 2013. In 2014, the number of newly identified ITP cases rose to 0.49 cases, but in 2015 and 2016, the rate declined to 0.35 cases, continuing to decrease to 0.21 in 2017. Starting from 2018, the detection rate began to increase again, reaching 0.42; in 2019 it rose to 0.66, and in 2020 this indicator reached 0.9.

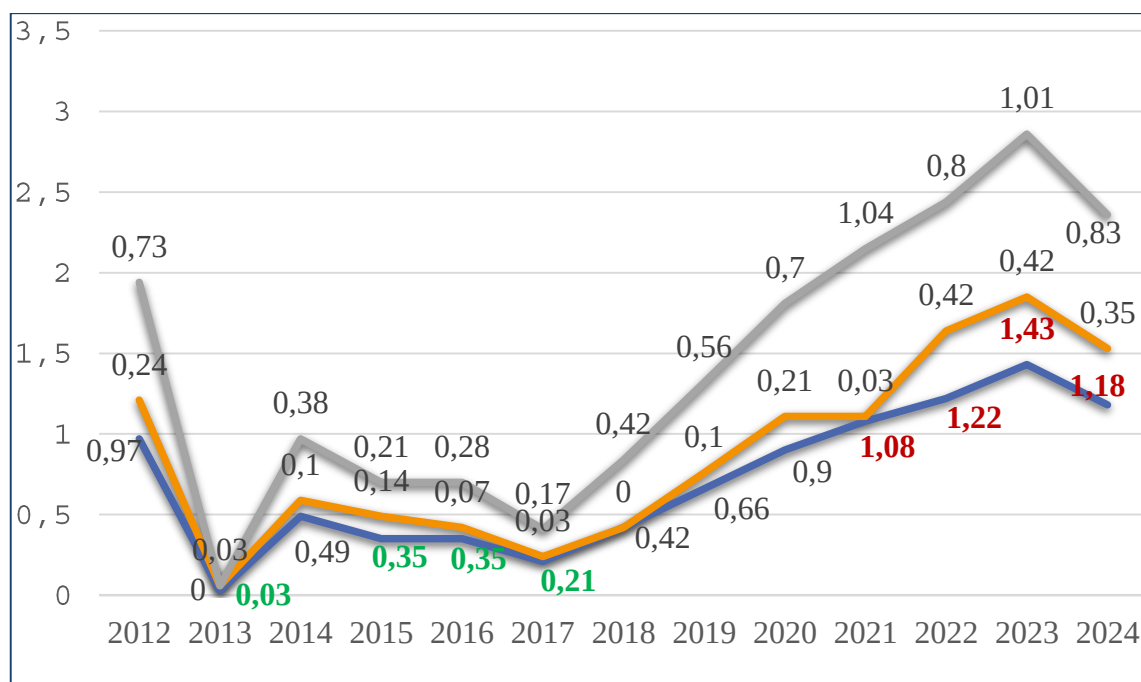


Figure 1. Frequency of primary ITP detection per 100,000 population in Surkhandarya region from 2012 to 2024.

From 2020 to 2024 (November), this indicator reached its maximum values, amounting to 1.08, 1.22, 1.43 and 1.18 per 100,000 adult population respectively. The lowest indicators were recorded in 2013 (0.03) and 2017 (0.21). 1.43 and 1.18 respectively.

Most likely, the increase in registered cases of primary ITP from 2019 to 2024 is related to improved efficiency of hematological services through the introduction of hematologist positions and the implementation of modern hematological analyzers in the laboratory process. Meanwhile, the indicator of primary ITP detection was lower compared to similar indicators in other CIS republics. For example, Russian authors A.L. Melikyan et al. (2019) provide data on the incidence of ITP in the Tula, Irkutsk, and Smolensk regions of the Russian Federation, where the incidence among the adult population was 4.2, 1.6 and 1.4 cases per 100,000 population per year [3].

Kyrgyz researchers have presented data on the registration of ITP cases in the Kyrgyz Republic, ranging from 8.3 to 10.7 cases per 100,000 population per year [1].

Along with this, we observed similar dynamics when calculating per 10,000 population as when calculating per 100,000 population.

Furthermore, we conducted a comparative analysis of primary detection from 2012 to 2024 across districts of Surkhandarya region.

The analysis revealed a higher frequency of ITP registration among female patients, amounting to 205 cases (76.8%), while men constituted only 62 cases (23.2%). The ratio of women to men in the region was 3.3:1.

When assessing the age characteristics of patients with ITP, data showed a high frequency of disease occurrence between 18 and 60 years of age.

Analyzing the age characteristics of patients with ITP separately by districts of Surkhandarya region, it was established that ITP was most often registered among young patients aged 18 to 45 years, ranging from 53.3% (Jarkurgan district) to 79.3% (Muzrabad district). The number of middle-aged patients ranged from 9.1% (Termez district) to 46.7% (Jarkurgan district). Additionally, 5.3% (Termez city) to 18.2% (Termez district) of patients aged 60 to 75 years, and 3.7% (Angor city) to 6.9% (Muzrabad district) of patients over 75 years of age were registered.

Thus, by analyzing the frequency of registration of patients with ITP depending on age, it was established that the largest number of young and middle-aged patients are registered in Muzrabad

(79.3%) and Jarkurgan (53.3%) districts, while patients of older age groups, namely elderly and senile, are more often registered in Termez (18.2%) and Muzrabad (6.9%) districts of Surkhandarya region.

Conclusion

Based on a retrospective analysis to assess the state of primary detection of ITP among the adult population of Surkhandarya region, we established an unsatisfactory state of the hematological service associated with both the shortage of hematologist specialists in the districts of the region and the lack of coordination in the laboratory service of the primary healthcare unit. The low quality of hematological services resulted in a rather low detection of primary ITP patients, especially from 2012 to 2019.

Summarizing the above, we can conclude that, based on a retrospective analysis to assess the state of primary detection of ITP among the adult population of Surkhandarya region, we established an unsatisfactory state of the hematological service associated with the shortage of hematologists in the primary healthcare service of the region.

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