EURASIAN JOURNAL OF MEDICAL AND NATURAL SCIENCES
Innovative Academy Research Support Center
UIF = 8.3 | SJIF = 5.995 www.in-academy.uz

DETECTION OF ADOLESCENT TUBERCULOSIS IN THE REGION OF BUKHARA WITH THE HELP OF THE DRUG "DIASKINTEST"

Alimova Gulrux Salimovna
Bukhara Medical Institute
https://doi.org/10.5281/zenodo.7123233

ARTICLE INFO

Received: 24th September 2022
Accepted:26th September 2022
Online: 29th September 2022

KEY WORDS

tuberculosis, Diaskintest, children and adolescents, risk groups, morbidity, examination of contact

ABSTRACT

Further methods have been combined with culture to successfully diagnose TB including, the chest X-ray and the Tuberculin skin test . Received the results confirm high sensitivity (in all patients with local forms of tuberculosis DST was positive) and the specificity of DST (in all children with post-vaccination allergic a negative reaction to DST was noted), which allows it to be used for differentiation al diagnostics of post-vaccination and infectious allergy in children. The highest frequency of positive of TB risk groups was observed in the contact group (50.6%). Significantly a large number of cases (13 out of 26), contact with patients with bacterial excretion was detected only retrospectively, after the detection of TB disease (1/2 of them had contact with patients excreting among MBT strains with multidrug resistance, 2/3 had familial tuberculosistact). It is necessary to improve the work on identifying contacts and their examination, expanding the sanatorium-type institutions for separation and isolation of children from foci of tuberculosis.

Intraduction. According to official statistics, destructive pulmonary tuberculosis was diagnosed in 13.4% of newly diagnosed patients.Children and 37.3% of adolescents. Further methods have been combined with culture to successfully diagnose TB including, the chest X-ray and the Tuberculin skin test . Proportion of bacteria excretors was 4.6% among children and 26.9% among adolescents. Despite the continued significant level of "bacillary nucleus" (52.0 per 100 thousand) and prevalence of acquired multiple venom drug resistance (MDR) among patients with tuberculosis (TB) in the Region Bukhara - 28.3 per 100 thousand (in the Republic Uzbekistan - 23.6 per 100 thousand), as well as a high proportion of primary MDR in the Republic of Kazakhstan (35.9%) (in the Republic Uzbekistan - 19.8%), number of children in the Republic of Kazakhstan in 2012 amounted to 8.2 per 100 thousand, which is almost 2 times lower than the same indicator in the R (15.2 per 100 thousand). This situation may be related with defects

in the organization of detection and registration number of cases of TB among children. Therefore, an important task is to find new, more informative methods for detecting TB in children.It is known that the main disadvantage of mass tuberculin diagnostics among children and adolescents tkov for the purpose of early detection of tuberculosis is a high proportion of false positives reactions (from 40 to 90%) [5], predominantly directly related to mass BCG vaccination. This is confirmed by the analysis of the results tatov of mass tuberculin diagnostics (test Mantoux with 2 TE PPD-L) and formed on it basis of dispensary observation groups in the Republic anti-tuberculosis dispensary of the. In 2019, according to the results of mass tuberculin diagnostics (85,926 tests were performed in the general medical network

Mantoux with 2 TU) revealed 7 cases of TB among children those that amounted to 0.008% of the number of surveyed nyh. According to the results of mass tuberculin diagnosis and contact examinations TB in 2019 for dispensary observation

formed a group of children and adolescents in number of 2881 people among whom fell ill with TB 12 people (0.4%) . All children and teenagers underwent dynamic observation and examination treatment in phthisiatricians with the use of radiation diagnostic methods. The result of research on the primary structure genome of M. tuberculosis (MBT), antigenes (ESAT-6 and CFP-10) encoded in the zone

RD1 of the MBT genome and expressed at eproduction of the MBT, characteristic only of the virus tape, multiplying strains of MBT. Danye proteins are absent in the vaccine strain M. bovis and most nontuberculous mycobacteria. In most foreign countries,isolated proteins (ESAT-6 and CFP-10) for detection of latent tuberculosis infection and differential diagnosis of TB created and the QFT test (QuuntiFERON – TB Gold In-Tube test) in vitro (specificity up to 99%, sensitivity 78%) [9], [10], requiring care blood from a vein and expensive equipment.In Uzbekistan, based on isolated proteins (ESAT-6 and CFP-10) developed and implemented intradermal

diagnostic test (Diaskintest - DST) [3],[4], the setting technique of which is similar to the test Mantoux with 2 TEs, approved for use by Zom of the Ministry of Health of the SR RF No. 855 dated 10/29/2019. There are works [6], [7], [8] on the use of DST, possessing, according to the authors, a higher specificity than the Mantoux test with 2 TU, for early detection of TB. We have studied the results of using DST drug in 551 patients who were on dispensary registration (risk groups) and passed

our examination in GBUZ "Republican TB dispensary" of the Republic

Uzbekistan, and 29 children and adolescents with identified active TB (Fig. 2). Among 29 children and adolescents treated with local forms of TB, the distribution of TB forms was as follows blowing: tuberculosis of intrathoracic lymphaticical nodes - 18; exudative pleurisy - 1; infiltrative TB - 4; focal TB - 2; per-primordial tuberculosis complex - 4 patients. 83 patients were registered by contactwith TB patients: in IVA - 56 people, IVB - 27 people. 102 children were observed with post-vaccination allergies. In the VIA group - 96; in VIB - 94 rebenka and teenager. A separate group was 147 children and adolescents infected with pro-past years, not subject to observation by a

phthisiatrician. The results of setting DST among various
groups of the surveyed are shown in fig. 3.All children and adolescents (29 people) with local different forms of TB, the reaction to DST was positive living, which confirms the high sensitivity the effectiveness of the DST preparation. Analysis of the results of DST among contacts, observed in IVA and IVB groups in 2019–
2021 - 83 people, showed a high specific weight of positive results. Among them are positive DST was noted in 42 people. (50.6%), including among those observed in the IVA group ne - out of 56 in 31 (55.4%), in group IVB - out of 27 in 11 (40.7%). TB Incidence Study 2019– 2021, spent in these groups, allow edit was possible to identify the highest incidence among contact ones (Fig. 4). According to official
statistics, for 4 years (2019–2021) in the Republic of Kazakhstan in IVA group (contact with patients with TB bacteria patients) fell ill with local forms of TB
13 children and adolescents, which amounted to 1010.1 per 100 thousand, exceeding by 1.5 times the similar indicator for the Republic Uzbekistan (659.9 per 100 thousand) and 123 times TB incidence rate among all children Uzbekistan population in the Republic of Kazakhstan (8.2 per 100 thousand). Retro-prospective analysis revealed contact on TB in all 29 patients with local forms TB in children (see table). Among them, 13 have contact with patients with an open form of TB, only retrospectively, in this regard, the necessary preventive measures are not among them.were carried out. Taking into account the retrospectively revealed lennyh contacts in all cases of local forms of TB in children (26 of them had contact
with bacteria) incidence in IVA group amounted to 2020.2 per 100 thousand and exceeded by 3 times the same indicator in the Russian Federation. On the- the most unfavorable factor is the identification 50% of them had contact with patients, excreting mi strains of MBT with MDR: out of 26 cases, 13 had contact with bacterial excretors with MDR,the vast majority of them were in a close, family tube contact. In IVB group 3 people got sick. (332.6 per 100 thousand), which is 2 times
exceeded the same indicator in the Republic Uzbekistan (154.4 per 100 thousand). The vast majority of children and adolescents lived in socially unfavorable received families, in which in absolute pain most had familial tubal contact (in IVA group - 26 (78.6%)). In the VIA group of 96 children a positive reaction to DST was observed in 10 people (10.4%). Low percentage of positive reactions in this group, possibly due to flax overdiagnosis of tuberculosis according to the Mantoux test with 2 TU associated with insufficient but qualitative selection of children and adolescents for tuberculin diagnostics (against the background of catarrhal phenomena, allergic manifestations, etc.).In the VIB group of 94 children, a positive reaction 25 people (26.6%) had DST. These children have DST results confirmed active tumor tuberculosis infection, which was one of the indications for prescribing preventive chemotherapy myotherapy. Of the 147 children and adolescents infected with from previous years, in 98% of cases there was a negative reaction to DST. All children with an established post-vaccination allergy to BCG vaccine (102 children), the reaction to DST was negative,

which indicates a high special the physicality of the DST preparation. Of all examined DST method (545 children and adolescents), directed those who are referred to a phthisiatrician with positive tuberculosis culin tests, positive reaction on DST was detected in 103 people (18.9%), i.e. 5.3 times less common than positive Mantoux test with 2 TU PPD-L.
CONCLUSIONS
The results obtained confirm the juice sensitivity (in all patients with local forms of tuberculosis DST was positive) and drug specificity "Diaskintest" (in all children with post-vaccination allergies were negative reactions to DST), which allows it to be used for differential diagnosis of post-vaccination and infectious allergies in children. The highest proportion of positiveny reactions to Diaskintest from risk groups according to TB was observed in the contact group (50.6%). The incidence of TB in this group in the region Bukhara amounted to 1324.8 per 100 thousand (in IVA -2020.2 per 100 thousand; in IVB - 332.6 per 100 thousand), exceeding by 37–123 times the incidence of TB in the the rest of the child population, which dictates the need for the most thorough identification contacts and their subsequent examination and observation by phthisiatricians. In a significant number of affected children and adolescents (13 out of 26) only ret prospectively, after detection of TB disease (1/2 of them had contact with the most dangerous patients who isolated MBT strains with multiple natural drug resistance, 2/3 had a family tube contact), which is evidence no about shortcomings in the organization to identify contact persons and work with them. Considering the high incidence of children from TB contacts who usually live in socially disadvantaged families, against the backdrop of widespread tuberculosis with MDR in Bukhara it is necessary to expand children's
resolutions of the sanatorium type for separation and isolation of children from foci of tuberculosis.The use of the new technique "Diaskin-test" in a comprehensive examination of children with HIV rages (VIA group) and hypertests for reaction
Mantoux with 2 TE PPDL (VIB group) allows detect active TB infection and significantly reduce the amount of subsequent in-depth X-ray tomographic examination research and dynamic monitoring of phthisiasis rum with an unjustified prescription of prophylactic treatment (with inactive TB infection).

References:

1. Isomiddin USMONOV, Umrzok SHUKUROV. (2021). Features of the Clinical Course, the State of Diagnosis and Treatment of Hiv-Associated Pulmonary Tuberculosis in Modern Conditions Literature Review. Annals of the Romanian Society for Cell Biology, 1809–1828. Retrieved from https://www.annalsofrscb.ro/index.php/journal/article/view/2700
2. Isomiddin Xaydarovich Usmonov, Nodir Yusufovich Kobilov. (2021). Epidemiology, Clinical Course, Diagnosis and Treatment of Generalized Tuberculosis in Modern Circumstances Literature Review. Annals of the Romanian Society for Cell Biology, 25(2), 3806–3819. Retrieved from https://www.annalsofrscb.ro/index.php/journal/article/view/1387

3. Kh U. I., Muazzamov B. R., Jumaev M. F. Features of diagnostics and treatment of drug-resistant forms of pulmonary tuberculosis //International journal of pharmaceutical research. – 2021. – Т. 13. – №. 1. – С. 2484-2489.
4. Парпиева Н. Н. и др. Особенности диагностики и лечении при генерализированных формах туберкулёза //Новый день в медицине. Бухара,(2). – 2020. – С. 424-428.
5. Ismoilovich A. F. Tuberculosis Diagnostics with Modern Solutions (Literature Review) //CENTRAL ASIAN JOURNAL OF MEDICAL AND NATURAL SCIENCES. – 2022. – Т. 3. – №. 3. – С. 377-383.
6. Ismoilovich A. F. Modern Diagnostic Test for Tuberculosis //European Multidisciplinary Journal of Modern Science. – 2022. – Т. 4. – С. 408-412.
7. Aslonov F. I., Rustamova S. A., Raxmonova K. M. Immunopatological aspects in patients with first detected pulmonary tuberculosis //World Bulletin of Public Health. – 2021. – Т. 4. – С. 91-95.
8. Мизробовна, Р. К. (2021). Туберкулез Легких И Сопутствующие Заболевания. Central Asian Journal of Medical and Natural Science, 2(6), 137-144. https://doi.org/10.47494/cajmns.v2i6.496
9. Музробовна, Р. К. (2022). Разработка Методов Ранней Диагностики, Лечения И Профилактики Хронической Дыхательной Недостаточности При Туберкулёзе Легких(Обзорная Литературы). Central Asian Journal of Medical and Natural Science, 3(3), 262-272. Retrieved from https://cajmns.centralasianstudies.org/index.php/CAJMNS/article/view/776
10. Mizrobovna, R. K. . (2022). Accompanying Diseases of the Respiratory System Pulmonary Tuberculosis. European Multidisciplinary Journal of Modern Science, 4, 244–250. Retrieved from https://emjms.academicjournal.io/index.php/emjms/article/view/75
11. Ulugbek o'gli, A. M. (2022). Factors Predicting Mortality in Pulmonary Tuberculosis. Central Asian Journal of Medical and Natural Science, 3(3), 362-367. Retrieved from https://cajmns.centralasianstudies.org/index.php/CAJMNS/article/view/795
12. o'gli, Abukarimov Mirzobek Ulugbek. 2022. "Test for Procalcitonin As a Way to Predict Patients With Respiratory Tuberculosis". European Multidisciplinary Journal of Modern Science 4 (March):486-91. https://emjms.academicjournal.io/index.php/emjms/article/view/119.
13. Салимовна, А. Г. (2022). Массовый Скрининг Для Выявления Туберкулезной Инфекции У Детей В Возрасте От 2 До 8 Лет. Central Asian Journal of Medical and Natural Science, 3(3), 368-376. Retrieved from https://cajmns.centralasianstudies.org/index.php/CAJMNS/article/view/796
14. Salimovna, A. G. . (2022). Diagnosis of Tuberculosis Infection Activity by ELISA and Transcription Analysis Methods. European Multidisciplinary Journal of Modern Science, 4, 492–497. Retrieved from https://emjms.academicjournal.io/index.php/emjms/article/view/120
15. Жумаев Мухтор Фатуллаевич СЛОЖНОСТИ ДИАГНОСТИКИ И ЛЕЧЕНИЯ ЛЕКАРСТВЕННО-УСТОЙЧИВЫХ ФОРМ ТУБЕРКУЛЁЗА ЛЕГКИХ // Вопросы науки и образования. 2021. №15 (140). URL: https://cyberleninka.ru/article/n/slozhnosti-

diagnostiki-i-lecheniya-lekarstvenno-ustoychivyh-form-tuberkulyoza-legkih (дата обращения: 27.09.2022).

16. Jumayev Mukhtor Fatullayevich. (2021). BIOLOGICAL CHARACTERISTICS OF THE CAUSATIVE AGENT OF TUBERCULOSIS IN PATIENTS WITH PULMONARY TUBERCULOSIS. World Bulletin of Public Health, 5, 27-32. Retrieved from https://scholarexpress.net/index.php/wbph/article/view/368

17. Akhtamovna, K. N. (2021). Fibrotic Complications in the Lungs in Patients Who Have Had COVID-19 Pathogenesis of COVID-19. European Journal of Life Safety and Stability (2660-9630), 9, 14-24. Retrieved from http://www.ejlss.indexedresearch.org/index.php/ejlss/article/view/133

18. Axtamovna K. N. Optimization of methods of treatment of fibrotic complications in the lungs in patients with tuberculosis and covid-19 //Web of Scientist: International Scientific Research Journal. – 2022. – T. 3. – №. 6. – C. 1335-1342.

19. Erkinova, N. (2021). OBSERVATION OF ALBUMINURIA IN CHRONIC HEART FAILURE AND SOME OF ITS CLINICAL FEATURES. Galaxy International Interdisciplinary Research Journal, 9(05), 442-446.

20. Nigora, E., & Nargiza, X. (2021). OBSERVATIONS, CLINICAL FEATURES OF ALBUMINURIA WITH RENAL CHANGES IN CHRONIC HEART FAILURE. Academicia Globe: Inderscience Research, 2(05), 335-339.

21. Erkinovna, E. N., & Ulugbekovna, O. A. (2021, August). THE COURSE OF COMORBID CONDITIONS IN DIFFERENT FUNCTIONAL CLASSES OF CHRONIC HEART FAILURE. In INTERNATIONAL CONFERENCE ON MULTIDISCIPLINARY RESEARCH AND INNOVATIVE TECHNOLOGIES (Vol. 1, pp. 131-134).

22.Сохибова З.Р.,Ахмадова М.А. Комплексная диагностика и хирургическое и хирургическое лечение осложненных форм эхинококкоза печени./OrientalRenaissance:Innovative,Educational, naturalandsocialsciences/2021й -стр 203-212.

23.Сохибова З.Р.,Ахмадова М.А. Комплексная диагностика и хирургическое и хирургическое лечение осложненных форм эхинококкоза печени./OrientalRenaissance:Innovative,Educational, naturalandsocialsciences/2021й -стр 203-212.

24. Ахмадова Мафтуна Амин кизи Маммография И Ультразвуковое Исследование В Диагностике Местных Рецидив Рака Молочной Железы.CENTRAL ASIAN JOURNAL OF MEDICAL AND NATURAL SCIENCE./https://cajmns.centralasianstudies.org/index.php/CAJMNS/article/view/1023

25. Akhmadova Maftuna Amin Qizi Modern Diagnostics and Surgical Treatment of Complicated Forms of Liver Echinococcosis/ CENTRAL ASIAN JOURNAL OF MEDICAL AND NATURAL SCIENCE/ https://cajmns.centralasianstudies.org/index.php/CAJMNS/article/view/1021