

Klinik laborator diagnostikada innovatsion texnologiyalardan foydalanish, muammolar va yechimlar, 2023



**KLINIK LABORATOR  
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FOYDALANISH, MUAMMOLAR VA  
YECHIMLAR**  
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## **POSSIBILITIES OF MULTIPARAMETRIC EXAMINATION IN THE DIAGNOSIS OF TUBERCULOSIS OF PERIPHERAL LYMPH NODES**

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**Relevance.** According to the modern understanding of the pathogenesis of the development of tuberculosis of peripheral lymph nodes (TPLU) can be considered as regional tuberculous lymphadenitis. Of the existing methods of ultrasonography, multiparametric ultrasound (MP ultrasound), which includes linear B-mode, color and energy Doppler mapping modes, compression elastography, shear wave elastography and contrast-enhanced ultrasound, may be of the greatest interest for the differential diagnosis of focal changes in LU.

**The aim of the study:** to improve the results of non-invasive early diagnosis of tuberculosis lesions of peripheral lymph nodes.

**Materials and methods.** The study included the results of diagnosis and treatment of 62 patients aged 18 to 70 years, referred to RSNPMC FiP with suspected tuberculosis of lymph nodes in the period from 2018 to 2022. There were 28 women (45.2%), 34 men (54.8%). By age, patients were distributed as follows: from 18 to 44 years – 4 (6.5%), from 45 to 59 years – 29 (46.7%), from 60 to 74 years – 24 (38.7%) and 75 years and older – 5 (8.1%).

All patients were scanned to detect pathognomonic ultrasound signs of LU tuberculosis on Siemens Acuson 2000 ultrasound machines with convexic and linear sensors, respectively, with a frequency of 2-4 MHz, 5-10 MHz; Esaote MyLab 9eXP apparatus with a linear sensor (L 4-15) was used for elastography.

**Results.** In TPLU, the pathological process was most often localized in the cervical and submandibular region 61.1% - 95.7% of cases. Tuberculous lymphadenitis was less common in the axillary 15.0% - 17.0% and inguinal 7.0% - 8.0% areas.

In the inflammatory process, the reaction of the lymph node occurs as an adequate response to the introduction of the antigen. At the same time, the differentiation of lymph node structures remains unchanged. This stage is non-specific.

Currently, a system of qualitative assessment of the results of compression elastography of lymph nodes is used to assess the stiffness of lymph nodes (M. Furukawa 2007): the first type (soft), the second type (moderately soft), the third type (moderately hard), the fourth type (hard).

According to E.N. Bellendir, there are four stages in the development of a specific process in LU:

Stage I is the initial, proliferative stage. The stage of proliferation may not have ultrasound signs of tuberculous granulomas. The contents of such lymph nodes are similar to the ultrasound signs of other granulomatous diseases. The formation of an echo-dense capsule of the lymph node indicates the ability of the body to distinguish the tuberculosis process at an early stage.

Stage II - caseous, without softening and decay. The anechoic zone around the capsule indicates that the entire structure of the lymph node has been destroyed and replaced by tuberculous granulomas, and the normal function of the lymph node (lymph circulation) is blocked with the formation of lymph stagnation — lymphostasis. Such an echographic sign as reduced perfusion both in and around the lymph node is explained, firstly, the toxin of tuberculosis bacillus blocks blood capillaries, and secondly, the lymphostasis zone around the lymph nodes is significant for reducing blood circulation.

Stage III - abscessing; The appearance of anechoic zones in the lymph node indicates the beginning of the stage of purulent melting of tissues (destructive process).

Stage IV - fistula (ulcerative). In dynamics, the progression of the process leads to the melting of the lymph node capsule with the release of the contents into the surrounding space.

**Conclusion.** The multiparametric method of ultrasound scanning has a number of advantages due to its non-invasiveness and mass character, and its enhancement by elastography makes it possible to enhance the sensitivity and overall accuracy of the technique with its successful application at the earliest stages. This, in turn, prevents the generalization and development of severe, often fatal complications of tuberculosis of peripheral lymph nodes.

## **BILIRUBIN VA UNING KLINIK AHAMIYATI**

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**Toshkent tibbiyot akademiyasi**

**Bilirubin** – bu o‘t pigmenti hisoblanib, qonda eritrotsitlarni parchalanishi natijasida hosil bo‘ladi va ajigar hujayralari tomonidan tutib olinib, o‘t suyuqligi va ichak orqali organizmdan chiqarib yuboriladi. Jigar hujayralari tomonidan ushlab olingan bilirubin bog‘langan, jigarga tushmay qonda erkin yurgan bilirubin bog‘lanmagan deb atalib, normada qonda har ikkalasi ham ma‘lum miqdorda aniqlanadi. Virusli hepatitlarda qonda bog‘langan bilirubin miqdorini ortishi kuzatilib, sariqlik bilan namoyon bo‘lishi mumkin.

Bilirubin retikuloendotelial sistemasi hujayralarida, xususan jigarning kupfer hujayralarida gemoglobinning prostetik guruhi gemdan hosil bo‘ladi va erkin bilirubin deb atalib, suvda erimaydi. U Erlix diazoreaktivi bilan reaksiyaga kirishgani uchun bog‘lanmagan yoki bilvosita bilirubin deb ham nomlanadi.

Bog‘lanmagan bilirubin qon tarkibida albumin bilan birikkan ko‘rinishda uchraydi. U qon bilan jigarga tushgach, jigar hujayralarining endoplazmatik