АКТУАЛЬНЫЙ КЛИНИЧЕСКИЙ ПРИМЕР ТУБЕРКУЛЁЗНОГО ПОРАЖЕНИЯ СТЕРНАЛЬНОЙ КОСТИ

Ходжаева С.А. https://orcid.org/ 0000-0002-4181-8664

Ассистент кафедры фтизиатрии и пульмонологии

Самаркандский Государственный Медицинский университет, Самарканд, Узбекистан

АННОТАЦИЯ

Костно-суставной туберкулез составляет 10-25% от внелегочного туберкулеза, поражение грудины туберкулезом является редкой клинической формой даже в странах с высокой распространенностью туберкулеза. Тщательный поиск литературы, по ключевым словам, "первичный туберкулез грудины" и "первичный туберкулезный остеомиелит грудины" в базе данных PubMed дал 30 и 22 статьи соответственно. Проанализирован клинический случай: женщина, 23 лет. Обратилась в стационар по поводу образования на передней стенке грудной клетки. При осмотре виден большой отек диаметром 12,5 см, мягкий, безболезненный, без повышения температуры, флюктуирующий. Гной был аспирирован и исследован. Гной был отрицательным по отношению к кислотоустойчивым бациллам (КУБ), но нуклеиновый кислотный тест с использованием картрижного теста амплификации нуклеиновой кислоты на Mycobacterium tuberculosis был положительным и чувствительным к рифампицину. Согласно исследованиям современных ученных, рентгенологические признаки могут первоначально отсутствовать при поступлении, а симптомы, абсцессы или свищи могут появиться задолго до того, как методы визуализации обнаружат их. **Заключение.** Изолированный первичный остеомиелит грудины, вызванный M. tuberculosis, все еще встречается редко, несмотря на высокую распространенность туберкулеза в эндемичных странах.

Ключевые слова: костно-суставной туберкулез, микобактерии туберкулеза, туберкулез грудины, литература, гной

STERNAL SUYAGINING SIL BILAN ZARARLANISHINING DOLZARB KLINIK MISOLI

Xodjayeva S.A. https://orcid.org/ 0000-0002-4181-8664

Ftiziatriya va pulmonologiya kafedrasi assistenti

Samarqand davlat tibbiyot universiteti, Samarqand, O‘zbekiston

ANNOTATSIYA

Suyak-bo‘g‘im tuberkulyozi o‘pkadan tashqari tuberkulyozning 10-25% ni tashkil qiladi, to‘sh suyagining tuberkulyoz bilan zararlanishi tuberkulyoz ko‘p tarqalgan mamlakatlarda ham kam uchraydigan klinik shakl hisoblanadi. PubMed ma’lumotlar bazasida "to‘sh suyagining birlamchi tuberkulyozi" va "to‘sh suyagining birlamchi tuberkulyoz osteomiyeliti" kalit so‘zlari bo‘yicha adabiyotlarni sinchkovlik bilan qidirish mos ravishda 30 va 22 ta maqolani berdi. Klinik holat tahlil qilindi: ayol, 23 yosh. Ko‘krak qafasining oldingi devorida o‘sma borligi sababli shifoxonaga murojaat qilgan. Ko‘krak qafasining oldingi devorida o‘sma borligi sababli shifoxonaga murojaat qilgan. Ko‘rikda diametri 12,5 sm bo‘lgan katta shish, yumshoq, og‘riqsiz, harorat ko‘tarilmagan, o‘zgaruvchan. Yiring aspiratsiya qilinib, tekshirildi. Yiring kislotaga chidamli tayoqchalarga (KCHB) nisbatan manfiy edi, ammo Mycobacterium tuberculosis uchun nuklein kislota amplifikatsiyasining kartrij testidan foydalangan holda nuklein kislota testi musbat va rifampitsinga sezgir edi. Zamonaviy olimlarning tadqiqotlariga ko‘ra, kasalxonaga yotqizilganda rentgenologik belgilar dastlab bo‘lmasligi mumkin va simptomlar, abssesslar yoki oqmalar vizualizatsiya usullari ularni aniqlashidan ancha oldin paydo bo‘lishi mumkin. **Xulosa.** M. tuberculosis keltirib chiqaradigan to‘sh suyagining izolyatsiyalangan birlamchi osteomiyeliti, endemik mamlakatlarda silning yuqori tarqalishiga qaramay, hali ham kam uchraydi.

Kalit so’zi: suyak-bo‘g‘im sili, sil mikobakteriyalari, to‘sh suyagi sili, adabiyotlar, yiring

A RELEVANT CLINICAL CASE OF TUBERCULOUS INVOLVEMENT OF THE STERNAL BONE

Khodjaeva S.A. https://orcid.org/ 0000-0002-4181-8664
Assistant of the Department of Phthisiology and Pulmonology
Samarkand State Medical University, Samarkand, Uzbekistan

ANNOTATION

Bone-joint tuberculosis accounts for 10-25% of extrapulmonary tuberculosis, and the involvement of the sternum in tuberculosis is a rare clinical form even in countries with high tuberculosis prevalence. A thorough search of literature, according to keywords, "primary tuberculosis of the sternum" and "primary tuberculous osteomyelitis of the sternum" in the PubMed database yielded 30 and 22 articles, respectively. A clinical case was analyzed: a woman, 23 years old. She turned to the hospital for a tumor on the anterior chest wall. Upon examination, a large swelling with a diameter of 12.5 cm, soft, painless, without fever, fluctuating, is visible. The pus was aspirated and examined. The pus was negative for acid-resistant bacilli (ACB), but the nucleic acid test using a cartridge amplification test for Mycobacterium tuberculosis was positive and sensitive to rifampicin. According to research by modern scientists, radiological signs may initially be absent upon admission, and symptoms, abscesses, or fistulas may appear long before imaging methods detect them. Conclusion. Isolated primary sternal osteomyelitis caused by M. tuberculosis is still rare, despite the high prevalence of tuberculosis in endemic countries.

Keywords: bone-joint tuberculosis, tuberculosis mycobacteria, sternal tuberculosis, literature, pus

Bone-Joint tuberculosis accounts for 10-25% of out-of-lung tuberculosis, a tuberculosis that mainly damages the spine or supporting joints. Tuberculosis of the collarbone is also a rare clinical form in countries where tuberculosis is prevalent. Primary tuberculosis sternal osteomyelitis accounts for about 0.3% of all types of tuberculosis osteomyelitis, and the likely source is dispersal from paratracheal or intrathoracic lymph nodes. Despite the fact that tuberculosis is a common disease in endemic countries and around the world, a careful search of the literature on the keywords "primary tuberculosis of the collarbone" and "primary tuberculosis osteomyelitis of the collarbone" in the PubMed database gave 30 and 22 articles, respectively.

Clinical phenomenon. A 23-year-old woman complained that over the past 5 months, a painless swelling has appeared on the front wall of the chest, which is gradually developing. He had no significant medical history and was immune. He or his family had no connection with Koch's infection. The Anamnesis had no injuries to the anterior chest wall or surgical interventions nearby. She is a housewife and belongs to the lower middle socio-economic class on the modified Kuppuswami scale. He had no dependence and took a 1-Week course of antibiotics (amoxicillin and clavulanate) before contacting us. The case of vaccination against calmett-Geren Bacillus has not been confirmed. It has a medium body, no fever, stroke is 76 per minute, breathing rate is 13 per minute, blood pressure is 120/84 mm wire.who. was. On the front wall of the chest, a large swelling with a diameter of 12.5 cm is visible, soft, painless, the temperature does not rise, it is fluuctuating. The skin coating was normal and there were no other significant marks. There was no cervical lymphadenopathy. Examination and neurological evaluation of the chest and abdomen were mostly normal. An ultrasound scan revealed a hypoechogenic collection of about 180 cm3. Its laboratory tests: hemoglobin 9.1 g %, Total leukocyte count 8600 64% polymorphic and 35% lymphocyte, erythrocyte deposition rate (ECHT) 26 mm. The activity of the liver and kidneys was in moderation. Chest X-rays were also in moderation. Magnetic resonance

imaging (MRI) showed hyperintensive accumulation at the top of the chest, about 120x68x49 mm in front of the collarbone, a bone marrow tumor and a second fluid build-up nearby on the left handlebar, which is associated with the unevenness of the bark and the furnace previously described.

There were several enlarged paratracheal lymph nodes. The pus was aspirated and examined. The pus was negative compared to acid-resistant bacilli (KChB), but the nucleic acid test using a cartridge nucleic acid amplification test for Mycobacterium tuberculosis was positive and sensitive to rifampicin. The pus crop did not show growth after 72 hours.

The Mantu reaction was 4 mm after 48 hours; examination of the sputum and planting in a cube was negative. It weighed 55 kg and was preceded by a daily dose of anti-tuberculosis therapy (TQT) with four drugs: isoniazid (300 mg), rifampicin (450 mg), pyrazinamide (1200 mg), and ethambutol (800 mg). For 2 months (2hrze), then for 4 months isoniazid and rifampicin (4hr). It initially required two aspirations over a period of 5 weeks. M.the culture was positive for tuberculosis. After 7 weeks of therapy, the swelling decreased significantly. At this time, he completed 6 months of therapy and the tumor disappeared.

Discussion. Tuberculosis can spread to almost all organs after primary infection or after activation of latent foci. According to the 2018 Global sil report, 10 million new cases were reported in 2017 and 80% of cases fell to ten countries, with India (26%), Indonesia (11%) and Nigeria (9%) entering the top three [2]. This means that about a quarter of cases of tuberculosis worldwide fall under the contribution of India. Worldwide, the rate of non-pulmonary tuberculosis reached 10-15%, with young patients, women and people from Africa or Asia found to be more at risk. Of all cases of tuberculosis except the lungs, 10-25% of the musculoskeletal system is sili, with the most common area of injury being the spine (50-69%), followed by the thigh, knee and ankle/heel (10-13%) [3].

In about 60 to 80% of cases of skeletal tuberculosis, the spine or backbone is damaged, while the collarbone is damaged in about 1% of cases [1]. Collarbone

tuberculosis is a rare form of flat bone tuberculosis that can be accompanied by isolated or pleuropulmonary or lymphatic damage.

Isolated primary cold abscess of the collarbone becomes a diagnostic puzzle, especially if it is not associated with pulmonary tuberculosis. Most cases are an expansion of the primary furnace in the chest, manifested by a wound, a leak or a tumor with constitutional signs, while in this case there was a large cold abscess without constitutional signs.

Sternal mycobacterial infections are divided into three types: primary (67.3%), secondary (20.8%), and acquired after surgery (11.9%). In 14 of the 980 cases of Tuli and Syncha Bone-Joint tuberculosis, sternal tuberculosis was reported (1.5%). They are mainly young males aged on average 36 years (11 to 59 years), but cases have also been found in child populations. The incidence is 65% in males and 34% in females. Cunning et al analyzed 27 papers that reported 32 cases from 1966 to 2013, finding that primary sternal tuberculosis was more common in men (76%) and occurred at a relatively young age [7].

Reactivation of latent foci produced by hematogenic or lymphatic transmission of primary tuberculosis is a major cause of tuberculosis-related sternal osteomyelitis. Other mechanisms are direct spread from adjacent mediastinal lymph nodes, or infection in the posterior lymph nodes, which decompose into the collarbone over time. Thoracic tuberculosis is often more common on the stem (almost 70%) than on the body when collarbone damage is found if the rib spine or rib-spine, rib-spine joints are damaged [4].

Yuan found that isolated sili of the collarbone were observed in 60.4% of patients, collarbone tuberculosis with invasion of peristinal tissue (muscles, vertebrae and joints) - in 20.1% of patients, collarbone tuberculosis with tuberculosis of other organs - in 19.5% of patients.

The disease is often diagnosed late due to unspecific symptoms and slow insidious course. The average duration of symptoms before diagnosis was 6.3 months. The clinical picture of the disease is different. Swelling and pain located

in the area of the collarbone are the most common symptoms. Others are manifested by scarring of the skin or the arrival of detachment from the nasal cavities. Constitutional symptoms are less common, but include feeling unwell, fever, night sweats, or weight loss.

Our patient did not have any constitutional symptoms, and at the beginning there was a painless swelling in him, which in the last month became uncomfortable due to the rapid increase in size. The examination revealed primary sternal tuberculosis osteomyelitis and cold abscess.

Blood analysis is almost in moderation in most cases, with the exception of an increase in ECHT. Chest X-rays are normal in about 70% of cases, and in about 40% of cases, tuberculosis is detected not only in the collarbone, but also often in the lymphatic system. In more than 81% of cases of collarbone tuberculosis osteomyelitis, there are anomalous results of tuberculin skin fracture [5].

According to a study by Vijay et al, radiological signs may initially disappear during admission, and symptoms, abscesses or leaks may appear long before visualization methods can detect them. Normal radiographs are often normal, but radiography techniques such as computed tomography (CT) and MRI are more relevant for bone fractures and the localization and detection of soft tissue anomalies [6]. Common signs of blunt tuberculosis in CT are bone and vertebrate fragmentation, soft tissue masses, fascial Plains-Crossing margin (abscess), and diffuse strengthening (granulatory tissue), calcification, and underlying pleuroparenchymatous tuberculosis. MRI better detects abscesses in soft tissues and isolates bone marrow damage. Atazoy and others have shown the role of MRI in early detection of bone marrow and soft tissue damage in collarbone tuberculosis due to the high contrast accuracy of MRI.

Changes in early cellulitis (*panniculitis) (seen in T1-weighted images as an alternation of subcutaneous adipose tissue signal with swelling and strengthening) and myositis (showing hyperintensitivity of the muscles involved in T2-weighted images with their enlargement) are also often observed. Late changes include

osteomyelitis, joint fluid, bone degradation. One can also see the formation of a sinus pathway, which manifests as a high intensity (SI) linear signal in T2-drawn images. Ultrasound has a limited value in the early stages, but later abscesses, osteolytic damage to the collarbone or damage to the ribs are detected.

For histopathological diagnosis of osteomyelitis of the collarbone, it is imperative to carry out a needle aspiration biopsy or excision biopsy, since X-ray data does not allow to distinguish the cause of osteomyelitis, and sometimes it can also appear to be neoplastic [1,7].

The diagnosis is usually confirmed by the detection of MBT and positive MBT cultures, as well as caseosis necrosis and granuloma on histological examination. The frequency of positive crops is up to 75%. Newer tests such as polymerase chain reaction amplification (PZR) and GeneXpert nucleic acid amplification test can also help with diagnosis in cases of negative grease or ECMA.

A high level of care is required for early diagnosis and prompt treatment, which can prevent complications. TQT is the basis of treatment according to a standard scheme of four drugs for 6-9 months. Cold abscesses or stacks can be aspirated.

Han and co-authors found that surgical intervention is only necessary in the following cases: when open biopsy is necessary when puncture aspiration does not produce results; drainage of leaks; sanitation to quickly treat damaged or sequestered bones or joints visible on X-rays, such as a funnel-shaped chest; large-scale interosseous disease or exacerbation of the disease; symptoms of secondary infection or mediastinitis; or

Surgical methods are only necessary in permanently drained fistula and bone erasure, which include closing the chest with a large muscle of the chest, the right muscle of the abdomen, the widest muscle of the back or the larynx, reconstructing or not the chest wall, or using a vacuum. The outcome of patients is usually positive in treatment.

Conclusion. M. isolated primary osteomyelitis of the collarbone caused by tuberculosis, despite the high prevalence of tuberculosis in endemic countries, is still rare. Tuberculosis damage to the collarbone can manifest differently and occur in people of all ages. This requires a high suspicion index, as diagnostics are usually delayed. CT and MRI provide important indications, but confirmation can only be obtained using an ECMA or histopathological examination. TQT remains the basis of treatment. Surgical drainage of the abscess should only be considered if it is not absorbed during aspiration and TQT.

References / Список литературы /Iqriboslar

1. Garg RK, Malhotra HS, Kumar N. Spinal Tuberculosis: Still a Great Mimic. Neurol India. 2019;67(6):1402-4. https://doi.org/10.4103/0028-3886.273618
2. Heyde CE, Lübbert C, Wendt S, Rodloff A, Völker A, von der Höh NH. Spinal Tuberculosis. Z Orthop Unfall. 2022;160(1):74-83. https://doi.org/10.1055/a-1285-4994
3. Wang B, Gao W, Hao D. Current Study of the Detection and Treatment Targets of Spinal Tuberculosis. Curr Drug Targets. 2020;21(4):320-7. https://doi.org/10.2174/1389450120666191002151637
4. Jetley S, Jairajpuri ZS, Pujani M, *et al*. Tuberculosis “The Great Imitator”: A usual disease with unusual presentations. Indian J Tuberc. 2017;64:54–9.
5. Adada H, Valley MA, Nour SA, *et al*. Epidemiology of extra-pulmonary tuberculosis in the United States: high rates persist in the post-HIV era. Int J Tuberc Lung Dis. 2014;18:1516–21.
6. Vijay V, Vaishya R. Isolated C-C joint tuberculosis—a diagnostic dilemma. Foot (Edinb). 2015;25:182–6.
7. Held MFG, Hoppe S, Laubscher M, Mears S, Dix-Peek S, Zar HJ, *et al*. Epidemiology of musculoskeletal tuberculosis in an area with high disease prevalence. Asian Spine J. 2017;11(3):405–11.