

Left Pubic Tuberculosis Was Misdiagnosed as Synovitis of the Left Hip

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Abstract: A 51-year-old male patient was admitted to hospital with “1 week of restricted movement in left hip pain.” The patient denied trauma and had no other specific discomfort. Slightly reduced weight and physical strength, normal diet. No previous history of tuberculosis or exposure. Admission examination: no obvious abnormalities in the appearance of the spine, no tenderness and percussion pain. Left groin tenderness (+), left hip and buttock percussion pain (+), left 4-word experiment (+). Admission to complete relevant investigations: consider infectious lesions of the left pubic bone. After admission to the hospital and standardized treatment of tuberculosis, the patient's left pubic pain was significantly improved.

Keywords: pubic bone, Hip, synovitis, tuberculosis

1. Case Report

The patient, a 51-year-old male, was admitted to hospital with “1 week of restricted movement in left hip pain”. The patient had no obvious trigger for left hip pain 1 week ago, with limited left hip movement, left lower limb lameness, and no significant relief after rest. MRI of our hospital showed that there were no abnormalities in the morphology and position of bilateral acetabula, no abnormalities in the morphology and signal of bilateral femoral heads, patchy long T1 and long T2 abnormal signal shadows in the iliopsoas muscle in front of the left femoral head, no abnormal signals in bilateral joint cavities, smooth articular surfaces,

no abnormal changes in joint relations, no abnormal changes in the morphology and signal of bilateral gluteal muscles, local mild edema of the iliopsoas muscle in front of the left femoral head, and no obvious lesions in bilateral hip joints. After admission, the patient was pushed into the ward by a wheelchair, poor energy, pain in the left groin and left buttock, restricted movement of the left hip joint, denial of trauma, a slight cold and fever about 1 week ago, and improved after taking “Kankang” symptomatic treatment, no fever again, no cough and runny nose, no fatigue diarrhea, no other special discomfort. Slightly reduced weight and physical strength, normal diet. No previous history of tuberculosis or exposure. Admission

examination: no obvious abnormalities in the appearance of the spine, no tenderness and percussion pain. Left groin tenderness (+), left hip and buttock percussion pain (+), left 4-word experiment (+). Laboratory tests showed that C-reactive protein was 10.2mg/L, hypersensitive C-reactive protein was greater than 10.0mg/L. The percentage of monocytes was 11.4%, plasma fibrinogen content was measured 5.06g/L, uric acid was 475umol/L, and procalcitonin was normal. Admission was initially diagnosed with synovitis of the left hip.

After admission, the relevant examinations were perfected, tumor series + vitamin D + parathyroid hormone, procalcitonin, CCP, urinalysis, fecal routine, infection eight items (qualitative) normal, γ -glutamyltransferase 93U/L on the 2nd day of admission, creatine kinase 25U/L, ESR 40.00mm/h, hypersensitivity C-reactive protein 5.6mg/L on the 6th day of admission, ESR 26mm/h, tuberculosis infection T cell test on the 8th day after admission showed that: cellular immune response level - negative 374.20pg/ml, positive T-cell immune response (+) for TB infection, considered Mycobacterium tuberculosis infection. On the 11th day of admission, monocytes were $0.81 \times 10^9/L$, C-reactive protein was 86.5mg/L, hypersensitive C-reactive protein $> 10.0mg/L$, and serum amyloid was $> 200.00mg/L$. Na 136.7mmol/L, ESR 51.00mm/h.

Figure 1 chest CT showed: left upper lobe tongue segment cord focus, cardiac shadow slightly enlarged, left pleura local thickening, left femoral head and neck junction limited low-density shadow, considering intraosseous ganglion cyst, Figure 3 lumbar MRI shows: lumbar 4/5, lumbar 5/sacral 1 intervertebral disc slightly bulging, lumbar degenerative changes, Figure 2 ultrasound limb soft tissue + residual urine display: after urination, bladder residual urine volume is about 13ml, left inguinal area lymph node can be explored, Figure 4 SPECT bone three-phase imaging display: left pubic blood flow phase, increased nuclide uptake in the blood pool phase and delayed phase, considering infectious lesions, ultrasound (abdominal + urinary system) showed that fatty liver, gallbladder adhesion wall crystals, inflammatory changes in the gallbladder, slightly larger spleen, no obvious abnormalities in both kidneys, ureters, bladder, and prostate.

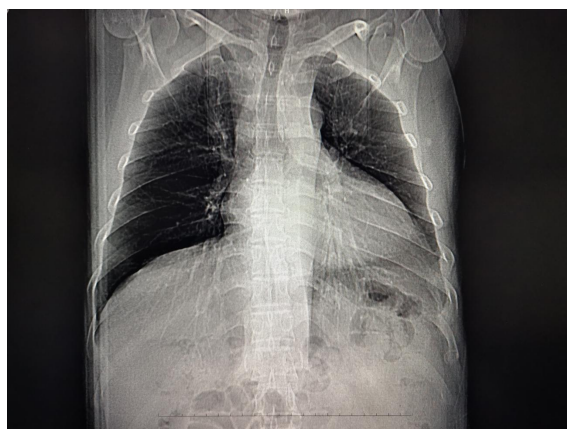


Figure 1. Chest x-ray showed no tuberculosis changes



Figure 2.

Fatty liver, gallbladder appendage wall crystals, inflammatory changes in the gallbladder, slightly larger spleen, no obvious abnormalities in both kidneys, ureters, bladder and prostate.

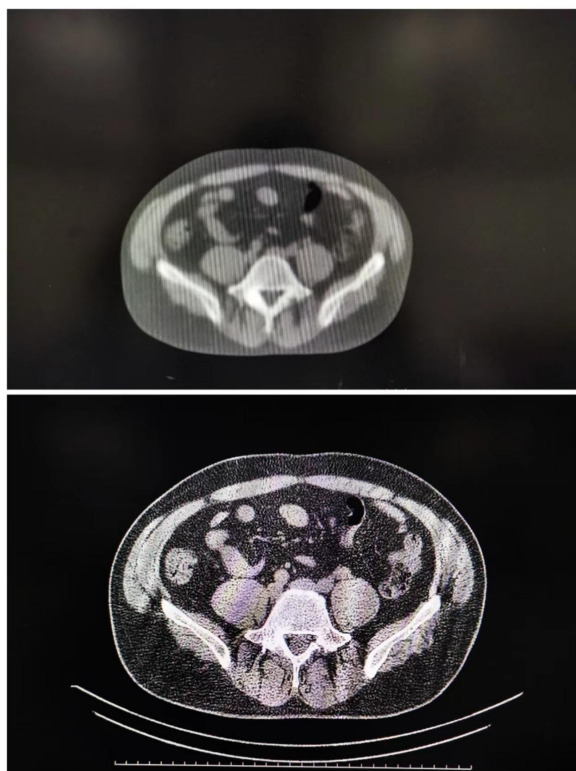


Figure 3.

Lumbar 4/5, lumbar 5/sacral 1 intervertebral discs are mildly bulging, and the lumbar spine degenerative changes.

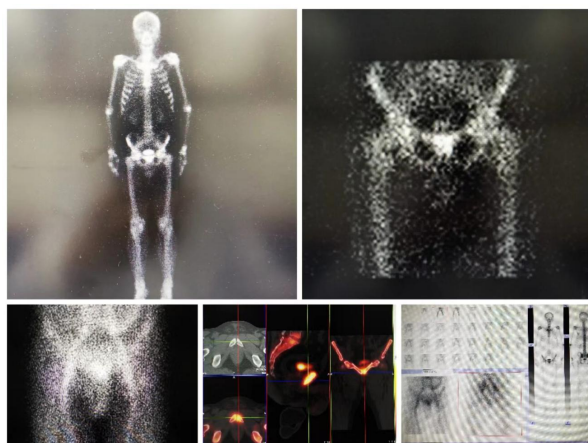


Figure 4.

The left pubic blood flow phase, blood pool phase and delayed phase nuclide uptake were increased, and infectious lesions were considered. After the “projectile” intravenous injection of tracer, dynamic continuous development was carried out to obtain the blood flow phase, blood pool and delayed phase, respectively. Blood flow phase: intravenous injection of contrast agent 8s after abdominal aorta, bilateral iliac artery, femoral artery development, left and right sides are not

symmetrical, the left pubic bone can be seen abnormal blood flow perfusion area, followed by soft tissue contour, soft tissue radionuclide distribution is uniform. Blood Pool Phase; After 2 minutes, bilateral femoral artery vascular shadows were still visible, soft tissue development was further clear, the contours were clear, the uptake of left pubic radionuclides increased, and bilateral hip nuclides were not abnormally increased. Delayed phase; Intravenous injection of missing agent for 3 hours delayed scanning, and the whole body bone imaging is clear. In the area of increased pubic radioactive uptake on the left side, the nuclear metabolism of the left pubic bone was increased on SPECT/CT scintigraphy, and the bone density was reduced and the local bone cortex was discontinuous on the left pubic symphysis on CT scan. The distribution of radionuclides in the skull and sternum is normal. Spinal nuclides are evenly distributed. The rest of the bone nuclides in the bilateral acromioclavicular joint, shoulder blade, ribs, and pelvis were evenly distributed, and no abnormal nuclide uptake was seen. The rest of the limbs have a uniform distribution of nuclides. Imaging of both kidneys.

2. Discussion

Epidemiology of osteoarticular tuberculosis throughout the body. Mycobacterium tuberculosis can cause bone tuberculosis, mainly occurring in chronic diseases of bones and joints, and the clinical manifestations are the destruction of joint synovium, cartilage and bone tissue, and the specific clinical manifestations are different according to the difference in the site of destruction (RUI Minjie, CHEN Qiyi, YANG Zengmin, et al., 2021). Bone tuberculosis is one of the most common extrapulmonary tuberculosis (RAMIREZ-LAPAUSA M, MENENDEZ-SALDANA A, NOGUERA-DO-ASENSIO A., 2015). Symphysis pubic tuberculosis is currently relatively rare in clinical practice, and the incidence rate is about 0% of bone and joint tuberculosis according to foreign statistics. 09% ~ 0. 53% (YAN Haijian, LIU Zilin, LI Qing, 2016). TB remains by far one of the most important health concerns in many developing countries. Musculoskeletal tuberculosis accounts for about 3% of all cases (Rajasekaran S, Dheenadhylan J. Tuberculosis of bone and joints. In: Bulstrode C, Buckwalter J, Carr A, Marsh L, Fairbank J, Wilson-MacDonald

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Diagnosis and treatment of pubic tuberculosis. The diagnosis of pubic TB must be confirmed in conjunction with the patient's history, specific clinical manifestations, laboratory tests, and imaging (Lynn Marie Trotti, Cathy A. Goldstein, Christopher G. Harrod, etc., 2015). Pubic tuberculosis has a variety of clinical manifestations and is initially asymptomatic. The most common presentation is abscess and swelling in the lower abdomen, perineum, inner thigh, or part of the scitica and rectal region (Lal Hitesh, Jain Vijay Kumar & Kannan Sudhir, 2013). The treatment principle of tuberculosis is early, appropriate, combination, regular, whole, the current first-line treatment drugs are isoniazid, rifampicin, ethambutol, pyrazinamide, etc., surgical treatment is sometimes an important supplement to medical treatment, and sometimes it is an indispensable treatment (HUANG Xunwu, XU Hongwei & DONG Zhiming, 2022).

After admission to the hospital, the patient was given 4 capsules orally of rifampicin, 3 tablets/time of isoniazid, 1 time/day, ethambutol 4 tablets/time, 1 time/day, pyrazinamide 5 tablets/time, 1 time/day, and was given our homemade plaster analgesic plaster, after the above treatment, the patient's left pubic pain condition was significantly improved.

The patient was misdiagnosed for the following reasons: (1) the patient had no previous history of tuberculosis and no symptoms of systemic tuberculosis infection; (2) Bone and joint tuberculosis is rare; (3) The initial imaging manifestations and signs are similar to synovitis. Whether the treatment of this patient is considered to be synovitis or bone tuberculosis, the treatment of the two will be quite different, if it is treated according to synovitis, it mainly adopts anti-infection and anti-inflammatory treatment, and if it is treated according to bone tuberculosis, it mainly considers the use of anti-tuberculosis treatment, and even surgical treatment, there is a big difference between the two. This will affect the treatment and prognosis of the disease. Therefore, microbiology and pathological biopsy are recommended when treating similar cases (AO Qingfang & LIN Bin, 2014).

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