

A Female Patient with Right Anterior Hip Pain: A Paralabral Cyst of the Hip

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SECTION 2 – ANSWER

Case

A 54-year-old female complained of right anterior hip pain for half a year. She described that the pain aggravated after walking for 20 min. She denied limitation of hip range of motion. No muscle weakness was noticed over her right lower extremity. The ultrasound images were obtained from the short- [Figure 1a] and long-axis [Figure 1b] view of her right anterior hip. What is your impression?

INTERPRETATION

At the short-axis view of the right anterior hip, we can visualize the sartorius and iliacus muscles. Apparently, the muscle fibers of both abovementioned muscles are well arranged without visible hypoechoic clefts. A cystic lesion (asterisk) lies above the femoral head and lateral to the psoas tendon. The cyst separated the hyperechoic labrum (arrowheads) into the superficial and deep layers. In the long-axis view, the cyst can be seen extending to the acetabulum level. The diagnosis of a hip paralabral cyst is thus made. The patient received ultrasound-guided aspiration [Video 1] and her symptom improved significantly thereafter.

DISCUSSION

Ultrasound is helpful in diagnosis and guided treatments of anterior hip pain.^[1] The possible causes include hip osteoarthritis, iliopsoas tendon sprain, iliopsoas bursitis, rectus femoris tendon injury, and paralabral cysts. In hip osteoarthritis, ultrasound imaging may reveal effusion, hypertrophic synovium, osteophytes, and tiny bony fragments in the hip joint. The joint capsule may also become thickened. Iliopsoas tendon sprain or

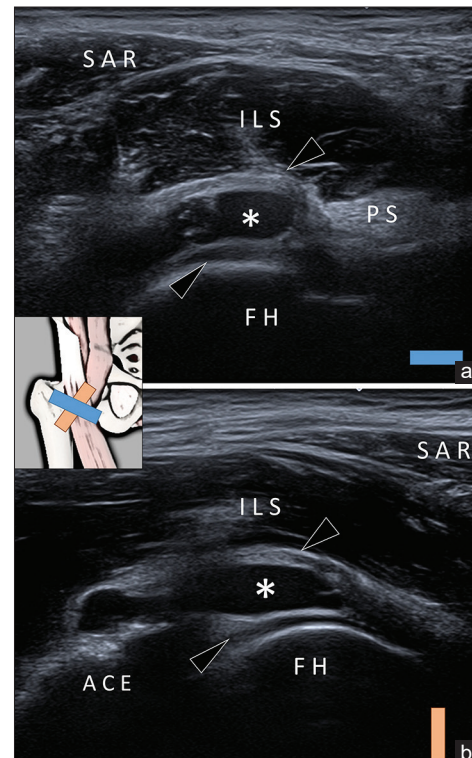


Figure 1: (a) short-axis and (b) long-axis ultrasound imaging of the anterior hip. Asterisk: the lesion, Arrowheads: labrum, SAR: Sartorius muscle, ILS: Iliacus muscle, PS: Psoas tendon, FH: Femoral head, ACE: Acetabulum

avulsion injury is more prevalent in physically active adults or adolescences.^[2] Examination of the iliopsoas tendon requires

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full abduction of the hip as the tendon attaches to the lesser trochanter, which is located at the posterior aspect of the proximal femur. The iliopsoas bursitis can be identified at the muscular cleavage between the lateral and medial compartments of the iliacus muscles or the gap between the psoas tendon and pubic ramus.^[3] A noteworthy point is that the iliopsoas bursitis might be secondary to hip joint pathology, like avascular necrosis of the hip.^[4] The rectus femoris tendon has a direct and an indirect head.^[5] The pathologies of the direct head comprise tendinopathy, calcification, and tears and usually lead to anterior hip pain. The transducer can be placed on the top of the anterior inferior iliac spine to scrutinize the integrity of the rectus femoris direct tendon.

In this case, the diagnosis of a paralabral cyst can be easily made using ultrasound. The landmark diagnostic ultrasound image is an anechoic cystic lesion dissecting the hyperechoic labrum. The hip labrum contains hyperechoic fibrocartilage extending from the acetabulum to the femoral head. Therefore, the paralabral cyst may cross the hip joint like our patient and causes symptoms while flexion and extension of the hip. The prevalence of hip paralabral cysts is 2%–5% in the asymptomatic population and can rise to 50%–70% in patients with labral tears.^[6] A large paralabral cyst can cause compression of the femoral and sciatic nerves.^[7,8] In this case, ultrasound-guided aspiration relieved her discomfort and appeared to be a safe and effective procedure. However, the physicians are suggested to closely follow-up the patients because recurrence of the cystic lesion may happen after aspiration. If the paralabral cyst repeatedly occurs, the surgery should be considered to repair the torn labrum.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given her

consent for her figures and other clinical information to be reported in the journal. The patient understands that her name and initials will not be published, and due efforts will be made to conceal his identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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