

New-Onset Groin Pain in an Elderly Woman

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A 72-year-old woman presented with new-onset right hip pain. Approximately 2 weeks prior, she had fallen on her right hip while walking her dogs. At the visit, she reported the pain has been steadily worsening and now has difficulty bearing weight on her right leg. She describes the pain as aching and constant, originating in the right anterior groin and radiating down the leg. Except for pain with activity, she has not had any associated symptoms. Nonsteroidal anti-inflammatory drugs (NSAIDs) have provided only minimal relief of her symptoms, but the pain does improve with rest.

History

The patient has hypertension diagnosed several years ago that is well controlled with diet. She takes her dogs for 15-minute walks daily. The remainder of her medical history is unremarkable, and she takes no other medications.

Physical examination

The patient is 157.5 cm tall and weighs



Figure 1. Radiograph of the right hip.

69.5 kg. Her blood pressure is 112/70 mm Hg; her other vital signs are within normal limits. There is diffuse tenderness to palpation over the right groin area. The right hip has limited range of motion in all planes. Flexion abduction and external rotation

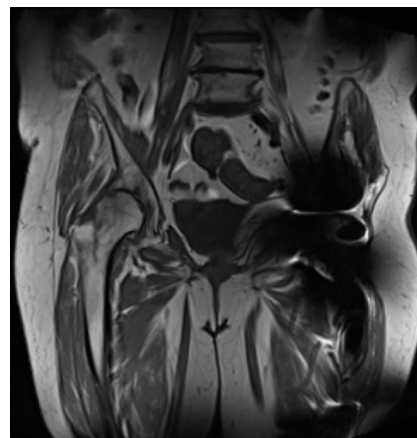


Figure 2. T1-weighted magnetic resonance image of the right hip.

and flexion adduction and internal rotation of the hip produces pain that she rates as a 9 on a 10-point scale. Motor nerves are intact at the extensor hallucis longus, flexor hallucis longus, gastrocnemius, and anterior tibialis distribution. Dorsalis pedis pulse is palpable at 2+. Sensation to light touch is intact.

Diagnostic studies

Radiograph and magnetic resonance imaging (MRI) of the right hip were performed (**Figures 1 and 2**).

Based on the patient's history, physical examination, and imaging findings, which of the following is the most likely diagnosis?

- A. Hip osteoarthritis
- B. Femoral neck fracture
- C. Trochanteric pain syndrome
- D. Meralgia paresthetica

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CITATION:

Bhardwaj N, Pierre GS. New-onset groin pain in an elderly woman. *Consultant*. Published online July 6, 2022. doi:10.25270/con.2022.07.00002

Received January 11, 2022. Accepted February 25, 2022.

DISCLOSURES:

The authors report no relevant financial relationships.

DISCLAIMER:

The authors report that informed patient consent was obtained for publication of the images used herein.

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Answer: Femoral neck fracture

The radiograph (**Figure 1**) shows osteoarthritis, but the MRI T1 sequence shows the black sinuous line that typically represents a femoral neck fracture.¹

Differential Diagnosis

Hip osteoarthritis, commonly described as “wear and tear,” is a complex degradation process of cartilage and subchondral bone resulting in narrowing of joint space and subsequent worsening range of motion, stiffness, and pain upon awakening. Treatment involves a combination of physiotherapy, NSAIDs, and cortisone injection.²

Trochanteric pain syndrome is a common cause of lateral hip pain. Pain is typical over the area of the greater trochanter of the femur and is worsened by sleeping on the affected side and sitting for long periods of time.³ Women between 40 and 60 years of age are most commonly affected. Treatment typically consists of NSAIDs and physical therapy, but steroid injections have also proven to be effective.⁴

Meralgia paresthetica is an entrapment of the lateral cutaneous nerve, which originates in the lumbar plexus from L1 through L4 and acts primarily as a sensory nerve. Entrapment can have idiopathic causes, such as obesity or tight-fitting belts, or iatrogenic causes, such as lumbar surgeries. The entrapment may cause anterolateral thigh pain, numbness, and paresthesia. Treatment involves NSAIDs, physiotherapy, ultrasound-guided injections, and (rarely) surgery with nerve resection.³

Discussion

Hip fractures are common in elderly patients. Each year, approximately 300,000 elderly (aged ≥ 65 years) patients are hospitalized in the United States because of hip fractures, at a treatment cost of \$17 billion dollars per year in 2002.^{5,6} This makes recognition of hip fractures prudent. Most hip fractures in the elderly are secondary to low-energy falls.⁷ After such a fall, most patients present with new-onset groin pain and say they have pain

with weight-bearing.

Clinicians should have a high index of suspicion for a femoral neck fracture in elderly patients with new-onset groin pain after a fall. Patients with a suspected hip fracture should have radiograph imaging performed to include anterior-posterior views of the pelvis and a cross-table lateral view. If radiographs prove inconclusive but there is a high index of suspicion, MRI is the imaging modality of choice. Patients who have been diagnosed with a hip fracture should have an emergent evaluation by an orthopedic surgeon.

Patient Outcome and Follow-Up

The patient was sent to the emergency department for emergent placement of a cephalomedullary nail for her right hip. She tolerated the surgery well and has completed rehabilitation for her fracture. She is back to walking her dogs on a regular basis.

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