



HIP PAIN IN PREGNANCY

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ABSTRACT

Objective: Pain, which is localized to the hip during and after pregnancy can be difficult to diagnose and treat. We aimed to discuss how to determine the appropriate diagnosis.

Material and Method: We evaluated 17 patients prospectively, with complaints in hip area continuing more than two months during pregnancy or postpartum period. All cases were evaluated with clinically, radiologically and with laboratory tests.

Results: Two sacral fractures, one migratory osteoporosis, 14 transient osteoporosis of the hip were detected.

Conclusion: Physicians occasionally overlook hip complaints. If a patient complains about hip pain longer than one month, examination of the hip and lower back must be performed or the patient should be referred for a second opinion.

Key Words: Hip, pain, pregnancy, osteoporosis, transient, avascular necrosis

GEBELİKTE KALÇA AĞRISI

ÖZET

Amaç: Gebelik döneminde veya sonrasında oluşan kalça ağrısının tanısı ve tedavisi zor ve karışık olabilmektedir. Bu çalışmada doğru tanı ve uygun tedavi için yapılması gerekenleri tartışmayı amaçladık.

Materyal ve Metot: Prospektif olarak, 2 aydan fazla süredir kalça ağrısı olan 17 gebe veya postpartum hastayı değerlendirdik. Tüm olgular klinik, radyolojik ve laboratuvar testleri ile değerlendirildi.

Bulgular: İki olguda sakrum kırığı, bir olguda gezici osteoporoz, 14 olguda kalçanın geçici osteoporozu saptandı.

Sonuç: Kalça şikayetleri, doktorlar tarafından sıklıkla gözden kaçabilmektedir. Kalça şikayetleri bir aydan fazla süren hastalarda; kalça ve bel muayenesi dikkatlice tekrar yapılmalı veya ikinci görüş için doğru bölüme yönlendirilmelidir.

Anahtar Kelimeler: Kalça, ağrı, gebelik, osteoporoz, geçici, avasküler nekroz

INTRODUCTION

Pain, which is localized to the hip during and after pregnancy, can be difficult to diagnose and subsequently treat. A variety of orthopedic conditions can cause hip pain during and after pregnancy. Pathology affecting the lower back, pelvis, or hip may be present, and physicians should be aware of the differential diagnoses to determine the appropriate diagnosis and treatment. Although the most common etiology of hip pain during and after pregnancy is transient osteoporosis of the hip (TOH), regional migratory osteoporosis and sacral fractures have been described, as well as acetabular labral tears, disc pathology, symphysis pubis diastasis or dysfunction, cauda equina syndrome, and sacroiliitis.¹⁻⁷

These patients present with no history of trauma, but do report acute onset hip pain accompanied by a limping.⁸ On physical examination, patients may have coxalgic gait, painful hip range of motion and positive hip impingement signs.

In our study, we evaluated the complex multifactorial etiology and diagnosis of hip pain during and after pregnancy as well as the subsequent management of the diagnosed pathology during pregnancy and the postpartum period.

MATERIAL and METHOD

Between 2009-2012, 17 female patients presented to the second author's office with persistent hip pain, which had begun during pregnancy or delivery. The mean age was 32 years (range: 25-42 years). 12 patients were primiparous, five patients were multiparous. Neither of the patients had a history of hip problems prior to pregnancy, nor did they have a history of sports activity or trauma. In all cases, the hip pain was acute onset. In five patients, hip pain began during last trimester of pregnancy and 12 had an onset of pain during the postpartum period.



Figure 1: 33 year-old woman's MR image showing that transient osteoporosis.

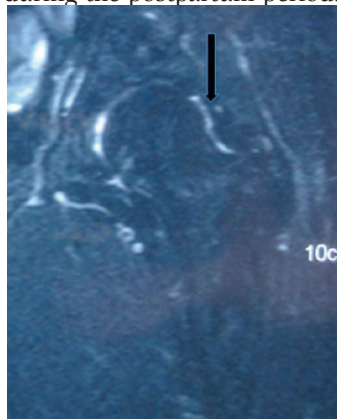


Figure 2: 33 year-old woman's control MR image six months later, showing that recovery of the transient osteoporosis.

Patients were referred to the orthopedic department at an average of two months (range: 2-15 weeks) after the onset of complaints of hip pain at the postpartum period.

All cases had clinical, laboratory, and radiographic evaluation. All patients underwent a hip magnetic resonance imaging (MRI) scan, hip and lumbar spine bone mineral density (BMD) screening and a 25-hydroxy vitamin D (25-OH Vit D) test (Figure 1). Three patients continued to have a pain up to six months after treatment started and were subsequently referred to the Rheumatology Department and laboratory test was done according to suspected rheumatologic disease in consist of HLA-B27 test (Figure 2).

RESULTS

All cases had a normal range of motion at the hip and clinical examination showed that positive hip impingement sign and two of all cases showed that tenderness with palpation at the sacral area. Sacral fractures were detected in two patients (Figure 3). One of these 17 patients reported continuous pain that migrated from the right to left hip, then to the left ankle, ending at the right ankle. Results of all aforementioned tests in this case were within normal limits and this patient underwent surgery as a decompression surgery as a micro drilling in side of the femur neck and calcaneus. This case was diagnosed as migratory osteoporosis (Figure 4). The rest of 14 cases were diagnosed as TOH (Figure 1). A total of 16 patients were treated conservatively with weight-bearing restrictions, rest, and supplementation with nutrients that were determined to be lacking. Two of the 14 cases continued to have complaints of pain six months after admission were diagnosed as ankylosing spondylitis. The remainder of the cases had complete resolution of clinical signs with normal hip impingement signs and MRI findings (Figure 2). The mean hip score was 93 as excellent except ankylosing spondylitis cases diagnosed according to Harris hip score.⁹ Osteopenia was defined as a mean total hip BMD levels a -2,1. Vitamin D insufficiency was defined as a mean 25-OH Vit D level <10 ng/ml.

DISCUSSION

In the presence of hip pain during and after pregnancy, some conditions appear more frequently; these include TOH, regional migratory osteoporosis, sacral fractures, acetabular labral tears, disc herniation, symphysis pubis rupture, cauda equine syndrome, and sacroiliitis.²⁻⁵

Transient pain around the hip during the pregnancy period can be present with or without trauma, and can continue for up a few days. If the pain continues for →

more than one week, the patient should be examined for hip and lower back pain. Some specific tests used for diagnosis include the FABER (Flexion-Abduction-External Rotation) test in addition to the standard orthopedic examination.^{8, 10}

In our study, we showed that although the impingement test was useful for suspected impingement, patients that have bone marrow edema in the hip also were diagnosed with TOH. The main problem is diagnosis for TOH. So that, clinical suspicion and MRI remains the gold standard for diagnosis of the origin of hip pain in pregnant and post-partum patients.¹¹ However, there is no concern regarding the effects of MRI on the fetus.¹²⁻¹⁴

Our patient series include; two sacral fractures, one case of migratory but differentiated osteoporosis, and 14 cases of transient osteoporosis during the postpartum period. Although fractures can readily be diagnosed, distinguishing hip avascular necrosis (AVN) and TOH can be difficult. Gemmel showed that diffuse bone marrow edema without focal femoral head changes at the proximal femur was a positive sign for diagnosis of TOH. Bone mineral density (BMD) testing can be used for the differential diagnosis of hip pain.¹¹ Though BMD is decreased in TOH during the pregnancy period, exposure to ionizing radiation is a risk for the fetus. All cases showed osteoporosis in the hip area.

Several treatments for TOH are available; rest and restriction of weight bearing, including ilomedin, hyperbaric oxygen, alendronate, and decompression surgery.^{15,16} Calcium and vitamin D supplementation was used according to the deficiency level determined by the endocrinologist. Mutluoğlu reported that 10 weeks of hyperbaric oxygen therapy for TOH resulted in early recovery, while the time to recovery with conservative treatment was 4-9 months.¹⁶ Fernandez reported that surgical therapy is unnecessary; however, it can decrease the healing time.¹⁷ We performed MRI scans at one-month intervals. Upon identification of increasing edema in hip joints or other joints, including the contralateral hip or ankles, surgical decompression was indicated. The main issue in the decision to proceed to surgery is exact confirmation of the diagnosis. TOH can progress to AVN, for which the treatment is generally total joint arthroplasty.¹⁸ Decompression is associated with less adverse events than arthroplasty in circumstance that can not to exact differentiated between TOH to AVN. Surgical decompression was performed in one patient who was diagnosed with a sacral fracture that advanced to the hip. Two months later, she complained of bilateral ankle pain. We believe that this patient was suffering from migratory osteoporosis, and the MRI showed that the disease worsened from month to month. All

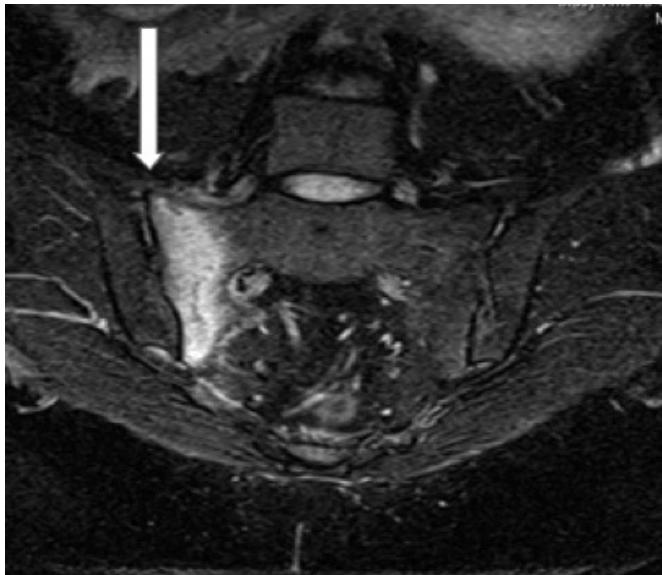


Figure 3: 27 year's woman that complaint started the last trimester. MR image was showing sacral fracture.

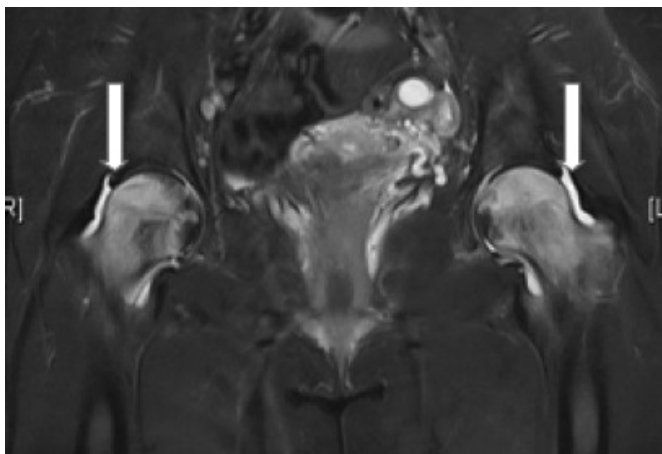


Figure 4: 27 year-old woman, MR image showing that migratory osteoporosis.

endocrine and rheumatologic tests were normal. Recovery was complete within a mean of four months for all cases in our study, except in two patients whose complaints continued for >6 months. Hip MRI scans showed normal appearance of femoral head and neck area but sacroiliac involvement. Rheumatologic evaluation revealed that both patients had ankylosing spondylitis.

In conclusion, hip pain during pregnancy and the postpartum period is a complex problem for patients and physicians. Literature research shows that, TOH is seen rarely and reported as a case report at the pre-post partum period.^{19,20} Moreover, physicians occasionally overlook hip complaints. Although, our cases referred to orthopedic department at mean two months; we believed that; if a patient complains of pain in the hip for long er than one month, examination of the hip and lower back must be performed or the patient should be referred for a second opinion. →

* Each author certifies that he or she has no commercial associations (e.g., consultancies, stock ownership, equity interest, patent / licensing arrangements, etc.) that might pose a conflict of interest in connection with the submitted article.

* Each author certifies that his or her institution has approved the reporting of this case report, that all investigations were conducted in conformity with ethical principles of research.

* The authors declare that there are no conflicts of interest.

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