Postpartum Inflammatory Sacroiliitis-A Case Report

Postpartum İnflamatuar Sakroiliit-Olgu Sunumu

Postpartum Sakroiliit / Postpartum Sacroiliitis

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Özet

Gebelik sırasında sakroiliak eklem straini ve septik sakroiliite predispozisyon yaratan birtakım değişiklikler oluşur. Bu yazıda postpartum dönemde akut inflamatuar sakroiliit saptanan HLA B27 pozitifliği bulunan ve klinik izlem sürecinde psöriatik artrit tanısı konan bir olguyu tanımladık. Postpartum bel ağrısında inflamatuar sakroiliitin ayırıcı tanılar arasında yer alması gerektiğini vurgulamayı hedefledik.

Anahtar Kelimeler

Sakroiliit; Postpartum; Bel Ağrısı

Abstract

During the pregnancy several changes occur in sacroiliac joint and pelvis which may predispose for sacroiliac joint strain and septic sacroiliitis. We describe a case of acute inflammatory sacroiliitis in a patient with HLA B27 positivity during postpartum period, and diagnosed psoriatic arthritis during the follow up period. We aimed to emphasize that inflammatory sacroiliitis should take place whithin differantial diagnose of postpartum low back pain.

Keywords

Sacroiliitis; Postpartum; Low Back Pain

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Introduction

During the pregnancy several changes occur in sacroiliac joint and pelvis which may be predisposing factors for sacroiliac joint strain and septic sacroiliitis [1].

Psoriatic arthritis is an inflammatory arthritis associated with psoriasis. Hereby we report postpartum acute inflammatory sacroiliitis in human leukocyte antigen HLA B-27 positive patient who had not experienced low back or hip pain associated with spondyloarthritis in her history and diagnosed psoriatic arthritis (PsA) during clinical follow up period.

Case Report

22 year old female patient presented with low back pain since 15 days. The low back pain had began acutely, involving bilateral buttock. She described marked morning stiffness lasting 3 hours since 2 weeks. She had an history of labour by caesarean section 2 months ago. There were no trauma, inflamatory low back pain, systemic infection, urethritis, skin lesions, uveitis, conjunctivitis and gastrointestinal symptoms in her history. The family history was negative for rheumatic diseases. She had no smoking history. In physical examination, bilateral sacroiliac compression and Geanslen tests were positive. Palpation of sacroiliac joints were exquisitely painfull to direct pressure. Back pain assessed on a visual analog scale (VAS) as 9. Systemic examination and cervical, thoracal, lumbar spine and peripheral joint examination was unremarkable.

In laboratory examination serum C-reactive protein (CRP) was 6,02mg/L (Normal range 0-5mg/L), hemoglobine was 11,4 g/dL (Normal range 12-15,5 g/dL), erytrocyte sedimentation rate was 70 mm/h (Normal range 0-20 mm/h), white blood cell count was 10100/mm^3 (Normal range 3500-10500/mm^3) (Table 1). Urine test was unremarkable. Brucella agglutination test was negative. The patient was HLA-B27 positive.

Plain radiograph of sacroiliac joint revealed bilaterally definite sclerosis on both sides of joint and we considered as grade 3 sacroiliitis (Figure 1).

Magnetic resonance imaging of sacroiliac joint showed bone narrow edema of sacroiliac joint associated with bilateral sacroiliitis that is more marked on right side (Figure 2).

Sulphasalazine treatment 500 mg twice a day and ibuprofen 1200 mg daily started. After second week, pain on VAS was 50 mm. In laboratory examination serum C-reactive protein (CRP) was decreased to 3,19 mg/L, erytrocyte sedimentation rate was 39 mm/h. At the third follow up she reported neither low back, hip pain nor morning stiffness. By the end of one year she had not reported inflammatory low back, hip pain or peripheral arthitis but physical examination realized red squamous plaques on her abdominal skin and scalp covered with white scales. We consultated with dermatology clinic and she had diagnosed as psoriasis. She was stil under treatment of non-steroidal antiinflammatory drugs.



Figure 1. Bilaterally derrangement and sclerosis on both sides of sacroiliac joint

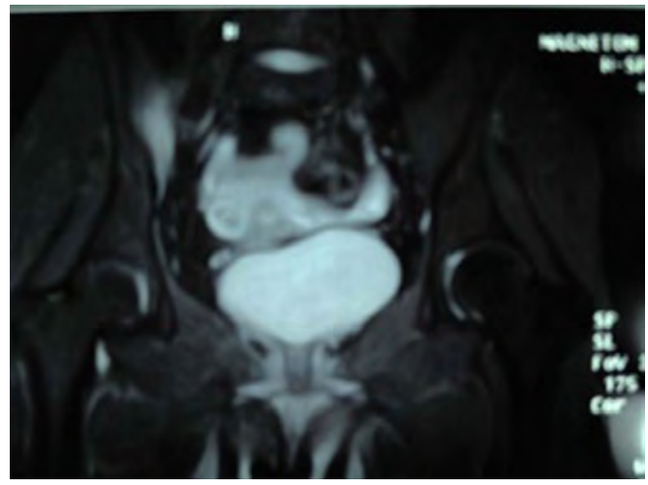


Figure 2. Bilaterally asymmetric sacroiliitis seen in magnetic resonance imaging

Discussion

Hereby we reported a HLA B 27 positive patient with acute inflammatory sacroiliitis during late postpartum period. She did not describe any symptoms of low back, hip pain, peripheral arthritis or skin lesions associated with spondiloarthritis in her history. In this report we aimed to emphasize that, sacroiliac mechanical stress during delivery may have a triggering a role in inflammatory sacroiliitis due to PsA pathogenesis when genetical predispositional factors were present.

Postpartum period is consisted of three phases. The initial or acute period involves the first 6–12 hours after delivery. The second phase is the subacute postpartum period, which lasts 2–6 weeks. The third phase is named as the delayed postpartum period, which can last up to 6 months [2]

Symptoms associated with PsA are appeared initially after the 2 months period of time after the delivery, so she was in the delayed postpartum period which is the period of recovering period.

In literature four cases were reported with inflammatory sacroiliitis in postpartum period but all were HLA B-27 negative and all were in a few days after the delivery [1]. The relaxation of pelvic joint may be responsible from sacroiliac joint strain and a secondary inflammatory process had been occured secondary to mechanical stress [1]. Postpartum inflammatory sacroiliitis may be a self limiting condition and usually resolve in a period of few months but clinical follow up must be more intense when HLA B27 positivity present. Recently Mahovic et al. reported a case of pregnancy related posterior pelvic girdle pain during early postpartum period in a patient who has treated succesfully with analgesics and physical therapy. Unlike our report the patient was HLA B27 negative, and she suffered from mostly mechanical charecteristics of pain, and at the end of 2 months

her symptoms were relieved [3]. Unlike previous report, our case experienced pain with inflammatory charecter, and she was HLA B27 positive. The psoriatic skin lesions detected during the follow up process encouraged our diagnose of PsA.

As the retrospective analysis indicated onset of Ankylosing Spondylitis (AS) is closely related to pregnancy and delivery, our patient presented with low back pain began 2 months after the delivery. Pelvic stress during pregnancy and parturition may be effective on the onset of symptoms when genetic predisposition exist. Increased pelvic stress during pregnacy and delivery may contribute patient's symptoms and onset of inflammatory sacroiliitis [4]. The distinctive feature of our patient is, first clinical signs of inflammatory sacroiliitis started in late postpartum period and the occurance of psoritaic lesions about a year after the onset of inflammatory low back pain. Genetical predisposition additional to mechanical factors may lead to first flare up of spondyloarthritis. To our knowledge this is the first report that described inflammatory postpartum sacroiliitis with HLA B27 positivity and diagnosed psoriatic spondyloarthritis after long period of time. However onset of psoriatic arthritis is more common after a period of time psoriatic skin lession occur, our report is interensting that of spondyloarhtritic symptoms overlap during the period of late postpartum stage, and onset of skin lesions occured 1 year after the sacroiliitis. Mechanical factors associated with gestational period with presence of genetical predisposition to pseuriasis and spondyloarthritis may be responsible of this clinical condition.

The most important differantial diagnose in postpartum sacroiliac joint pain in pyogenic sacroiliitis. We did not have performed sacroiliac joint culture because there were no systemic signs of infection in our patient and we achieved good response to sulphasalazine and non-streoidal antiinflammatory medication. Also HLA-B 27 positivity confirmed our sacroiliitis diagnose associated with spondyloarthritis.

The other underlying cause of pelvic pain during peripartum period is strain of ligaments in the pelvis and lower spine resulting from a combination of damage to ligaments, hormonal effects, muscle weakness, and the weight of the fetus. Peripartum pelvic pain was associated with twin pregnancy, first pregnancy, higher age, larger weight of the baby, forceps or vacuum extraction, fundus expression, and a flexed position of the woman during childbirth and a negative association was observed with cesarean section [5]. In our patient clinics the complaint of low back or pelvic pain during postpartum period is not uncommon. However the sacroiliac joint strain or lomber strain is the most frequent diagnose, the physician must be in suspicion of inflammatory or pyogenic sacroiliitis as well. The onset of back pain during the postpartum period may be the first symptoms of spondyloarthritis.

Plasma concentrations of cytokines have been shown to change during pregnacy. Gestational increase of cytokine inhibitors interleukin 1 receptor antagonist (IL-1ra) and soluble tumor necrosis factor receptor (sTNFR) in the circulation is comply with low disease activity in RA and AS patients [6]. The decraesed levels of IL-1ra and sTNFR concentration during postpartum period may be responsible for exacebating disease activity. Our patient's onset of symptoms may be associated with the decreased level of antiinflammatory cytokines in plasma additional to mechanical stress. The influence of hormones and cytokine levels on disease activity in patients with spondyloarthritis, especialy with pregnant patients with psoriasis must be an issue for further study.

It has been defined that trauma, mechanical stress are prevelant in psoriatic arthritis. In one study 8% of patients with PsA experienced trauma history within 3 months before onset of the disease while this ratio is only 2% in patients with RA [7]. Biomechanical stress may lead microtrauma, with activation of stress genes and upregulation of adhesion molecules. McGonagle et al assumed that, in patients, those with HLA B27 antigen, microtrauma or microbial factor at the diseased site upregulate the proinflammatory cytokines, and homeostasis may shift from repair to inflammation [8]. The third stage of postpartum period (6 weeks-6 months) is the time of restoration of muscle tone and connective tissue to the prepregnant state [2]. The repairing process may have been shifted to inflammation and initiated the inflammatory sacroiliitis associated with PsA, with the presence of HLA B27 positivity. Postpartum initiation of sacroiliitis in addition to mechanical stress of sacroiliac joints during pregnancy, and delivery can suggest, posttraumatic-onset PsA in our patient.

In conclusion inflammatory sacroiliitis may be the cause of low back pain during postpartum period, and the mechanical stress due to sacroiliac joint may lead inflammatory reaction triggering sacroiliitis, associated with PsA.

Competing interests

The authors declare that they have no competing interests.

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