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Case Report

Osteitis Condensans Ilii (OCI): A Case Report and Review of Literatures

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Abstract

Background: Osteitis Condensans Ilii (OCI) is a self-limiting condition characterized by sclerosis of the iliac bone with an incidence rate of 0.9% - 2.5%, mostly among females especially in those with recent weight gain or in pregnancy. Most cases are asymptomatic and can be managed conservatively. Here, we report a resistance case of bilateral iliac sclerosis with OCI in a 32-year-old female presenting with unilateral symptoms.

Case Report: A 32-year-old female presented with chronic right gluteal pain radiating to posterior aspect of thigh for one and half years (Pain started on 2nd trimester). Physical examination revealed tenderness over the right sacroiliac joint (SIJ) and FABER tests was positive on right side. There was hypointensity changes on T1W and T2W images whereas few hyperintensity foci on bilateral SIJ on STIR images. The pain was significantly improved following right SIJ block was given under c-arm guidance.

Conclusion: OCI is a rare non-inflammatory benign pathology of sacroiliac joint and rarely symptomatic. It is considered as a possible cause of lower back pain and must be ruled out in a young female in their Perigestational/Postpartum period.

Keywords: *Osteitis Condensans Ilii (OCI); Sclerosis; Iliac Bone*

Introduction

Osteitis condensans ilii (OCI) is a self-limiting condition characterized by sclerosis of the iliac bone with an incidence rate of 0.9% - 2.5%, mostly among females especially in those with recent weight gain or in pregnancy [1]. The etiopathogenesis is still unclear. The basic reported pathogenesis includes increased mechanical stress and vascularity in the ileum during pregnancy leads to remodeling of bone causing sclerosis [2]. Most cases are asymptomatic and can be managed conservatively [3]. OCI with Sacral side sclerosis was associated significantly with less improvement [8]. Here, we report a resistance case of bilateral iliac sclerosis with OCI in a 32-year-old female presenting with unilateral symptoms.

Case Report

A 32-year-old female patient with history of chronic right gluteal pain radiating to posterior aspect of thigh from 1.5 year. The pain was started during her 2nd trimester. Pain was dull aching initially but now from last 5 month severe in intensity and not relieved by medications. Initially pain was improve with non-steroidal anti-inflammatory drug. Physical examination revealed intact distal neurovascular status with intact bowel and bladder control, tenderness over the right sacroiliac joint (sij) present and fabere tests was positive right side. To rule out lumbo-sacral spine pathology mri l-s spine with bilateral sij was performed, which revealed altered signal intensity which was hypointense on t1w, t2w and few stir hyperintensity foci (mild irregularity of both s1 joint with periarticular edema, fatty infiltration of bilateral sij). Lab work was unremarkable. Patient was plan for right sij block. Right sij block was given under c-arm guidance. Post si joint block pain was significantly improve.

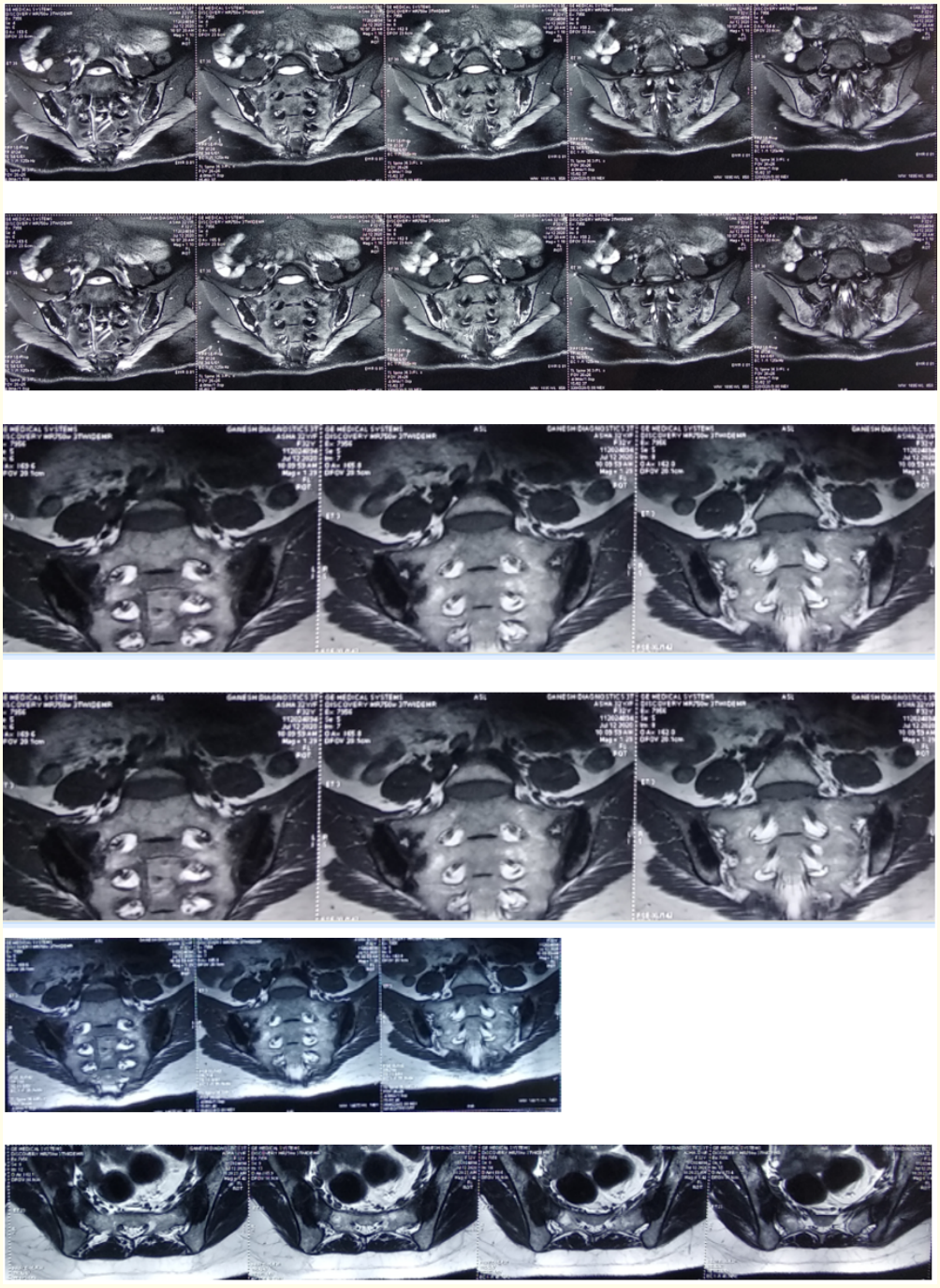

Figure 1: *A 32-year-old non-BME (bone marrow edema) osteitis condensans ilii (OCI) patient with intermittent lower back pain for 1.5 years. Slice of SIJ oblique axial T1-weighted image (b) and short tau inversion recovery magnetic resonance image (c) show symmetric sclerosis of iliac subchondral bone as very dark signal intensity in sequences without BME. Note bilateral SIJ spaces and surfaces are normal.*

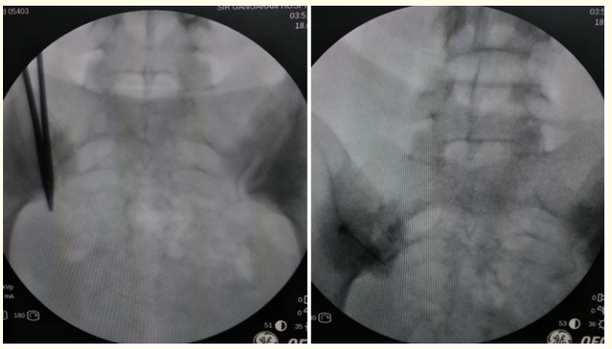

Figure 2: *(a) Pelvis radiograph demonstrates classic bilateral triangle bone sclerosis beneath the auricular surface of iliac bone without sacroiliac joint (SIJ) space or surface changes, right SIJ block*

Discussion

The osteitis condensans ilii (OCI) was first Described by Sicard., *et al*. in 1926 and term coined by Barsony and Polgar [3]. Typically, the disorder affects the perigestational/postpartum women but cases also reported in males and nulliparous females [4]. The etiopathogenesis is still unclear. Stress induced joint space widening and ligamentous laxity with mild hemodynamic flow alteration and transient ischemia to the downstream distal ileum is still felt most likely etiology [3]. Most cases are asymptomatic, but can also present as nonspecific lower back pain radiating to the posterior thighs in a non-radicular pattern, with mild SIj tenderness, sij tests may be positive, with intact neurology. A typical x-ray and MRI findings (triangular shaped sclerosis with intact SIJ joint space on x- ray and absence of erosions and bone marrow edema on MRI) distinguish OCI from other sacroiliac abnormalities, but some time because young age presentation and confusing clinical, laboratory and radiological finding its mimicking manifestations like SpA [4]. Ling MA., *et al*. [4] retrospectively evaluated 27 OCI patients SIJ MRI and reported that Some OCI may demonstrate BME on SIJ-MRI. A Ilium side ventral-cartilaginous joint part BME extending to beneath the arcuate line in a continuous distribution pattern characteristics of OCI. laboratory studies are most helpful in ruling out other causes of sacroiliac disease. Inflammatory markers such as ESR, CRP, RF are negative, HLA-B27 is rarely positive [5]. The extended involvement of skeletal other locations rather than the pelvis on Radionuclide bone scan is essential diagnostic tool to distinguish from Paget's disease [6]. Pathologic examinations of biopsy specimens revealed normal thickened lamellar bone [3]. OCI symptoms are self-limiting, and patients usually show improvement of symptoms and disappearance of radiological findings with time. Management manly involves physical therapy, non-steroidal anti-inflammatory drugs and muscle relaxants. local steroid SIJ injections are useful in cases resistant to conservative treatment [9] and open surgical resection or sacroiliac arthrodesis being reserved for refractory cases [7]. Percutaneous iliac core decompressions through a cannulated drill bit is a novel mini-invasive technique can be of great benefit for refractory OCI cases with almost no added morbidity or complications with preservation of physiological functions of the affected sacroiliac joints [8].

Conclusion

OCI is a rare non-inflammatory benign pathology of sacroiliac joint and rarely symptomatic. It is consider as a possible cause of lower back pain and must be rule out in a young female in there perigestational/postpartum period.

Bibliography

1. Biswas S., *et al.* "Osteitis Condensans Ilii: An Uncommon Cause of Back Pain". *Cureus* 11.4 (2019).

2. Jenks K., *et al.* "Osteitis condensans ilii: a significant association with sacroiliac joint tenderness in women". *International Journal of Rheumatic Diseases* 12.1 (2009): 39-43.

3. Parperis K., *et al.* "Osteitis condensans ilii: current knowledge and diagnostic approach". *Rheumatology International* 23 (2020): 1-7.

4. Ma L., *et al.* "Osteitis condensans ilii may demonstrate bone marrow edema on sacroiliac joint magnetic resonance imaging". *International Journal of Rheumatic Diseases* 21.1 (2018): 299-307.

5. Singal DP., *et al.* "HLA antigens in osteitis condensans ilii and ankylosing spondylitis". *The Journal of Rheumatology* 3 (1977): 105-108.

6. Antonelli MJ and Magrey M. "Sacroiliitis mimics: a case report and review of the literature". *BMC Musculoskeletal Disorders* 18.1 (2017): 170.

7. Servodio CI., *et al.* "Osteitis condensans ilii: therapy and diagnostic problems. Presentation of a case study". *La Chirurgia Degli Organi Di Movimento* 74.3-4 (1989): 101-107.

8. Ayoub MA. "Refractory osteitis condensans ilii: outcome of a novel mini-invasive surgical approach". *International Orthopaedics* 37.7 (2013): 1251-1256.

9. Vadivelu R., *et al.* "An uncommon cause of back pain in pregnancy". *Postgraduate Medical Journal* 81.951 (2005): 65-67.

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