

Osteitis Condensans Ilii - A Rare Presentation

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Abstract

We presented a case of 45 years old unmarried woman who complaints of chronic low back pain and diagnosed as a case of Osteitis Condensans Ilii (OCI). We are discussing this rare presentation of OCI to increase awareness among the specialty and primary care physicians, as it may be confused with other conditions like- Ankylosing Spondylitis (AS) and inflammatory arthritis. It also prevents misdiagnosis and extensive investigations that not only increase anxiety but are of little benefit.

Key words: Chronic low back pain, Osteitis Condensans Ilii, Ankylosing Spondylitis.

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Introduction

Low back pain (LBP) is very common our day to day practice. 80% of all population experience LBP once in their life time¹. Back pain is self-remitting condition. 70% of patients recover within one month, 90% within 2-3 month while duration of recovery may exceed more than 6 months in 4% patients². LBP is most prevalent and

expensive musculoskeletal problem. As many as every ten adults have LBP at some point in their lifetime. The incidence is equal in men and women but women report more LBP after age 60 years³. In a community based survey, showed the risk of LBP is higher among women with ratio between 1.3 to 1.57⁴. The risk of developing low back pain increases by too folds for women due to their wide pelvis, stress of hormonal change and childbirth⁵. The mean number of pregnancies was greater in women with LBP (2.6) than in those without 1.6⁶. OCI is benign pathology causing chronic back and hip pain. Although definitive cause is unknown. Most popular hypothesis is mechanical stress in development of the disease⁷. It is a self remitting condition but in a small group of patient may develop chronic LBP due to OCI.

Case Report

Our patient was unmarried lady of 45 years of age. By profession she is a school teacher. She attended outpatient department of Physical Medicine and Rehabilitation (PM&R), BIRDEM, Dhaka with the complaints of LBP for 10 years, pain and swelling of back of both heels for 2 years, pain in the outer side of elbow joint for 1year. LBP was gradual in onset, moderate in intensity, constant and dull aching in nature and without any radiation to other side. It was relieved with activity and exaggerated with rest. Usually it was associated with night pain and morning stiffness for about half an hour. She also noticed pain and swelling of posterior aspect of the heel (right>left) for 2 years which cause difficulty in walking. Then she developed pain in the lateral aspect of right



Figure- 01: X-ray of pelvis and both hip joints AP view:

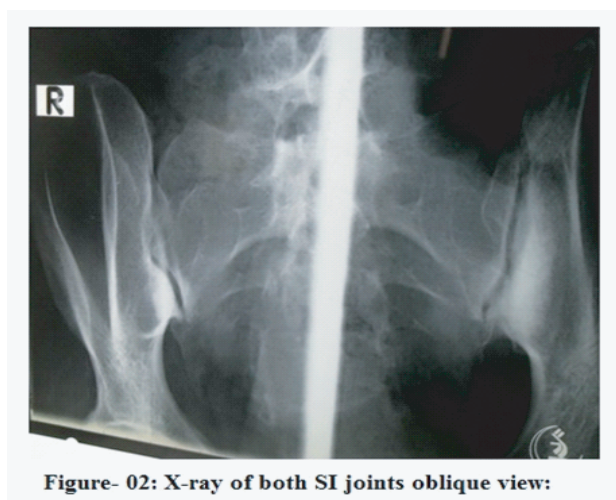


Figure- 02: X-ray of both SI joints oblique view:

elbow which aggravated during screwing movement and carrying heavy objects. She had no history of trauma, fever, weight loss, burning micturation, diarrhea, dysentery, skin, eye or nail changes, oral ulcer, chest pain and sexual exposure. On general examination her vital signs were normal. Musculoskeletal examination reveals sacroiliac joint tenderness (grade-I), Faber maneuver, sacroiliac distraction test, sacroiliac compression test, Gaenslen's maneuver were negative. Some special tests were done. Modified Schober's test -5cm, occiput to wall distance -0cm, finger floor distance -2 cm, finger- fibula distance -0cm and chest expansion -3.5cm. Her gait was antalgic. Cozen's and Chair test were positive. Mild swelling and grade -II tenderness was present on posterior superior heel. All other joints of the body were tested normal. Other systemic examination revealed no abnormality, Clinical diagnosis was AS. On investigation - hemoglobin -11.3gm/dl, Erythrocyte Sedimentation Rate (ESR) -21 mm in 1st hour, C-reactive protein (CRP) - <6mg/dl, RA test(-)ve, HLA_B27- (-)ve, Serum uric acid-4.5 mg/dl. Renal, liver, thyroid function test, s.calcium, parathormone level, alkaline phosphatase, and phosphate level were normal. Figure -1 represents x-ray of pelvis and both hip joint anterior-posterior (A/P)- increased bone density was seen in both iliac bones. Figure -2 represents X-ray sacro-iliac joint (SI) both oblique view-joint space and articular surface of both SI joints were normal, bilateral symmetrical increased bone density involving the both iliac bone sparing the SI joint were seen. Finally the diagnosis was confirmed --Bilateral Osteitis Condensans Ilii with bilateral Achilles tendinitis with right lateral epicondylitis. Patient received conservative management with physiotherapy. Short Wave Diathermy (SWD) and therapeutic exercises in the form of back muscle strengthening exercises, back extension exercises and respond accordingly for low back. For Achilles tendinitis - phonophoresis with ketoprofen gel was given and shoe modification was done. For lateral epicondylitis - phonophoresis, counter bracing by tennis elbow strap and deep cross friction message was given along with strengthening exercises and grip training.

Discussion

OCI is characterized by benign sclerosis of the Ilium adjacent to the sacroiliac joint⁸. It was first discovered by Sicard, Gally and Haguenam in the year 1926⁹ and contributed five case reports. They said OCI can occur anywhere in the skeleton and describe the case which involved the oscalsis and also the fourth and fifth lumbar vertebrae. In 1928 Barsony describe the lesion as a sclerosing bone disease, easily demonstrable by x-ray and confined to OS ilii. They described 15 cases in a period of one and half years. The prevalence of OCI in the general population has been estimated to be between 0.9 and 2.5%¹⁰. It is essential a radiological diagnosis. The radiographic appearance of OCI¹¹.

Table-I: Radiographic appearance of OCI

- A. Well defined triangular sclerosis on the iliac aspect of the SI joint. The bony eburnation involves the inferior portion of the bone and the apex of the sclerosis can extend up the articular portion of Ilium.
- B. Normal appearing joint space and articulating surface.
- C. Little or no radiological evidence of involvement of sacrum.
- D. Minimal or no spurring at the lower margin of SL joint

OCI affects primarily female especially during or following pregnancy. It can also affect nuliparous woman and male¹². Path physiology is unclear. Most popular hypothesis is that bone remodeling due to stress induced vascularity across SI joint¹³. During pregnancy mechanical stress may cause OCI or uterus may compress abdominal aorta causing ischemia and sclerosis. Gillespice and Lloyd- Roberts described 21 cases, all occurring in female who had borne children their thought was probable pathogenesis was obliterate end arteritis that follows parturition¹⁴. Hare and Haggart reported a series of female patient with this condition, some of whom are nulliparous. They believed that the condition might represent a disturbance of circulation¹⁵. Jerks et al. performed a study in 2009 and showed that 35 female of OCI reported prior pregnancy¹⁶. The lesions are usually bilateral with diffuse pain in the lower lumbar region. Sometime it may radiate in the lower limb. The disease has chronic course and with a tendency to relapse¹⁷. Our case presented with non radiating low back pain which was gradual onset, moderate in intensity, dull aching in nature. It exaggerated with rest and relived a bit by activity. It was associated with night pain & morning stiffness for half an hour. The diagnosis of OCI has to be supported with the differential diagnoses. Differential diagnoses of OCI is Serongetivespondyloarthopathies especially AS, lumbar or pirifrom strain, ischio-gluteal bursitis, renal osteodystrophy, lymphoma, Paget's disease, primary hyperparathyroidism, metastatic disease etc. Polyarthralgia in peripheral joints have been noted in a small group of patients with OCI, although significant inflammatory articular findings are generally absent¹⁸.

Table-II: Differentiating point between AS and OCI

AS		OCI	
1	As is common in man.	1	OCI is common in female.
2	As is not related with pregnancy.	2	OCI is related with pregnancy.
3	Erosion of SI joint and narrowing of SI joint space (greater than 2mm) seen in AS.	3	SI joint space is normal in OCI.
4	Sclerosis is poorly defined.	4	Sclerosis clearly defined.
5	Laboratory finding --acute phase reactants increase in AS.	5	Normal.

Basset P et al in their comparative study between OCI and AS in female patients included that OCI is not a variant of AS in a women¹⁹. It is a self remitting condition. Isley and Baylin in a long term follow up study of nine patients with this condition noted that all but two showed signs of definite improvement. The condition spontaneously remitted after a few days to a few weeks²⁰. Treatment of OCI is primarily conservative. Physical therapies, non steroidalanti inflammatory medications and steroid injection with surgical resection being reserved for refractory cases. Servodio et al performed surgery of two OCI patients due to non responsiveness of conservative management²¹. Our case showed significant improving with non steroidalanti inflammatory drugs & therapeutic exercises.

In conclusion, OCI when found, the case should be completely investigated to uncovered new fact and findings and to prevent misdiagnosis with the other entities. As it is a case of chronic low back pain, it can interface with mood, every part of life and ADLs (activities of daily living). Through it is a self-remitting condition, conservative management, analgesics and physiotherapy are the mainstay of management of OCI.

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