

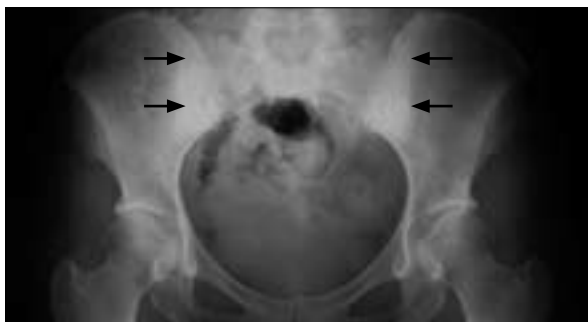
## Quiz

A 28-year-old Chinese woman in her second trimester presented complaining of 4 months of continuous low back pain. She gave a 3-year history of dull back pain, never severe enough to prevent her going to work. The pain, dull in nature, usually came on after prolonged standing and walking. A history revealed a similar exacerbation of her back pain during her first pregnancy 2 years ago. On physical examination, no signs of nerve root compression were detected. Apart from tenderness demonstrated during a stress manoeuvre of the sacroiliac joints, the rest of the physical examination was normal. Plain roentgenograms of her spine and pelvis (Fig) taken before her current pregnancy were retrieved for evaluation. What is she suffering from?

## Comment

The anteroposterior radiograph of her pelvis (Fig) shows bilateral, symmetrical, well-defined sclerosis (triangular in shape with the base located inferiorly) of the iliac sides of the sacroiliac joints. A diagnosis of osteitis condensans ilii was made based on the characteristic clinical and radiographic features, and the absence of findings suggestive of spondylitis.

About two thirds of adults suffer from low back pain at some time, with as many as half of all pregnant women having an exacerbation of existing pain at some stage during pregnancy.<sup>1</sup> Apart from biomechanical



**FIG.** Plain radiograph of the pelvis after pregnancy

The radiographic findings include an area of triangular sclerosis (black arrows) on the iliac aspect of her sacroiliac joints. The apex of the sclerosis extends into the articular portions of the ilium, in the absence of joint erosion

changes and stress on the pelvic joints, there are ample reasons for this vulnerability to back pain in pregnancy, including ligamentous laxity secondary to the release of the hormone relaxin.<sup>2</sup> In particular, pain arising from sacroiliac dysfunction is a substantial problem in pregnant women. Its prevalence rises with multiparity and it is often associated with symphyseal pain. Although radiographic imaging is generally not necessary for the diagnosis of symphysis pubis pain, osteitis condensans ilii is by and large a radiological diagnosis.<sup>3</sup> Osteitis condensans ilii is a non-inflammatory condition with bony eburnation about the sacroiliac joint. This relatively uncommon condition, which has a prevalence of 1.6% in the Japanese,<sup>4</sup> usually affects the ilium adjacent to both sacroiliac joints. Predisposing factors for osteitis condensans ilii appear to be mechanical stress across the sacroiliac joint in association with pregnancy and diastasis of the symphysis pubis. The condition is painful in many, but not all, patients and occurs more often in multiparous than nulliparous women. Most affected women notice the onset of pain during pregnancy or the postpartum period.

Recognition of this benign condition is important in order to avoid confusion with ankylosing spondylitis, a predominantly male condition. Other important distinguishing features include the absence of joint erosion, intra-articular bony ankylosis, and ligamentous calcification in patients with osteitis condensans ilii.<sup>5</sup> Moreover, osteitis condensans ilii runs a relatively benign course which responds to simple measures including sleeping on a firm mattress, physiotherapy, and analgesics as required. The radiographic changes may revert to normal, further supporting a conservative approach as the mainstay of management.<sup>4,6</sup> Osteitis condensans ilii should be recognised by primary care physicians and obstetricians who look after patients with low back pain. Whether this condition simply represents a process of bone remodelling in response to stress remains speculative. Nevertheless, we should inform our patients with osteitis condensans ilii about the non-inflammatory nature of this phenomenon and emphasise that it is not a form of arthritis.

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