

# Chronic osteomyelitis of the pubis in the peri-partum period-A rare presentation: Case report and a review of the Literature

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## Abstract

Background:

Chronic Osteomyelitis of the pubis is rare. The condition may complicate urological surgery but literature is very scarce concerning its occurrence in the peri-partum period. The condition must be differentiated from osteitis pubis and symphyseal disastasis which can occur in the peri-partum period. Differentiation is important because the clinical symptoms are similar and the conditions can co-exist in the same patient at the same time.

Objective:

To present a rare case of chronic osteomyelitis of the symphysis pubis in pregnancy and highlight the problem of late presentation which occurs commonly in developing countries.

Case:

A 28 year old woman presented eight weeks after delivery with complaints of pain in the pubic region and gait abnormalities. She first felt pain in the pubic region 24 hours before commencement of labour. Pain worsened after delivery and later became associated with a waddling gait. X-rays were suggestive of chronic osteomyelitis. She was treated by debridement, primary bone grafting and antibiotics.

Conclusion

Chronic Osteomyelitis is difficult to treat and can have serious complications. The condition should be considered in pregnant women who present with pain in the pubic region. When diagnosed, treatment should not be withheld.

## INTRODUCTION

Chronic Osteomyelitis is still seen and presents significant treatment challenges in the developing world<sup>1</sup>. The condition can affect any bone but is commonly reported in long bones<sup>2, 3</sup>. Chronic Osteomyelitis of the pubis is not common and very few cases have been reported in the ante-partum period and following spontaneous vaginal delivery<sup>4,5</sup>. However, there are reports of chronic osteomyelitis pubis following urologic surgery<sup>6,7</sup>. Some risk factors are associated with pubic infection and include female incontinence surgery, sports, pelvic malignancy and intravenous drug use<sup>6,8</sup>. The

interplay between pregnancy and an increased susceptibility to pubic infection is not documented.

The presenting features of chronic osteomyelitis are known but those of the pubic symphysis include pubic pain, painful or waddling gait, low grade fever, pain with hip motion and pain in the groin<sup>4</sup>. In many developing countries, patients present late to orthodox centres and often have tried injudicious treatment interventions<sup>9</sup>. The complications that follow chronic osteomyelitis are varied and severe. Antibiotics are usually recommended for the condition but surgical debridement is often required<sup>4,5</sup>. Literature review

showed very few reports of osteomyelitis of the pubis in the peri-partum period. To the authors' knowledge, there are no reports of this condition from Africa. We report the presentation of this rare condition and highlight the problem of delayed presentation in our society.

## CASE REPORT

A 28 year old woman presented to Faith Foundation Specialist Clinic 8 weeks after spontaneous vaginal delivery with complaints of pain over the pubic symphysis and abnormality of gait. The pain was deeply located over the pubic region, was boring in nature and had started 24 hours before onset of labour and childbirth. It had however worsened post-partum and became associated with a waddling gait subsequently. She denied any fever, local swelling or trauma to the region. Childbirth was uneventful. She however volunteered a history of road traffic accident with a fall from a motorcycle 2 years previously. This was not followed by any complications.

Significant findings on examination were deep tenderness over the pubic symphysis, a waddling gait and grade 4 muscle power in both lower extremities. X-rays showed symphyseal diastasis with proximal displacement of the (R) hemipelvis, irregular erosion of the body of the (L) pubis with discrete lytic lesions and an insignificant (L) sacroiliac diastasis (Fig 1). The Full blood count (FBC) was normal but Erythrocyte sedimentation rate (ESR) was raised (120mm in the first hour by Westergren method).

The patient was treated by one stage surgical debridement, block cancellous bone graft (held in place by wiring) and antibiotics. Curettages from the symphysis pubis and (L) pubis yielded a heavy growth of *Pseudomonas aeruginosa*. She made a complete recovery and at nine months follow-up remained pain-free with a normal gait.

## Figure 1

Figure 1: X-Ray showing discrete irregular destruction of the left pubis (Arrows)



## DISCUSSION

The pubic symphysis is located anteriorly between the two pubic bones. It is a non-synovial fibrous joint and osteomyelitis pubis is rare in the general population more so in pregnant women<sup>4,10</sup>. Osteomyelitis pubis, osteitis pubis and pubic diastasis can present with pubic pain, painful or waddling gait, fever, painful hip abduction and groin pain<sup>4,10,11</sup>. These conditions may coexist, but differ in aetiology. Osteomyelitis pubis is infectious, osteitis pubis is inflammatory and self-limiting while pubic diastasis is traumatic. Because of its rarity, uncommon site and difficulty in differentiating osteomyelitis pubis from urological, gynaecological and abdominal conditions, diagnosis is often delayed<sup>10</sup>. In Africa, delayed presentation as in the index case also contributes to delay in diagnosis and treatment leading to the development of avoidable complications.

Apart from conventional radiography, technical investigations such as computerized tomography, magnetic resonance imaging and bone scintigraphy which may help in differentiating osteomyelitis from the other conditions are lacking in many parts of Africa and other resource poor regions. A high index of suspicion must be maintained if the diagnosis is to be made. Laboratory indices like the full blood count, C-reactive protein, erythrocyte sedimentation rate (ESR) and fibrinogen are useful. The complete blood count and ESR are feasible in many parts of Africa. A biopsy and culture of the affected area is often necessary<sup>10</sup>. The most common isolated organism is *S. aureus*<sup>2,3,9</sup>. Our index case showed a heavy growth of *Pseudomonas*

aeruginosa, one of the less common organisms.

Antibiotic therapy is essential for chronic osteomyelitis but is supportive. It should be culture and sensitivity based and a sequential intravenous – oral therapy is the preferred mode of administration<sub>1</sub>. The C-reactive protein and ESR are used to monitor response to treatment and timing of switch from parenteral to oral route. Adequate debridement of all infected and avascular tissue offers the most important chance for disease eradication and should not be withheld when a diagnosis of chronic osteomyelitis pubis is made in the peripartum period.

Our patient had chronic osteomyelitis pubis with infection by *Pseudomonas aeruginosa*. The X-ray findings of irregular erosion of the pubis with discreet lytic lesions were suggestive. The condition can mimic and coexist with osteitis pubis and symphyseal diastasis and should be suspected in patients who present with pubic pain and painful/waddling gait in the peripartum period. When patients present late, low grade fever may not always be present. Our treatment consisted of debridement, primary bone grafting (with a block of cancellous bone from the iliac crest) to fill the wide defect created by debridement, and culture and sensitively based antibiotic therapy. The extent of bony destruction was probably due to delay in presentation. It was difficult to find the ideal route of bacterial spread in this patient.

## CONCLUSION

Chronic Osteomyelitis pubis should be considered in women who present with pubic pain, waddling gait with/without low grade fever in the peri-partum period. Laboratory tests, X-rays and biopsy of suspicious lesions should be performed in

all cases. Surgical debridement should not be withheld when indicated. Severe complications including pubic diastasis and pelvic instability may result from delays in presentation, diagnosis and treatment<sub>8</sub>.

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