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Case Report

An Unusual Case of Postpartum Septic Arthritis of the Knee Joint

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Abstract

Septic arthritis presents with pain and swelling in the joint, and if untreated cases can lead to irreversible arthropathy and disability is an unusual complication during pregnancy and post-partum period. The morbidity is due to destruction of the articular cartilage resulting in impaired mobility of the joint. Severity depends upon the organism involved and host's own defences. Septic arthritis of the knee joint is very rare during post-partum period and very few cases have been reported so far. We report a rare case of post-partum Staphylococcal septic arthritis of the knee joint in a low risk woman, who was successfully treated.

Keywords: Septic arthritis, knee joint, postpartum period.

INTRODUCTION

Septic arthritis is an unusual complication during pregnancy and post-partum period. The condition presents with pain and swelling in the joint. Clinical examination may reveal raised temperature, warmth, effusion, and erythema over the joint. If left untreated it can lead to irreversible arthropathy and disability. The morbidity is due to destruction of the articular cartilage resulting in impaired mobility of the joint. Severity depends upon the organism involved and host's own defences [1].

Septic arthritis of the knee joint is very rare during post-partum period and very few cases have been reported so far [2]. We report a rare case of post-partum Staphylococcal septic arthritis of the knee joint in a low risk woman, who was successfully treated.

CASE PRESENTATION

A 27-year-old Gravida2, para1, live1 at 39 weeks of gestation was admitted to labor room with labor pains. She had no obstetric or medical complications during the present pregnancy. There was no significant past medical or surgical history. Her previous pregnancy was uneventful and it was a spontaneous vaginal delivery. Her antenatal investigations were as follows: Hemoglobin – 10.8 g/dl, urine microscopy negative for pus cells, Oral glucose challenge test was 110 mg/dL, Serology was negative for VDRL, HIV and HBsAg. She delivered by spontaneous vaginal delivery and the baby weighed 3.2 Kg with good Apgar scores. She started breast feeding within an hour of delivery.

On the second post-natal day, she complained of fever and progressive pain, swelling and decreased range of motion in her right knee joint. General examination revealed no pallor or pedal edema, her temperature was 39 degree Celsius. Pulse rate was 118 beats/ minute and blood pressure was 100/70 mmHg. The oropharynx was clear, without any dental carries or gingivitis. There was no inflammation at the intravenous cannula site. There was no breast engorgement or calf muscle tenderness. Episiotomy wound and lochia were healthy. Examination of the right knee joint revealed redness and swelling over the joint. On palpation, the knee was warm, tender with restricted joint mobility. Anteroposterior and lateral X rays of the knee joint were unremarkable. Under aseptic conditions, aspiration of the knee joint was done and 30 ml of turbid fluid was collected and sent for culture sensitivity. Blood investigation results were as follows: white blood cell count 18000/mm^3, and ESR 60. Urine microscopy and culture reports were normal. Gram

stain of the aspirate showed plenty of pus cells. In view of the clinical finding, urgent arthroscopic irrigation and debridement of the knee was performed. During the procedure, significant pus collection was noted in the suprapatellar pouch. The synovium was thickened and inflamed, and synovial biopsies were taken. Eight litres of normal saline wash was given. Pus culture grew Staphylococcus aureus sensitive to cefazolin and flucloxacillin. The synovial biopsies were reported as acute synovitis with inflammatory exudates and extensive ulceration of the synovial lining.

The patient's condition significantly improved following treatment with intravenous cephazolin in the post-operative period and was discharged later with additional prescription of oral flucloxacillin for 4 weeks. She was doing well during the follow up visit after 6 weeks, with an improved range of movements in her left knee joint.

DISCUSSION

Musculoskeletal pain is common during pregnancy and post-partum period [3]. Differential diagnosis for joint pain in post-partum period include trauma, bacterial or viral arthropathy, rheumatoid arthritis, enteropathic arthritis and rarely septic arthritis [4]. Septic arthritis is uncommon during the post-partum period as there are activated innate and specific immune defences during this period. In addition, lactation is associated with a boost in these defence mechanisms [5]. Predisposing factors for septic arthritis during the postpartum period include diabetes, rheumatoid arthritis, mastitis and breast abscess, urinary tract infection, surgeries such as lower segment cesarean section and intravenous catheter associated bacteremia. The likely mechanism includes hematogenous seeding, but can also result from direct spread or extension from a local focus of infection [6, 7]. The patient's history and examination may provide clues to the origin of arthritis. Magnetic resonance imaging is helpful for a detailed assessment of the inflamed joint [8]. Very few cases of post-partum septic arthritis of the knee joint have been reported [2, 9]. The most common causative organism for septic arthritis is Staphylococcus aureus like in our case. Joint aspiration should be performed in cases with septic arthritis, as it allows drainage of fluid collection to facilitate treatment and recovery. Initial therapy with broad spectrum antibiotics is usually started which can later be changed based on culture sensitivity pattern [4]. Duration of therapy typically involves many weeks. Our patient was prescribed antibiotics for 4 weeks with significant clinical improvement.

CONCLUSION

Septic arthritis is an uncommon during the postpartum period. Obstetricians need to be vigilant regarding the clinical features suggestive of septic arthritis, in order to prevent adverse outcomes. Emergency joint irrigation and use of antibiotics has been associated with a favorable outcome.

Conflict of interest: None declared

Informed Consent: A written and signed informed consent from the individual, who is the subject of this case report has been obtained, prior to submission of this manuscript for publication.

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