



## CASE REPORT

# Septic Arthritis in an Elderly Patient: A Case Report

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### Abstract

**Background:** Infectious arthritis is an alternative name for septic arthritis. Joint damage that cannot be repaired can result from septic arthritis. It is an infectious agent's invasion of a joint that results in joint inflammation. It generally happens as a result of uniform bacterial dissemination. Knee, hip, ankle, shoulder, and wrist joints are frequently affected. Weakened immune systems and systemic diseases such as HIV, cirrhosis, diabetes, and alcoholism. The causative agents include the sexually transmitted virus *Neisseria gonorrhoea*, group A streptococcus, and staphylococcus aureus. **Patient presentation:** The patient we have here is a 46-year-old woman who was seen in the orthopedic outpatient unit. Her first complaint was that she was OK until five months ago, at which point she began to complain of sudden, moderately severe pain. The degree of pain has progressively increased in nature to the point that it increases with movement and decreases with rest and medicine. She was prescribed medicine and had a radiological examination when she visited a private hospital for the treatment. To determine the diagnosis, a pelvic X-ray, MRI, and biopsy were performed on the hip and back. The patient had an excisional arthroplasty of the left side of the femoral head performed under spinal and epidural anesthesia. **Conclusion:** The condition is an infection-related joint inflammation. Adults are most commonly affected with septic arthritis. This disease is characterized by erythema, severe fever, intermittent chills, altered gait, and discomfort in a weight-bearing joint. A total blood cell count that indicates an elevated CRP can be used to identify septic arthritis. Rise in radiography, ultrasound, MRI, WBC count, and blood culture. Surgical intervention is necessary to treat septic arthritis.

**Keywords:** Septic Arthritis, Inflammation, Pain

## Introduction:

An infectious agent-related arthritis is a disease where the joints get infected. If hip septic arthritis [SA] is not diagnosed or treated promptly, the joint may sustain irreversible damage [1]. Hip septic arthritis is a multifaceted ailment that presents with an array of clinical presentations, a challenging diagnosis, and a range of surgical alternatives for therapy, such as arthroscopy, resection arthroplasty, and one- or two-stage complete hip replacement. Regarding the rate of infection elimination, different techniques provide different outcomes. [2] Identifying patients as soon as feasible and providing the right therapy is crucial to preventing consequences such as joint deterioration, alkalosis, growth stop, infection spread leading to osteomyelitis, and nerve lesions. The sole method for treating septic arthritis is surgical treatment [3].

## Case Scenario:

We are dealing with a 46-year-old female patient who first came to the orthopedic outpatient unit complaining that she was fine five months prior. However, she then began complaining of pain that suddenly responded, progressing from moderate to severe pain that increased with movement and decreased with rest and medication. She visited a private hospital for treatment, where she received medicine and underwent a radiological examination. The diagnosis was made using a pelvic X-ray, a pelvic MRI that included the hip and back, and a biopsy. The patient had an excisional anthropological investigation of the left side of the femur head performed under spinal and epidural anesthesia. to address this particular situation. Per the patient's account, she seemed to be doing well for five months before experiencing somewhat severe pain that started from nowhere. Moving causes pain to grow significantly, which is progressively progressive. Pain is lessened with rest and medicine. She was given medicine and a radiological examination in a private hospital where she received treatment.

To determine the diagnosis, an MRI of the pelvis including the hip and Bach was performed on her, along with a pelvic x-ray. A physical examination revealed that the right straight leg lift test could not be negative since it would cause a segue because of negative active ankle and toe movement on the right side and left side, respectively. The PBH client was checked while in a supine posture, but no movement of the left ankle, hip, or knee could be elicited. Due to discomfort, PTA palpation on the left side and DPA weak palpation on the left side were unable to elicit a response for the mild swelling over the left foot, local temperature, hip, knee, and ankle moment. Positive earth visual indicator. Edema pitting over the left foot. There is a 2-centimeter shortening of the left lower leg and generalized discomfort over the left hip. X-ray pelvic with both hips shows severely reduced joint space in the left hip, sclerosis of the femoral head, and osteophytes. Bone marrow edema in the head of the femur and acetabulum, along with a decrease in left joint space, thickening, iliopsoas bursitis, detached superior acetabulum labrum, and soft tissue edema in the muscles and fat planes next to the hip joint are all suggestive of partial destruction of the left hip on a pelvic MRI. The iliopsoas bursitis and soft tissue inflammation in the left hip are consistent with infective arthritis, as is the modest region of soft tissue edema in the right adductor, obturator internus, and gluteus maximus muscles.



Figure 1: Patient X-Ray

## Discussion:

Delaying diagnosis or treatment of hip septic arthritis can result in irreversible joint destruction, making it a serious orthopedic emergency. Septic arthritis results from the presence of microbiological organisms in a joint space. Adult hip septic arthritis [SA] is challenging to identify and manage [4]. Proper treatment and early diagnosis are essential for preventing problems. The diagnostic workup and final therapy require a multidisciplinary approach due to the range of clinical symptoms that may arise based on age, kind of infection, and origin. To prevent therapy delays that might drastically affect the patient's quality of life, an early diagnosis is essential [5]. A variety of surgical therapy options, including arthroscopy, resection arthroplasty, and one- and two-stage total hip replacement, are available for treating hip septic arthritis, a complicated disorder with a wide range of clinical symptoms and a difficult diagnosis [6]. For infection eradication rates, different methods report different sets of data. If SA is identified, prompt and comprehensive therapy is required. Via direct injection or hematogenous diffusion, the infection might reach the hip. When germs enter the hip and proliferate, an inflammatory response is brought on [7]. The use of surgery results in lower rates of death and recurrence. The primary goal of surgery is to restore anatomy. The patient will show up unable to bear weight and experience severe hip or groin pain. Lack of fever does not rule out SA because only 30–60% of people have a fever when they initially appear [8].

clinical proof gleaned from a patient's medical history and examination The results of the pelvic MRI and X-ray confirm the clinical diagnosis of septic hip arthritis. Upon examination, the patient's lower limbs seemed to be flexed and externally rotated, accompanied by hip joint pain related to internal rotation. Obtaining the necessary laboratory tests and diagnostic imaging is necessary to confirm a diagnosis and

schedule surgery [9]. In this instance, the radiological studies yielded important results. MRI results are also revealed, and they are similarly significant. Although there have been significant advancements in the technique over the years, the 1943 Girdlestone excision arthroplasty may be effective in eliminating the infection; yet, the procedure has resulted in long-term limping, length discrepancy, and very minimal pain alleviation as adverse effects [10]. An excisional arthroplasty of the femur head was done when septic arthritis was suspected. Emergency care was necessary for septic arthritis to minimize complications. One-stage arthroplasty is recommended for quiescent infections instead of two-stage arthroplasty, which is recommended for patients who have active infections at the time of arthroplasties. The success percentage seems to be about the same whether the subjects are people who are not actively infected [11].

Hip infections in adult patients can be treated in several ways, but the most effective course of action will depend on the kind of infection. When treating septic arthritis, arthroscopic or open drainage together with antibiotic treatment is the gold standard. Complete recuperation from surgery requires time, and hospital stays are lengthier than those associated with bedside arthrocentesis. Arthroscopy is frequently used to debride necrotic tissues and eliminate pathogenic microorganisms [12]. In modern times, an orthopedic surgeon treating an SA has several surgical alternatives at their disposal, including one or two phases of total hip replacement [THR], arthroscopic lavage/debridement, and resection arthroplasty [arthrotomy] [13].

Interestingly, Nusem et al. did not take the patient's age into account while selecting their course of therapy, unlike in none of the papers under review [14]. In every article, the youngest patient group received treatment with just arthroscopy. Arthroscopy is usually useful for

debriding necrotic tissues and eliminating infectious debris [15].

## Conclusion:

We presented a case where timely surgical intervention and follow-up contributed to the patient's recovery. Anatomy can be restored by surgical intervention. Currently, available therapies for septic arthritis include arthroplasty for resection [sometimes called an arthrotomy], lavage/debridement utilizing arthroscopic methods, and complete hip replacement in one or two phases. The course of treatment for septic arthritis will depend on the kind of infection, which might be latent or active. For native joint septic arthritis, the medicinal treatment seems to be just as successful as the surgical treatment, with a shorter hospital stay and a better functional result. It is necessary to do prospective research.

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## Institutional Review Board

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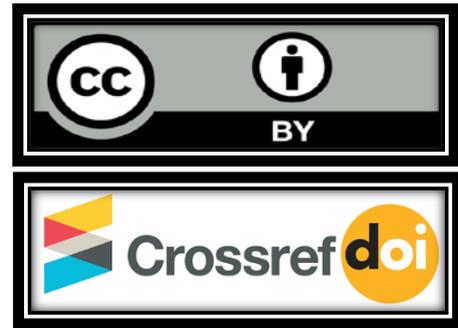
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