

# Septic Arthritis Present with Silent Gallbladder Stone

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**Abstract:** *Septic arthritis is inflammation of a synovial joint. The infection is located in the synovial joint or periarticular tissues. Septic arthritis of knee joint is common and is associated with significant morbidity and mortality. Septic arthritis of knee present with silent gallbladder is a rare case. Septic arthritis can spread via hematogenous route as bacteremia. we know ascending cholangitis is usually due to bacterial infection of biliary tract, that result for biliary stasis. This result gall bladder stone formation, but it represent as silent gall bladder stone. Patient remain asymptomatic. Incidentally came out during routine investigation for septic arthritis. here we present a 45 years old man present with septic arthritis with silent gallbladder stone.*

## 1. Introduction

Septic arthritis is an intensely painful infection in a joint which causes an inflammatory reaction with migration of polymorph nuclear leucocytes and subsequent release of proteolytic enzymes. This could lead to destruction of the articular cartilage and later the joint.

Diagnostic criteria (Morrey and associates criterion)

- 1) More than 38.3 degree celcius temperature
- 2) Swelling of suspected joint
- 3) Pain in joint that increase with movement
- 4) Systemic symptoms
- 5) No other pathologic process
- 6) Satisfactory response to antibiotic.

### Pathophysiology

Synovial membrane is highly vascularised. So bacteria can easily enter synovial joint via blood stream. There will be inflammatory reaction with seropurulent exudate and increase in synovial fluid. As pus appear in the joint, the articular cartilage is eroded and destroyed. Partly by the bacterial enzyme, and partly by the enzyme released from synovium, inflammatory cell and pus.

### Route of Spread

- a) Hematogenous spread = bacteremia, iv drug user, immunocompromised state.
- b) Direct spread = recent joint surgery, prosthetic joint, steroid injection, trauma
- c) Spread from local infection = skin infection or ulcer, osteomyelitis, septic bursitis, abscess

## 2. Case Report

A 45 year old male present with pain and swelling of left knee for last 3 months. there is few episodes of mild grade fever for last 2 months. Patient experienced movement restriction during daily activity.

On examination, tenderness present over this area. Range of motion is limited. increase temperature locally. Then ultrasonography of left knee was done urgently.

### On Ultrasonography:

Huge long segment suprapatellar thick collection with synovial thickening extending to medial and lateral aspect of knee joint (left side) with surrounding inflammatory changes.

### On Blood Test

White blood cell total count = 15660 per microliter  
 Red blood cell count = 3.66 million  
 Cells per microliter.  
 Neutrophil = 89.2% lymphocytes = 8.2%

This patient has no history of pulmonary tuberculosis, diabetes mellitus, hypertension.

### Ultrasonography of Whole Abdomen:

GB- multiple calculus  
 CBD – 8mm  
 Right kidney- 7.8 mm calculus at superior pole

### Serology:

HIV 1 and HIV 2 = non reactive.  
 Hbs antigen = negative  
 Anti HCV = negative  
 Management = Arthrotomy done under spinal anaesthesia under antibiotic coverage for septic arthritis.

## 3. Discussion

Septic arthritis is an inflammation of synovial membrane with purulent effusion into the joint capsule due to infection. Bacteria rapidly gains access to the joint cavity and settles in the synovial membrane. Articular cartilage is eroded and destroyed due to the action of bacterial toxins and by enzymes released from the synovium and inflammatory cells. In hematogenous route bacteremia associated with gut infection. Here in this case this patient similarly present a silent multiple gall bladder stone with septic arthritis.

## 4. Conclusion

This is to conclude that gall bladder stone may be silently present with septic arthritis, for that reason ultrasound of whole abdomen should be included in preoperative preparation. This needs to be taken into account when

interpreting the results of joint aspiration of septic arthritis patient.

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