Case Report: Arthroscopic Treatment of Psoas Abscess Concurrent with Septic Arthritis of the Hip Joint

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Introduction

Psoas abscess

1. Primary psoas abscess
   - The cause is often unknown: trauma, distant source of infection
   - Male : Female = 3:1
   - Most common pathogen: *Staphylococcus aureus*

2. Secondary psoas abscess
   - Direct extension from an adjacent retroperitoneal or intra-abdominal infection
   - Pathogens: often mixed – *E. coli* and *bacteroides spp* (most common)
Purpose of This Study

- To describe the first case of a primary psoas abscess concurrent with septic arthritis of the hip joint treated with hip arthroscopy
Case Report

- A 62-year-old man with diabetes mellitus presented with a 3-day history of the left hip pain, rigors, and general myalgia.
  - Fever of 38.1°C
  - WBC count of 10,850/μL
  - C-reactive protein of 26.88 mg/dL
- MRI with contrast
  - left psoas muscle swelling and lobulating cystic lesion with peripheral enhancement, and the fluid collection tracked into the left hip joint
Arthroscopic Surgery

- Hip arthroscopic surgery on the 5 day of illness
- Access to the peripheral compartment w/o traction, 45° hip flexion
- High-volume irrigation using > 30L of normal saline and debridement of the proliferative synovial membrane and granulation tissue
- Anterior capsulotomy to gain access to the iliopsoas bursa
- Drainage tube was placed in the hip joint and the iliopsoas bursa through the defect on the anterior hip capsule.
Postoperative Management

1. The etiologic agent: *Staphylococcus aureus* (from hip joint aspiration)

2. Antibiotics:
   - Intravenous piperacillin/tazobactam for 6 weeks
   - Oral moxifloxacin for 1 week

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PreOp Contrast CT

Contrast CT at immediate postOp

Contrast CT at postOp 2 weeks

Psoas abscess

Air bubbles spreaded along psoas bursa during hip arthroscopy

Decreased muscle swelling
No abscess
Results

- Hematologic and biochemical tests: normalized at 4 weeks after surgery.

12-month Follow-up

- The ROM in the hip joint was unrestricted and the patient did not have any particular complaint.
- Modified Harris hip score: 90.2
- Nonarthritic hip score: 83.75
Discussion

- **Management of psoas abscess**
  - Antibiotics treatment accompanied by abscess drainage
  - CT-guided percutaneous drainage or open surgical drainage

- **Psoas abscess concurrent with septic arthritis of the hip joint**
  - 5 similar case reports in previous literatures

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<thead>
<tr>
<th>Author (Journal, Year)</th>
<th>Treatment</th>
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<tbody>
<tr>
<td>Talbot et al (Injury, 2004)</td>
<td>Open I&amp;D → Second stage total hip arthroplasty due to pathologic hip fracture</td>
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<tr>
<td>Kumagai et al (J Orthop Sci, 2005)</td>
<td>Open I&amp;D of both hip joint and psoas abscess</td>
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<tr>
<td>Compain et al (Joint Bone Spine, 2008)</td>
<td>Open I&amp;D → Second stage total hip arthroplasty</td>
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Discussion

Communication of iliopsoas bursa with the hip joint

- The iliopsoas bursa is located near the most vulnerable portion of the anterior capsule of the hip; therefore, a defect in the anterior capsule leads to communication between the bursa and the hip joint.
- **The hypothesized pathological mechanisms:** friction from the overlying iliopsoas tendon, increased intra-articular pressure from overproduction of synovial fluid, and a weakening of the capsule resulting from wear with age or inflammatory or degenerative joint disease.
- Wunderbaldinger et al (Eur Radiol, 2002)
  - A communication between this bursa and the hip joint is present in about 15% of healthy adults
Conclusion

- This is the first case of a primary psoas abscess concurrent with septic arthritis of the hip joint treated with hip arthroscopy.

- Arthroscopic surgery is an effective and less invasive technique for treating psoas abscess with septic arthritis of the hip joint.
References


