

The Recurrent Psoas Abscess Caused by Two Different Pathogens - A Case Report -

Chang-Hoon Jeon, M.D., Un-Seup Jeoung, M.D.*, Gu-Young Chung, M.D., and Sang-hwan Kim, M.D.

Department of Orthopedic Surgery, Ajou University College of Medicine, Suwon
Department of Orthopaedic Surgery, Hallim Medical Center*, Chuncheon, Korea

서로 다른 병원균에 의해 재발한 요근 농양 - 증례 보고 -

전창훈 · 정운섭* · 정구영 · 김상환
아주대학교 의과대학 정형외과학교실, 한림대학교 의과대학 정형외과학교실*

We report a case of a recurrent psoas abscess caused by two different pathogens. The abdominal CT scans revealed a multiseptated cystic mass along the right psoas-iliacus muscle. The patient was treated with antibiotics treatment in combination with CT-guided percutaneous aspiration and drainage using a catheter. The microbiological examination revealed *Klebsiella pneumoniae*. Six months later, the patient presented with anorexia, malaise, epigastric pain, lower back pain and fever of 37.8°C for a one-week duration. The abdominal CT scans revealed an abscess cavity on the inferior side of the right psoas-iliacus muscle. This was accompanied by retrocecal appendicitis and a periappendiceal abscess. Magnetic resonance imaging of the pelvis showed that the psoas abscess was located on the right psoas-iliacus muscle. We performed an appendectomy and laparotomy. Subsequently, the culture yielded *Escherichia coli* in the psoas abscess. To our knowledge, this is the first case of a recurrent psoas abscess caused by two different pathogens.

Key Words: Recurrent psoas abscess, Different pathogens, Appendicitis

A psoas abscess is also known as 'a disease evolution' because its causative microorganisms are constantly changing¹⁾. To our knowledge, this is the first case of the recurrent psoas abscess caused by two different pathogenic microorganisms.

CASE REPORT

A 27-year-old man visited with the chief complaint of back pain, right thigh pain, lower back pain and fever with a 3 week duration. He had severe pain on the right lower quadrant of the

abdomen, and a fever of 38.5°C. The physical examination revealed a tender, palpable 15×10 cm² size mass, accompanied by local heat, in the RLQ. In addition, he reported pain with an external rotation of the right hip. The laboratory findings revealed an elevated WBC count (19,410/L with 83.8% neutrophils; the normal levels are: WBCs; 3,400–9,300/L, neutrophils; 33.0–74.0%) and ESR (erythrocyte sedimentation rate) (88 mm/h; the normal level is 0–20 mm/h). The abdominal CT scan revealed a multiseptated cystic mass along the right psoas-iliacus muscle (Fig. 1). Upon ad-

통신저자 : 전 창 훈
경기도 수원시 영통구 원천동 산 5
아주대학교 의과대학 정형외과학교실
TEL: 031-219-5220 · FAX: 031-219-5229
E-mail: chjeon@ajou.ac.kr

Address reprint requests to
Chang-Hoon Jeon, M.D., Ph.D.
Department of Orthopedic Surgery, Ajou University College of Medicine,
San 5, Wonchon-dong, Youngtong-gu, Suwon 443-749, Korea
Tel: +82,31-219-5220, Fax: +82,31-219-5229
E-mail: chjeon@ajou.ac.kr

mission, CT-guided percutaneous aspiration and drainage were performed using a catheter. On day 8, the follow-up abdominal CT scan revealed a marked reduction of the right psoas-iliacus abscess (Fig. 2). On day 9, the catheter was removed. The total amount of drainage was 1,800 ml. A microbiological examination revealed *Klebsiella pneumoniae*. Antibiotic therapy was performed using cefamezine.

Six months later, the patient presented with a history of anorexia, malaise, epigastric pain, lower back pain and a fever of 37.8°C for one week. The physical examination revealed tenderness in the RLQ region of the abdomen. The laboratory find-

ings showed a hemoglobin level of 9.5 g/dl (the normal level is 11.7–17.1 g/dl), a Hematocrit level of 29.5% (the normal level is 35.5–51.4%), a WBCs count of 20,000/L with 81% neutrophils, and an ESR of 63 mm/hr. The abdominal CT scans revealed an abscess cavity on the inferior side of the right psoas-iliacus muscle. In addition, retrocecal appendicitis accompanying the periappendiceal abscess was observed on the abdominal CT scans. (Fig. 3) Magnetic resonance imaging of the pelvis revealed a psoas-iliacus between L3 and S1. An appendectomy and laparotomy was performed. The culture yielded *Escherichia coli* in the psoas abscess. Ceftazidim was administered to our pa-



Fig. 1. Contrast-enhanced abdominal CT scans showing a multiseptated cystic mass along right psoas-iliacus muscle.

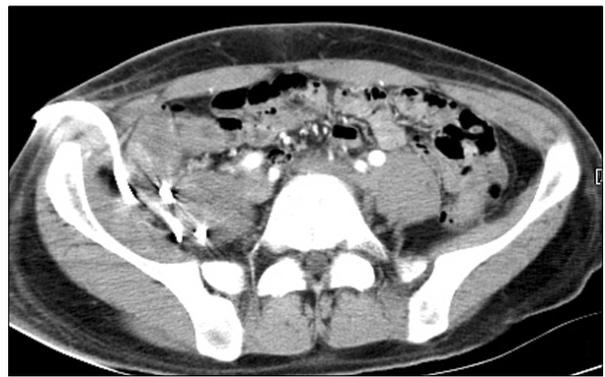


Fig. 2. Contrast-enhanced abdominal CT scans showing that the right psoas-iliacus abscess is almost resolved with CT-guided percutaneous drainage.



Fig. 3. Contrast-enhanced abdominal CT scans shows that the psoas abscess was accompanied by retrocecal appendicitis and a periappendiceal abscess (arrow) (A). In addition, the abscess cavity was observed on the inferior side of the right psoas-iliacus muscle (B).

tient based on the results of the sensitivity test. The drain was removed on day 10. After 3 months antibiotic treatment, the patient was discharged. At the 2-year follow-up, the patient showed no recurrent episodes.

DISCUSSION

An Iliopsoas abscess can be classified as primary or secondary according to the presence or absence of the underlying disease. Primary psoas abscess is caused by *Staphylococcus aureus* in 80–95% of cases⁵⁾. A prior trauma to the psoas muscle is observed in 18–20% of cases. Intravenous drug abusers or HIV-positive people are at increased risk of developing a primary psoas abscess⁶⁾. In some cases, the causative agents are coupled with *Escherichia coli*, *Staphylococcus* and *Streptococcus*, in which *Bacteroides* species are predominant⁵⁾. Presumably, percutaneous drainage with antibiotic therapy might be the first treatment of choice in cases of primary psoas abscess. Before starting this treatment, the occult blood must be cultured once the blood supply is stabilized. In cases of a psoas abscess, with percutaneous drainage, complete drainage of the abscess can be performed and the abscess membrane can be debrided. This increases the recovery rate to 97%⁵⁾. In addition, it is advantageous to shorten the length of hospital stay and lower the recurrence rate. In

the management of a secondary psoas abscess, abscess drainage must be carried out in combination with a treatment for the primary infectious focus³⁾. In cases of a secondary psoas abscess in which only percutaneous drainage was performed, the recurrence rate was at most 50%⁴⁾. In conclusion, antibiotic therapy must be continued for 2–3 weeks after defervescence and the cessation of drainage²⁾.

REFERENCES

1. Franco-Paredes C, Blumberg HM: *Psoas muscle abscess caused by Mycobacterium tuberculosis and Staphylococcus aureus: case report and review. Am J Med Sci*, 321: 415-417, 2001.
2. Gordin F, Stamler C, Mills J: *Pyogenic psoas abscesses: noninvasive diagnostic techniques and review of the literature. Rev Infect Dis*, 5: 1003-1011, 1983.
3. Malhotra R, Singh KD, Bhan S, Dave PK: *Primary pyogenic abscess of the psoas muscle. J Bone Joint Surg Am*, 74: 278-84, 1992.
4. Mynter H: *Acute psoitis. Buffalo Med Surg J*, 21: 202-210, 1881.
5. Ricci MA, Rose FB, Meyer KK: *Pyogenic psoas abscess: worldwide variations in etiology. World J Surg*, 10: 834-843, 1986.
6. Santaella RO, Fishman EK, Lipsett PA: *Primary vs secondary iliopsoas abscess. Presentation, microbiology, and treatment. Arch Surg*, 130: 1309-1313, 1995.

= 국문초록 =

서로 다른 병원균에 의한 재발성 요근 농양에 대한 경험을 보고하고자 한다. 복부 전산화 단층 촬영에서 우측 장요근을 따라 다각막 낭성 종괴를 관찰하였다. 항생제 치료와 함께 전산화 단층 촬영하에 도관을 이용한 경피 흡인술과 배농이 시행되었다. 미생물학 검사상 클렙시엘라 뉴모니아(*Klebsiella pneumoniae*)가 검출되었다. 6개월 후, 환자는 식욕부진, 권태감, 상복부 동통, 요통과 발열을 호소하였다. 복부 전산화 단층 촬영상 우측 장요근 하방에 농양이 관찰되었다. 더불어 충수염과 충수주위 농양이 동반되었다. 골반부 자기 공명 영상 촬영상 요근 농양이 우측 요장근에 관찰되었다. 충수절제술과 개복술을 시행하였고 요근 농양에서 대장균(*Escherichia coli*)이 검출되었다. 이번 증례가 서로 다른 병원균에 의한 최초의 재발성 요근 농양의 보고라고 사료되어 이를 보고한다.

색인 단어: 재발성 요근 농양, 다른 병원균, 충수 돌기염