

# RETROPERITONEAL ABSCESSSES-CASE REPORTS

Pages with reference to book, From 108 To 111

Huma Qureshi, Mushtaq Ahmed ( Surgical Unit I, Civil Hospital and Dow Medical College, Karachi. )

## Abstract

Three cases of retroperitoneal space abscess presented with classical signs and symptoms of fever, mass and pain at the site of collection and psoas spasm in two, but no signs of peritonitis. Plain X-ray abdomen in all cases revealed fullness, a soft tissue shadow, kyphoscoliosis and obliterated psoas shadow on the affected side (Fig. 1). Patients failed to show any improvement with pre-operative antibiotic therapy but had excellent recovery after incision and extraperitoneal drainage of the pus along-with an antibiotic postoperatively. Coagu-lase positive "staphylococci" were isolated from two and the E. Coli from the pus in the third case. The etiology remained unknown in two cases while suppurating lymphadenitis/pyomyositis from a distant septic focus seemed likely in the third.

## Introduction

The retroperitoneal space is potential space extending from the respiratory diaphragm above to the pelvic diaphragm below. It is limited posteriorly by the vertebral column, psoas, quadratus lumborum and the origin of transversus abdominus from the lumbar fascia; below the iliac crest by the sacrum, psoas and piriforms.

The lateral wall is formed by the iliacus and the obturator internus. The anterior boundary is formed by the posterior surface of the parietal peritoneum, posterior surface of liver, ascending and descending colon plus the retroperitoneal portion of the duodenum and rectum.

Daviglus and Rush (1961) have excluded the perinephric space from the retroperitoneal space on the basis of the thick Gerota's fascia which separates the two.

Retroperitoneal abscesses are serious surgical infections unless diagnosed early and treated adequately. They can occur as follows:

1. Complications of a known local pathology e.g., perforated colonic malignancy (Mair et al., 1977) or Crohns disease; osteomyelitis of 12th rib and spine; retroperitoneal lymphadenitis (Altemeier and Alexander, 1961).
2. Bacteremia from a distant septic focus in association with scurvy may produce pyo-myositis as has been seen in Gurkha army recruits.
3. From an unknown cause, these cases constituted 13.7% of Alexander and Altemeier (1961) series of 189 cases and 66.6% of Daviglus and Rush's (1961) series of 45 cases.

Retroperitoneal abscesses are commonly seen in the 4th decade with no sex variation. In United States it is known to occur more in black races due to prevalent malnutrition and poor hygiene.

Staphylococcus is the commonest infecting organism and accounted for 32% cases of Altemeier and Alexanders' series and 38.5% cases of Daviglus and Rush's series. E. coli is the second commonest infecting organism and was isolated in 19% of Altemeier and Alexander and 20.5% of Daviglus and Rush's series.

Three cases of retroperitoneal space abscesses seen between June and December 1980 are reported in this paper. The etiology is unknown in two cases and the possibility of an underlying suppurative lymphadenitis/pyomyositis could be considered in the third.

## Case Reports

**Case 1:**

A 25 year old male presented with fever and dull ache in the right iliac fossa of 45 days duration, pain in the right hip for 1 month and a gradually expanding lump in the right iliac fossa. Pain was aggravated by lying on the right side and on extension of the right hip so that the right hip was kept constantly in a semiflexed position. He had no urinary or bowel complaints.

On examination he was anaemic, pulse was 110/min, blood pressure was 110/90 mmHg and temperature was 101.4°F. A tender mass (4" x 3") was palpable in the right iliac fossa with a smooth surface and ill defined margins. Fluctuation was absent. Right hip was semiflexed and its extension was very painful. Rectal examination revealed a soft tender extra-rectal swelling posteriorly and to the right. Investigations revealed a haemoglobin of 11.5 G/dl, white cell count was 9,000/cumm with 70% polys and 28% lymphocytes. Erythrocyte sedimentation rate was 50 mm/1st hr. Plain X-ray abdomen showed a soft tissue shadow on the right side of pelvis, scoliosis, an obliterated psoas shadow on the right side (Fig. 1).

Urine, stool examination and X-ray chest were normal.

Following the treatment with ampicillin, the patient became afebrile on the 10th day, but the mass increased in size and fluctuation was evident. A diagnosis of retroperitoneal space abscess was made and about 500 ml of thick yellow pus were drained extraperitoneally through a muscle splitting incision in the right iliac fossa.

E. coli were isolated in the pus. Antibiotic therapy was continued for 10 days post operative-ly during which time psoas spasm was relieved and tenderness in the right iliac fossa subsided. A subsequent barium enema and intravenous pyelo-gram were unremarkable, He was discharged on the 12th post operative day and follow up showed continued recovery.

**Case 2:**

A 12 years old male came with high grade fever, vomiting and pain in the left iliac fossa of 8 days duration. He also had bleeding gums off and on. There were no urinary or bowel complaints.

On examination he appeared asthenic and anaemic, pulse was 100/min, blood pressure 100/10 mmHg and temperature 100°F. There was generalized, discrete, lymphadenopathy and a boil was present on the left leg. A tender mass was palpable in the left iliac fossa with an uneven surface, well defined margins and fluctuation. There was prominent left sided kyphoscoliosis. Rectal examination was normal.

Investigations revealed a haemoglobin of 10.3 G/dl, total white cell count was 10,200 cmm with polymorphonuclear leucocytosis. X-ray abdomen showed a soft tissue shadow in the left iliac fossa with scoliosis and an indistinct psoas shadow on the left. Mantoux tests, X-ray chest, I.V.P. and sigmoidoscopy were negative.

The patient did not show any improvement on ampicillin. A diagnosis of retroperitoneal space abscess was made and about 150 ml of thick yellow pus were drained extraperitoneally through a muscle splitting, left iliac fossa incision. Pus grew coagulase positive Staphylococci. Antibiotic was continued post operatively. Fever, pain and tenderness subsided on the 5th post operative day. Sinogram done on the 8th day showed a small residual cavity in the left iliac fossa. He was discharged on the 10th post operative day in a satisfactory condition.

**Case 3 :**

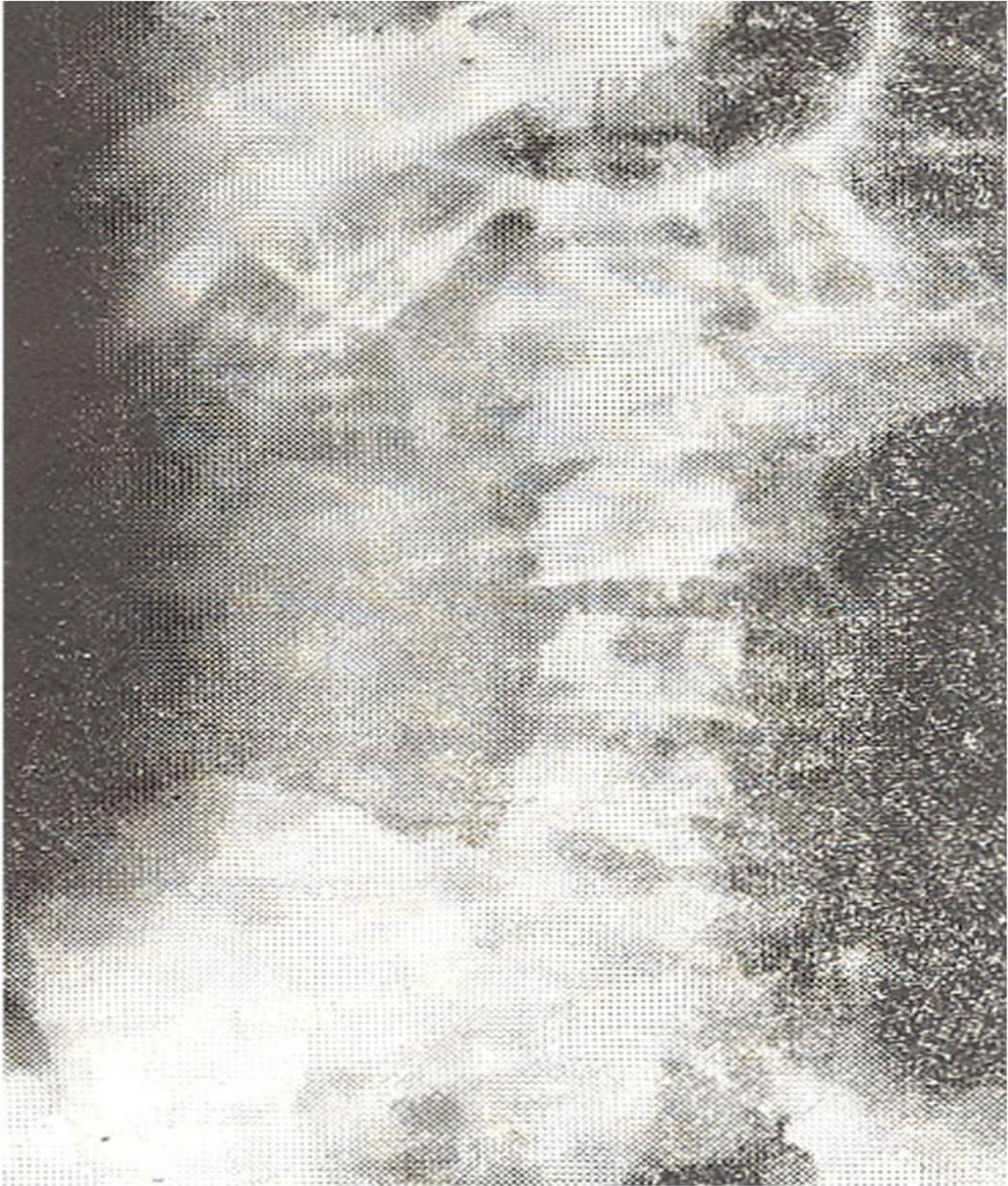
A 19 year old male presented with high grade fever with rigors, night sweats, vomiting and a constant dull ache in the right lumbar region of 20 days duration. Pain radiated to right leg and was aggravated on lying on the right side and on extension of the right hip. Subsequently he developed burning micturation with increased frequency but there was no colour change in urine. He had no bowel complaints.

On examination he was anaemic, pulse was 120/min, blood pressure 120/70 mmHg and temperature 100.6°F. There was right flank fullness with restricted abdominal movements on this side. A bimanually palpable, warm mass with smooth surface and ill defined edges was present in the right lumbar region.

Fluctuation was not evident, but a renal punch and Psoas test were positive. The right hip was semiflexed and was painful on extension

Right sided scoliosis was present. Rectal examination was negative.

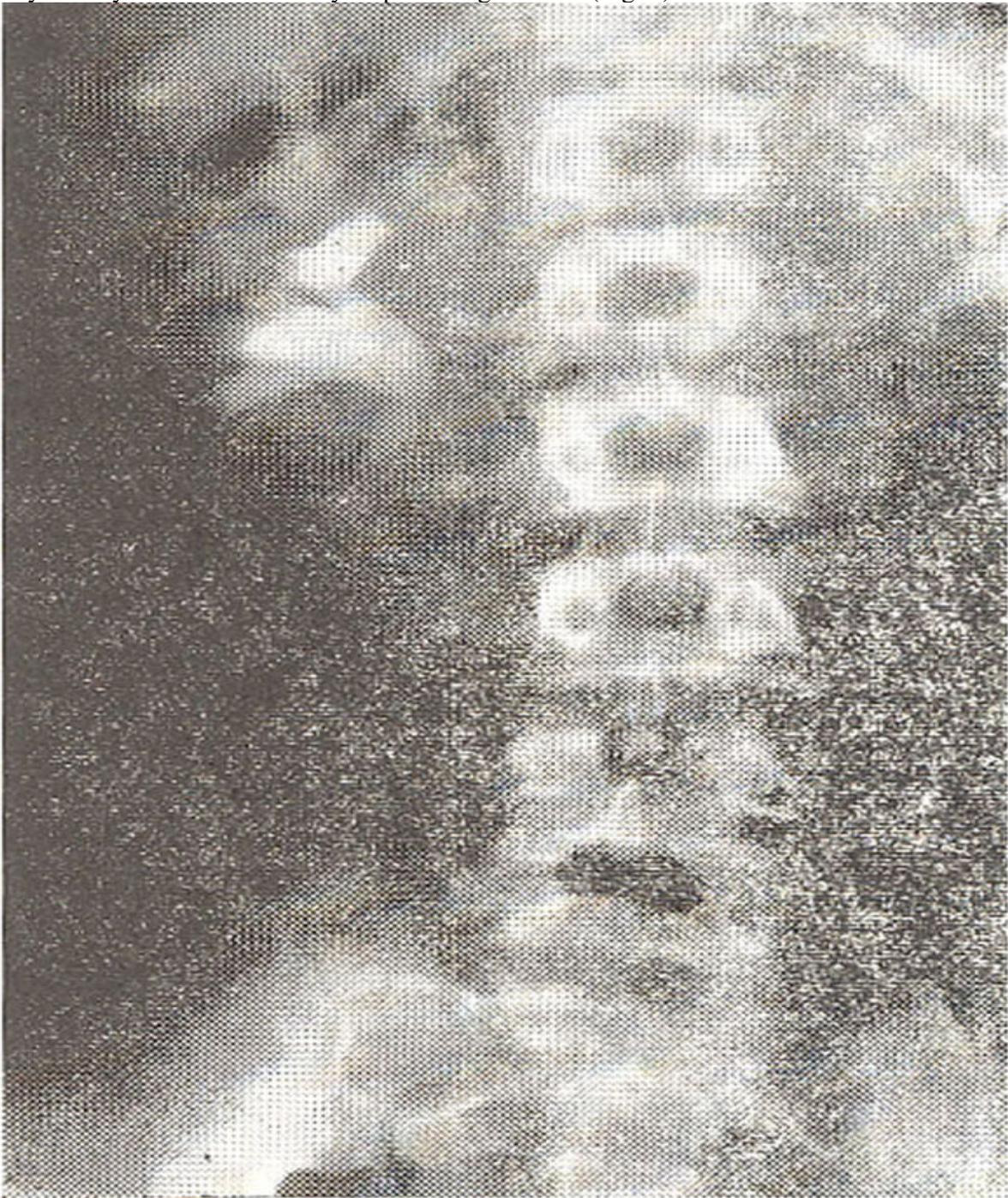
His investigations revealed a haemoglobin of 11.5 G/dl, total leucocyte count was 22,300/ cumm with polymorphonuclear leucocytosis. Erythrocyte sedimentation rate, urine and stool analyses as well as X-ray chest were normal. Plain X-ray abdomen showed a soft tissue shadow in the right flank with scoliosis and an indistinct Psoas shadow on this side (Fig. 1).



*Fig. 1.* Plain X-ray abdomen showing scoliosis of the spine on the right side, Obliterated Psoas shadow, soft tissue shadow and fullness in the right flank.

He was given ampicillin but failed to show improvement. He was diagnosed as a case of retroperitoneal abscess and 900 ml of creamy pus was drained extra-peritoneally from the site of maximum tenderness. Coagulase positive staphylococci were grown from the Pus. Antibiotic was continued post operatively; temperature, tenderness and psoas spasm were relieved by the 8th post operative day. Intravenous

pyelogram was done on the 8th day which showed a normal sized right kidney with dilated slightly pelvicaly-ceal system and a medially displaced right ureter (Fig. 2).



*Fig. 2.* Intra Venous pyelogram showing Scoliosis on the right, Vague Psoas shadow and moderately dialated calyces and pelvis. Ureter is pulled laterally.

A barium enema was normal. He was discharged after 1 month of hospital stay and was found to be

well on follow up.

## **Discussion**

Of the three patients with retroperitoneal space abscesses the etiology was unknown in two and an underlying suppurative lymphadenitis pyomyositis from a distant septic focus seemed possible in the third. Two cases isolated coagulase positive staphylococci and one E. coli. All of them responded well to incision and drainage and a broad spectrum antibiotic.

The diagnosis and treatment of retroperitoneal space abscesses is often delayed considerably as most of the patients tolerate their infection well and may delay seeking medical advice. Moreover, lack of constitutional symptoms, associated with weight loss may divert attention towards a malignant disease. The classical pattern of presentation is persistent low grade fever, mass and pain in flank, psoas spasm, but no signs of peritonitis. Total white cell count is not always reliable and may be normal in 25-30% cases. It may be worth-while looking for a distant focus of infection. Once a diagnosis of retroperitoneal abscess has been made incision and drainage should be performed promptly under an antibiotic cover.

## **References**

1. Altemeier, W.A. and Alexander, J.W. (1961) Retroperitoneal abscess. Arch. Surg., 83:512.
2. Daviglus, G.F. and Rush, B.F. Jr. (1961) Retroperitoneal abscess; a clinical study. Arch. Surg., 83:322.
3. Mair, W.S.J., McAdam, W.A.F., Lee, P.W.R., Jepson, K. and Goligher, J.C. (1977) Carcinoma of the large bowel presenting as a subcutaneous abscess of the thigh; a report of 4 cases. Br. J. Surg., 64:205.