

Intra-abdominal abscess presenting as a thigh abscess

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Abstract:

Secondary thigh abscesses are rare, and their cause is often obscure. We report a case of an elderly diabetic who presented with thigh abscess secondary to tuberculous sacroiliitis.

Key words: Secondary thigh abscess, retroperitoneal abscess, tuberculous sacroiliitis

Case history

A 61 year old male with known history of diabetes mellitus and on oral hypoglycaemic agent presented with diffuse swelling and pain on left thigh for three days and reducible left inguinal swelling for longer duration (see Fig 1 & 2). On the day of admission his blood sugar was under control but the count was raised with neutrophilic predominance. The clinical impression was left thigh abscess with left sided reducible indirect inguinal hernia.

The patient was taken to operation theatre and 500 ml of frank pus was drained by making two longitudinal incisions on medial and anterolateral aspect of thigh. Since then pus started pouring from the wound sites without any signs of improvement. On the tenth post operative day, the inguinal mass became irreducible. Our clinical impression was left irreducible indirect inguinal hernia and surgery was planned. On exploration femoral and inguinal extension of retroperitoneal abscess was found. Retroperitoneum was reached by extending the inguinal incision laterally and deepening it lateral to the deep inguinal ring, 1500 ml of pus was drained. There was no evidence of hernia. All wounds were irrigated and drained.

Pus culture report showed polymicrobial flora (E. coli, S. aureus). Barium enema done to rule out colonic pathology was inconclusive. X-Ray of dorsolumbar spine showed degenerative changes of lumbar disc, margin of sacroiliac joint was irregular, wide and eroded suggestive of tubercular sacroiliitis (see Fig 3). Thus with diagnosis of tubercular sacroiliitis with secondary infection patient was treated with antibiotics and anti tubercular drugs. The patient improved clinically and radiologically in a month's time.

Fig. 1

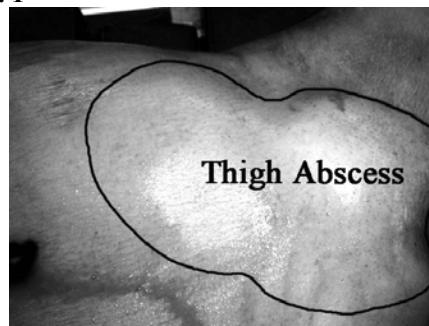


Fig. 2

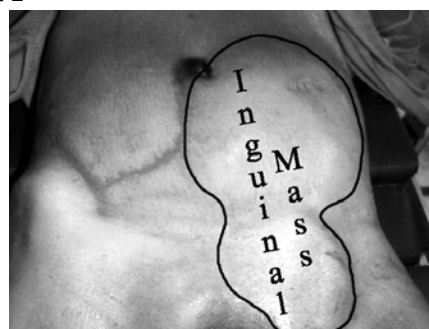


Fig. 3



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Case Discussion

Thigh abscesses secondary to abdominal pathology have been reported in various literatures. Rotstein OD et al in their review of literatures reported 46 cases of thigh abscesses due to carcinoma of colon and diverticulitis as the leading sources¹.

Rivera et al reported an uncommon presentation of retroperitoneal abscess as a painful inguinal swelling in a diabetic patient². Lorimer and Eldus reported three cases of invasive clostridium septicum infection associated with colorectal carcinoma³. Haiart et al reported leg pain as the sole mode of presentation for five cases of diverticulitis⁴. On occasions intraabdominal manifestation may remain occult and extra abdominal manifestation may be the only presenting symptoms. The etiology is usually suggested by the side of presentation.

The left thigh abscess is associated with sigmoid diverticulitis and rectal diseases. The right is associated with caecal carcinoma and perforated retrocaecal appendicitis. Peacock JE reported a case of unusual presentation of tuberculous spondylitis⁵. The disease was complicated by fistulous involvement of the sigmoid colon which led to bowel perforation and dissection of the resulting retroperitoneal abscess into the thigh. The clinical presentation as that of polymicrobial soft tissue abscess with the tuberculous etiology delineated only on further evaluation. Various routes have been identified to reach extra abdominal sites from intraabdominal infection. Routes of entry are summarized in the table below (modified after Mair et al)⁶.

Route	Tissue plane
Deep to inguinal ligament	Psoas sheath
	Femoral sheath
	Femoral canal
Fibro-osseus canals	Sacrociatic notch
	Obturator foramen
From abdominal wall	Subcutaneous
Direct	Penetration of pelvic floor
Generalized cellulitis	Septicemia/soft tissue plane

The retroperitoneal perforation of appendix and the extension of infection through the sacrosiatic notch had been reported by EL-Masry NS and Theodorou NA⁷. Gatt D published the appendix sepsis tracking

along the lateral cutaneous nerve of the thigh⁸. In this case, the left tuberculous sacroiliitis presented as the left thigh abscess. We observed the route of spread was through femoral canal and subcutaneous extension of the pus was through the inguinal canal reaching the superficial inguinal ring.

Tuberculous arthritis typically occurs as monoarticular arthritis. In case of sacroiliac joint involvement, it is usually unilateral with common manifestations of pain, cold abscess, draining sinus and fever. Radiology may play an important role in suggesting and establishing the diagnosis. CT scan is even more sensitive than physical examination in detecting soft tissue gas and may be very helpful demonstrating retroperitoneal and psoas abscess. In a plain radiograph soft tissue swelling may be the only abnormal finding. In tuberculosis of SI joints erosion of the adjoining surfaces of the joints results in the joint space, which is occupied mainly by tuberculous granulation and fibrous tissue. Marginal sclerosis is also commonly associated. Harwood Nash et al have brought up the classic triad of radio logic findings known as the Pheemister Triad in tuberculous arthritis, which consists of juxtaarticular osteoporosis, marginal bone erosions and gradual narrowing of joint spaces⁹. In some instances, nuclear medicine scans such as a Gallium scan and MRI have been used for early diagnosis.

Conclusion

It is imperative to recognize the undergoing etiologic process because mere drainage of the abscess with or without antibiotics results in 53% mortality. The mortality is in part a result of delayed recognition and treatment. Thus it is of utmost importance to diagnose and treat the primary pathology in cases where conventional treatment of abscess is not successful. Though western literature has shown that diverticular and neoplastic lesion of the bowel is a significant cause of secondary thigh abscess, tuberculosis should also be part of diagnosis in the developing nations. Drainage of the abscess with anti tubercular therapy improves survival.

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