Bilateral Psoas Abscess in a Case of Granuloma Inguinale

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ABSTRACT

The authors present a case of disseminated granuloma inguinale with bilateral psoas abscesses. Infection with calymmatobacterium granulomatis *is usually localized to the genital organs but rarely may be disseminated. A search of the literature revealed that only two cases of psoas abscesses due to* calymmatobacterium granulomatis *were previously reported.*

Absceso Bilateral de Psoas en un Caso de Granuloma Inguinal

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RESUMEN

Los autores presentan un caso de granuloma inguinal diseminado con abscesos bilaterales de psoas. La infección con calymmatobacterium granulomatis *normalmente se localiza en los órganos genitales, y raramente se disemina. La literatura reveló sólo dos casos de abscesos de psoas debidos a* calymmatobacterium granulomatis *reportados con anterioridad.*

West Indian Med J 2005; 54 (5): 343

INTRODUCTION

Historically, the most common aetiology of psoas abscesses was *mycobacterium tuberculosis*. However, non-tuberculous causes are more common today (1). Ninety per cent of infection with *calymmatobacterium granulomatis* is confined to the genitals, and 5% – 10% at the anal region (2). The disease, which is called granuloma inguinale or donovanosis, may involve the local lymphatics; haematogenous spread is uncommon. Donovanosis has been reported to involve bones, urinary bladder, bowel, spleen, liver, uterus and ovaries but only in 1% to 5% of cases (2). This case is unusual, for apart from the dissemination of the disease and the presence of osteomyelitis, to our knowledge, it is only the third reported case of psoas abscess in donovanosis.

Case Report

A 22-year-old (para 2 gravida 2) was referred from a rural hospital to the University Hospital of the West Indies (UHWI) with weight loss, weakness, oedema and vaginal bleeding. On examination, she was ill looking and cachectic with facial and pedal oedema. She had masses in both iliac fossae, shallow vulval ulcers and a fungating mass replacing the cervix. The only significant findings on blood investigations were anaemia, Hb 6.3g/dl and a high white cell count of 31.7 x 10^9/L with a neutrophilia of 83%. Serology was negative for VDRL and HIV. On ultrasound, there were large lymph nodes in both iliac fossae. The nodes were biopsied under ultrasound guidance and the cervical lesion biopsied under colposcopic guidance. Both biopsies were reported as granulomatous tissue.

The patient was treated with amoxycillin-clavulanic acid and transfused with whole blood. She improved and was discharged from hospital for follow-up in the outpatients' department. On a visit two months later, her condition had deteriorated; she was cachectic with tender swelling of both wrists, knees and right elbow. The nodes in the right iliac fossa were smaller but still palpable; those on the left were no longer palpable. The cervix was hyperaemic and friable.

X-rays of her wrists and elbow revealed destructive lesions in the ulnae that were interpreted as osteomyelitis. X-rays of her knees were normal. Abdominal computed tomography (CT) scan revealed enlargement of both psoas muscles in the pelvis. They were hyperdense peripherally with irregular water density components centrally; the right measured 6.1 cm x 5.7 cm at maximum diameter and the left 5 cm x 3.4 cm (Fig. 1). The abnormalities in the psoas muscles extended distally for approximately 6 cm from L5.

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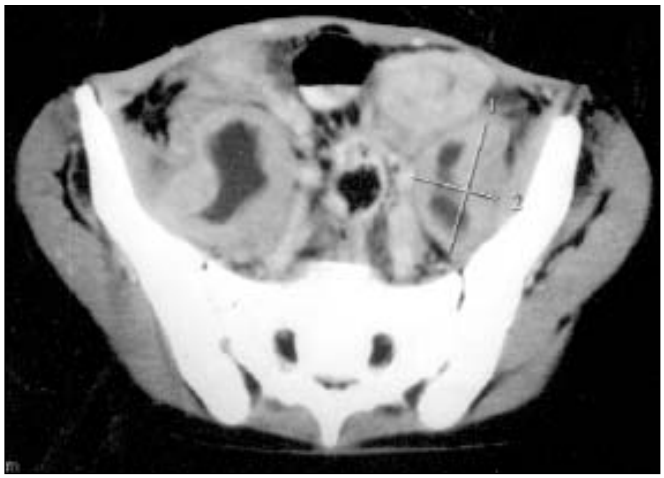

Fig. 1: Axial CT scan through the pelvis showing enlarged psoas muscles with central areas of fluid density.

Above the level of L5, the psoas muscles were normal. A diagnosis of psoas abscesses was made based on the general clinical features and the CT appearance. A nodular hyperdense mass was noted immediately anterior to the right psoas muscle in the right iliac fossa. The nodules in the mass each measured less than 1 cm and were hyperdense peripherally and of relatively low density centrally. This appearance was consistent with lymphadenopathy. The orthopaedic surgeons obtained pus from the wrists and straw-coloured fluid from the knee. The swabs from these materials showed gram-negative bacteria but there was no growth on culture. Colposcopy was repeated and this time Donovan bodies typical of granuloma inguinale were identified (Fig. 2). The patient was started on tetracycline and trimethoprim-

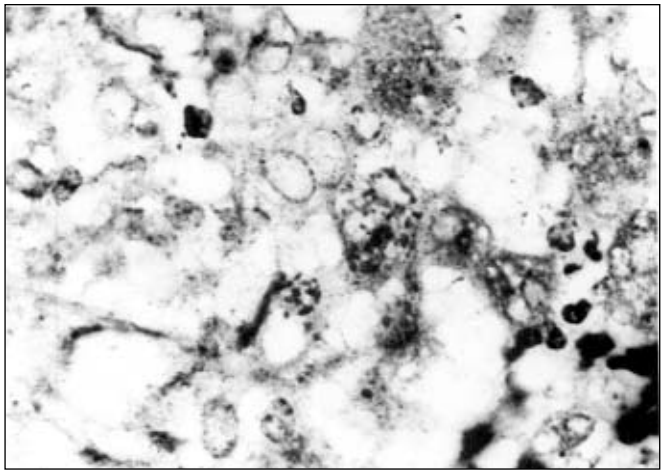

Fig. 2: Donovan bodies within two macrophages (middle of field) Warthin Starry stain x 800.

sulphamethoxazole and she made a gradual recovery. Two months later, she had returned to her normal lifestyle but had post-coital bleeding. She defaulted from the out-patient's clinic.

DISCUSSION

Psoas abscesses may be seen in several conditions but to our knowledge this is only the third reported case of psoas abscess in donovanosis. The two previous cases were reported by Mein *et al* (3). Their patients had intra-pelvic donovanosis, which presented as psoas abscesses. This patient had no specific clinical features of psoas abscesses; the diagnosis was an incidental finding on CT scan. This case was published highlighting the presence of osteomyelitis; the psoas abscesses were overlooked in the previous report and the rarity of psoas abscesses in donovanosis was not appreciated until a subsequent review of the literature (4).

Donovanosis is a chronic, progressive granulomatous infection of the genital region usually considered a sexually transmitted disease. The infectious agent is *calymmatobacterium granulomatis* (2). The organism was discovered by Donovan and subsequently renamed to reflect its capsulated appearance in tissues (kalymma is Greek for "hood" or "veil" however using genomic, clinical and pathologic criteria it has recently been placed in the genus Klebsiella) (5). The disease is rare in developed countries but is endemic in some developing countries as well as the aborigines of Australia (6).

Musculoskeletal involvement in donovanosis is rare. In 1998, Patterson presented a case report of spinal cord compression secondary to vertebral destruction (7) and his review of the literature for bony involvement revealed a total of 18 cases one of these was a Jamaican patient reported by Kirkpatrick (8). Patterson's patient had clinical and radiological features which were clinically and radiologically indistinguishable from tuberculosis.

The index case had lytic lesions in the ulna similar to those of the patient in Kirkpatrick's report but with the additional feature of psoas abscesses. Small psoas abscesses may be treated with antibiotics but larger lesions require incision and drainage; this is usually done as an open surgical procedure. Several articles have described image guide intervention as an alternative (9, 10). This patient was treated with antibiotics. It was not possible to determine the long-term response to treatment as she defaulted from clinic.

REFERENCES

1. Harrigan RA, Kauffman FH, Love MB. Tuberculous psoas abscess J Emerg Med 1995; **13:** 493–8.
2. Hart G. Donovanosis Clin Infect Dis 1997; **25:** 24–32.
3. Mein J, Russell C, Knox J, Coppola A, Bowden FJ. Intrapelvic donovanosis presenting as a psoas abscess in two patients. Sex Transm Infect 1999; **75:** 75–6.
4. Fletcher HM, Rattray CA, Hanchard B, Vaughan K, West WM. Disseminated donovanosis (granuloma inguinale) with osteomyelitis of both wrists West Indian Med J 2002; **51:** 194–6.
5. Murray PR, Rosenthal KS, Kobayashi GS, Pfaller. Medical Microbiology 4th Edition. Mosby, Inc. Missouri 2002: 353.
6. Bhagwandeen BS, Naik KG. Granuloma venerum (granuloma inguinale) in Zambia. East Afr Med J 1977; **54:** 637–42.
7. Paterson DL. Disseminated Donovanosis (granuloma inguinale) causing spinal cord compression: Case report and review of Donovanosis involving bone Clin Infect Dis 1998; **26:** 379–83.

8. Kirkpatrick DJ. Donovanosis (granuloma inguinale): a rare cause of osteolytic bone lesions. Clin Radiol 1970; **21:** 101–5.
9. Gupta S, Suri S, Gulati M, Singh P. Iliopsoas abscesses: percutaneous drainageunder image guidance. Clin Radiol 1997; **52:** 704–7.
10. Pombo F, Martin-Egana R, Cela A, Diaz JL, Linares-Mondejar P, Freire M. Percutaneous catheter drainage of tuberculous psoas abscesses. Acta Radiol 1993; **34:** 366–8.