

A stenosing sigmoid cancer revealed by a draining failure of bulky psoas abscess

RAKOTOMENA Solonirina Davidà¹, ANDRIANAH Emmylou Prisca Gabrielle²,
RANDRIANANDRASANA Sylvio³, RAJAONARIVONY Tianarivelo¹, AHMAD Ahmad², RAKOTO
RATSIMBA Herv Nirina¹

Abstract: Psoas abscess is a deep suppuration of the psoas-iliac muscle. It may be primitive in immunosuppressed patient, or secondary to locoregional disease.

The symptomatology is often nonspecific making its diagnosis difficult and so medical imaging very needful. In this paper we describe a case of a suspect wall thickening of the sigmoid revealed by persistence of the infectious syndrome after twice psoas abscess draining thanks to second abdominopelvic CT.

The aim of this study is to emphasize the relevance of searching the psoas abscess etiology and starting adequate treatment through literature review.

Keywords: Psoas-iliac abscess, Sigmoid cancer, Surgical access, Surgical approach, Imaging

Introduction

The abscess of the psoas muscle (or iliopsoas abscess) is a deep suppuration of the iliopsoas muscle. In the most case, diagnosis is difficult. First described by Mynter in 1881 who referred it as 'psoitis' Classification (Primary and secondary), this pathology is rare and may be secondary to intraregional or retroperitoneal locoregional disease^{1,2}. In this paper we report a case of incidental finding of sigmoid cancer during the management of a large psoas abscess. That in order to highlight the relevance in one hand of investigate the psoas abscess etiology and in the other hand of selecting the most appropriate treatment.

Observation

It is a 58-year-old man weaned ethyl with personality disorders and general impairment. He was admitted to emergency room for left hip pain with functional impotence in the left lower limb and psoitis. All that in an infectious and inflammatory context.

The abdominal and pelvic CT revealed a large collection of the left psoas muscle, extending throughout its path with 7 cm of anteroposterior axis, 10 cm of transverse axis and 33 cm in a craniocaudal plane. Was also visualized presence of gas bubbles inside it (Figure 1). This left psoas abscess was associated with a partially necrotic left iliac lymph node formation. It is supposed to be the origin of the abscess. Echo-guided puncture-drainage was attempted. It reported a brown smelly fluid in which *Enterococcus faecalis* and *Staphylococcus aureus* were revealed.

¹. Visceral surgery, CHU Antananarivo, Madagascar

². Medical imaging, CHU Antananarivo, Madagascar

³. Traumatology-Orthopedic Surgery, CHU Antananarivo, Madagascar

Corresponding author:

Solonirina Davidà RAKOTOMENA

Email: rakotomenadavida@yahoo.fr

Tel: +261 331 132 272

It should be noted that this puncture has caused anemia related to coagulation disorders.

Abscess flattening and its drainage were achieved by the left Scarpa surgical approach. However, postoperative period was marked by persistent infectious syndrome despite well-conducted antibiotic therapy.

Abdomino pelvic CT scan discovered the abscess' persistence in the thigh adductor compartment, and revealed a suspicious stenotic thickening wall of sigmoid (Figure 2 and 3), associated with colic occlusive syndrome.

A new anterolateral extraperitoneal lumbar drainage with transverse discharge colostomy on a right transversal subcostal laparotomy were performed. The blade was removed 2 weeks later after collection drying out. Facing the absence of secondary tumor localization and the disappearance of the infectious syndrome, a left segmental colectomy was performed 6 weeks later.

Anatomic pathological examination result was in favor of a stenosing and fistulating sigmoidal adenocarcinoma.

The evolution was favorable, without recurrence of psoas abscess during the 6 months of follow-up.

Discussion

Psoas abscess is a deep suppuration of the psoas-iliac muscle, generally following extension of a primitive suppuration³.

The frequency varies between 1.5 to 3 cases / year and it is higher in tropical environments than in temperate climates².

Primary psoas-iliac abscess occurs most commonly in immunocompromised, diabetics and alcoholics patients and patient with chronic renal failure^{3,4}.

The secondary psoas-iliac abscess is due to the extension of a locoregional infection: genitourinary, digestive or bone.

However, digestive causes are the most frequent:

Crohn's disease (55% of case), appendicitis (14%), inflammations and colorectal tumors (10%)^{5,6}.

Although, in the past tuberculosis represented the most common etiology, currently, the germ isolated from 80 to 90% of percutaneous puncture of primary psoas abscesses is the *Staphylococcus aureus*^{2,5}.

Other germs such as Gram -negative bacteria (*Escherichia coli*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, *Proteus mirabilis*) and Gram-positive cocci (*Staphylococcus aureus*, *Staphylococcus epidermidis*, *Streptococcus fecalis*, *Streptococcus agalactiae*, α -hemolytic streptococci, *Streptococcus mitis*) were also identified⁴⁻⁶.

In the case of this report, psoas abscess was secondary to fistulization of the sigmoid's tumor, explaining so the presence in pus of *Enterococcus faecalis*.

Diagnosis is often difficult because of nonspecific clinical signs^{1,4}.

The main clinical signs are flank pain with lower limb functional disability, pastiness of iliac fossa, psoitis, weight loss, transit disorders, and fever (2, 7, 8). A biological inflammatory syndrome is present in 100% of cases³.

Imaging is relevant for a positive diagnosis of psoas abscess and to determine its etiology. With 90% of sensitivity, abdominal ultrasound is the first-line examination to specify the seat and the importance of the abscess and to eliminate others affections, but with possibility of false negative when important aerocoly⁹. However computed tomography still the reference examination to specify the extension and to detect an underlying lesion with sensitivity close to 100%².

It shows an enlargement of the psoas muscle with hypodense mass containing gas, associated with enhancing thick wall after injection of contrast agent³. However, magnetic resonance imaging may be more interesting to differentiate an abscess from a hematoma, to look for an associated spondylodiscitis and to have a more precise extension assessment¹⁰.

For our patient, the clinical picture was quite typical and despite the obvious collection extent, the diagnosis was probably delayed because the psychological state.

Combined with appropriate anti-staphylococcal antibiotic therapy, abscess treatment is based on surgical drainage, which could be performed percutaneously under ultrasound or scanographic control, using a large and multi-perforated drain allowing the realization of wash-aspirations with saline³.

The success rate is about of 83 to 100% in cases of primary psoas-iliac abscess².

Surgical drainage is only indicated if percutaneous drainage fails and it must be performed by extraperitoneal approach⁴.

Laparoscopic drainage is also proposed in the literature³.

In our observation, percutaneous puncture was failed because of the collection extent and especially of the presence of the tumor fistulization, which probably maintained it.

However, cases of repeated percutaneous drainage are described until the complete disappearance of the abscess⁸.

Reported complications include displacement of the drain, drain 's obstruction, recurrence after drain's ablation, fistulization and hematoma formation^{5,10}.

Without abscess drainage, the mortality rate is of 45 to 100%⁴. Antibiotic therapy is often prolonged more than 1 to 2 weeks after complete abscess ' drainage⁸.

Finally, treatment of the causative disease in the case of secondary psoas abscess is essential to avoid its maintenance and recurrence².

In our case, it consisted on left colectomy with smooth postoperative recoveries.

Conclusion

Psoas-iliac abscess is an uncommon pathology, and one of the rare complications of colorectal cancer. The clinical and etiological diagnosis is essential but sometimes not very obvious.

Medical imaging remains relevant for etiological research.

In secondary psoas abscess due to a colon cancer, treatment combines a well-adapted antibiotherapy, drainage of the collection and oncological tumor resection.

When the psoas abscess is too bulky, the surgical approach is certainly invasive, but gives better results compared to the percutaneous puncture.

Conflicts of interest

The authors do not declare any conflict of interest.



Figure 1: Bulky collection of 33cm x 7cm x 10cm in all left psoas muscle, containing gas bubbles (Initial computed tomography).





Figure 2: Persistence of the adductors abscess and discovery of suspicious wall thickening of the sigmoid (red arrow) with the drain conduit in place (green arrow) in the computed control tomography.



Figure 3: Occlusive tumor of sigmoid (red arrow) in the control of computed tomography.



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