Usefulness of dynamic compression bedside ultrasonography in the diagnosis of abdominal wall abscess

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A 55 year-old male patient positive for HIV and chronic virus C hepatitis, medically treated for a previous left inguinal hernioplasty was admitted to emergency room because of 4-day long persistent non-specific pain of the left abdominal lower part. On admission at the emergency room, at physical examination there was pain on palpation midway between umbilicus and right inferior quadrant without rebound tenderness in the whole abdomen without erythema or skin warm. The rectal temperature was normal as well as cardiac and lung physical examination. Laboratory examination revealed an increase of white blood cells (11.63 10^3/mmc, reference values 4.20-9.00) with 80% of neutrophils and C-reactive protein 6.17 mg/dL (upper reference limit 0.80). Renal, hepatic and coagulation parameters were within the normal limits. X-ray of the abdomen did not show alterations. A bedside dynamic compression ultrasound (US) showed a hypo-anechogenic area measuring 8.4 cm and 4.4 cm having fluctuating internal echoes, irregular margins of the left rectus abdominis muscle and swollen lymph nodes (Figure 1). To better define the US picture, a computed tomography (CT) scan was carried out, confirming the US picture (Figure 2). The abscess was surgically drained and the culture of the abscess revealed a *Staphylococcus areus* infection. The patient was discharged after 2 days with antibiotic therapy.

From an epidemiological point of view, the frequency of the abscess of soft tissue is increased in Western countries especially in HIV infected patients[1] and the bacterium usually isolated is the *Staphylococcus areus*.[2] The pathogenesis of this entity is unknown and probably HIV-infected patients are commonly colonized by *Staphylococcus aureus*. Neutrophils of these patients frequently have phagocytic, chemotactic, and oxidative defects and impaired bactericidal activity against *Staphylococcus aureus*.[2] The diagnosis should be based on clinical signs such as pain. Dynamic compression ultrasound is usually the technique to easily detect the pyomyositis,[3-6] while CT scan generally does not add any further useful information. The treatment is surgical and the follow-up is uneventful.

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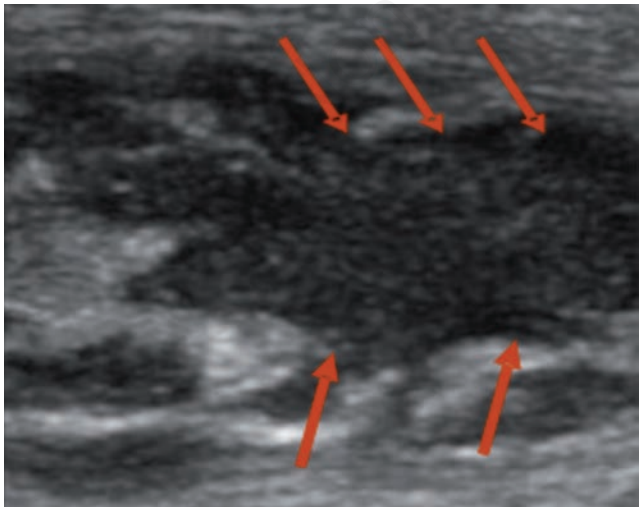

Figure 1. Bedside dynamic compression ultrasound showing a hypo-anechogenic area with fluctuating internal echoes, irregular margins of the left rectus abdominis muscle. The red arrows indicate the abscess.

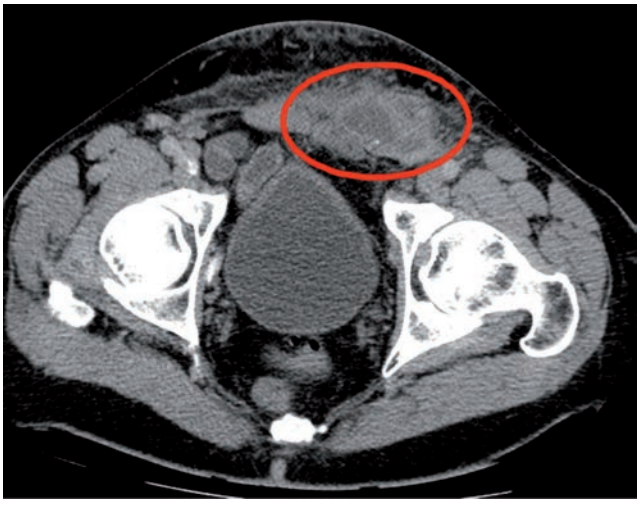

Figure 2. Contrast-enhanced computed tomography scan showing inhomogeneous soft tissue mass of the left rectus abdominis muscle, containing low and high-density structures. The abscess is indicated by a red circular line.