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# Lesion mimicking perianal abscess in an immunocompromised patient: Report of a case



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## ABSTRACT

**INTRODUCTION:** Ischio-rectal tumoral masses mimicking perianal abscess and abscess from uncommon microbiological origins have previously been reported.

**PRESENTATION OF CASE:** Unusual perianal abscess arising from an hematoma in an elderly woman with myelodysplastic syndrome: the patient presented on the emergency with gluteal pain and fever after intramuscular injection of analgesic drug. Physical examination revealed subcutaneous thickening on gluteus and perianal region, without skin changes. Magnetic resonance reported an heterogeneous mass sized 5 cm × 12 cm × 20 cm from gluteus maximus to ischioanal fat under levator ani muscle, through sciatic notch. Debridement of an staphylococcal infected hematoma through a single left lateral gluteus incision, and primary closure was performed. Proctologic examination was normal, so any perianal incision was done. The site infection progressed, so the patient required new surgery with wet cure. The patient contracted nosocomial pneumonia and died due to sepsis.

**DISCUSSION:** Hematological diseases can yield infectious and bleeding disorders. Intramuscular injections often cause haematomas that can lead to pyomyositis. Pyomyositis requires early debridement and continue cure.

**CONCLUSION:** Intramuscular administration of drugs should be avoided in patients with thrombocytopenia. Gluteal region is connected to perianal area through the sciatic notch. Usually perianal abscess in immunocompromised patients arise from proctologic origin, but other causes may be taken into account.

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## 1. Introduction

The most common cause of ischio-rectal masses is perianal abscesses. Other different etiologies have been reported previously, such as tumoral origin (primary lymphomas,<sup>1</sup> sarcomas,<sup>2</sup> adenocarcinomas),<sup>3</sup> or less reported, infectious diseases (*Enterobius vermicularis*,<sup>4</sup> Actinomycosis).<sup>5</sup> All of them are unusual, references are provided from case reports, and those patients usually required surgery. We present a perianal abscess arising from a intramuscular gluteal hematoma (pyomyositis), which is more common in immunocompromised patients.

## 2. Presentation of the case

A 77 year old woman, with a history of type 2 diabetes mellitus, hypertension, hypothyroidism, diverticulosis without prior episodes of diverticulitis, and fecal incontinence without prior anal

surgery or obstetric trauma. Her hematological history reported a mielomonocytic chronic leukemia with complex caryotype (5q del), and dramatic progression to another Myelodysplastic disease (MDS): refractory anemia with excess blasts (RAEB), with 22% blasts in bone marrow biopsy. She was considered not candidate for chemotherapy treatment, so she was receiving supportive treatment with blood and platelet transfusions.

The patient presented on the emergency with lumbar pain radiated to left knee with weakness the last two weeks before admission, and fever the day before consulting. Physical examination revealed subcutaneous thickening on her left gluteus to anal margin, without any visible skin changes.

The patient and family reported intramuscular injection of diclofenac (NSAIDs) for her lumbosciatalgia two weeks before admission.

Peripheral blood test revealed anemia (hemoglobin 8.3 mg/dL), thrombocytopenia (10,000/mL) and total white blood cell count 8000/mL (54% mature neutrophils, 2% immature neutrophils, 9.7% blasts, 0.9% promyelocytes, 6.2% myelocytes, 8.8% metamyelocytes). Biochemistry of the sample showed acute phase reactants elevation: C reactive protein 35.28 mg/dL, lactate dehydrogenase 527 UI/L.

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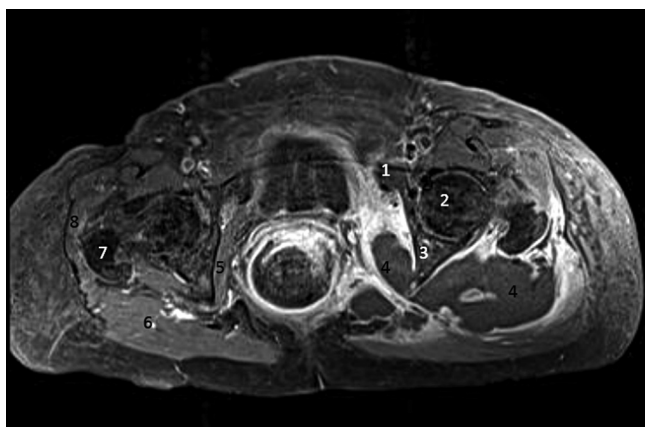
**Fig. 1.** (1) Right obturator internus muscle. (2) Rectum. (3) Left levator ani muscle. (4) Hematoma. (5) Ischium.

Seriated blood cultures were taken, and broad spectrum antibiotic was started (Amoxicilin/clavulanic). Blood cultures showed growth of *Staphylococcus aureus* penicillin resistant. Endovenous cloxacilin treatment was started.

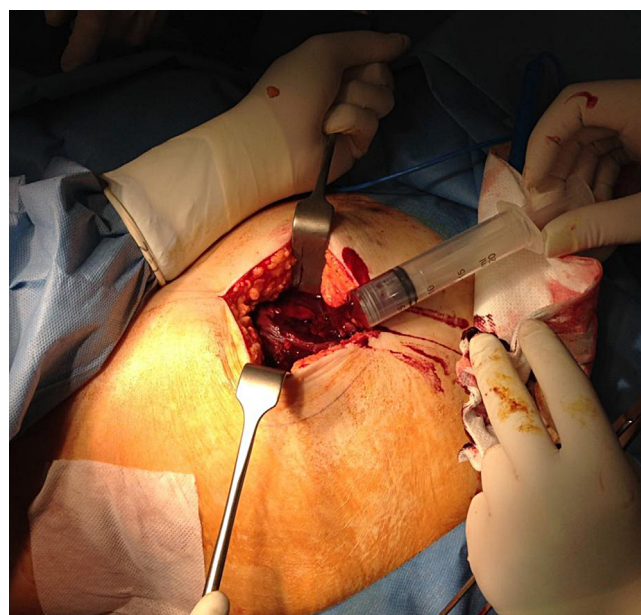
Third day after admission, magnetic resonance (MRI) was done, reporting an heterogeneous mass from gluteus maximus to ischioanal fat under levator ani muscle, sized 5 cm × 12 cm × 20 cm (Fig. 1), connected through sciatic notch (Fig. 2).

Fourth day after admission, ultrasound guided needle aspiration of the mass was done. Cultures showed growth of *S. aureus*.

On the fifth day, our Surgical Department was consulted because of huge dimension of hematoma and patient worsening (uncontrolled pain and persistent fever). Surgical exploration was done: debridement of infected intramuscular hematoma (pyomiositis) through left lateral gluteus incision (Fig. 3). Surgical wound was primarily closed, due to the depth of the fluid collection (4 cm under skin and beneath gluteus maximus), with two suction drains left inside. Digital rectal exam revealed left mesorectal fat thickening, known fecal incontinence, with proctoscopic examination normal,



**Fig. 2.** (1) Ilium. (2) Head of femur. (3) Ischial spine. (4) Hematoma. (5) Right obturator internus muscle. (6) Right gluteus maximus. (7) Right trochanter. (8) Gluteus medius.



**Fig. 3.** Left gluteus incision.

so any perianal incision was done. Surgical cultures grown *S. aureus* (cloxacilin sensibility).

A week after the surgery, surgical wound appeared erythematous and exudative. New cultures were taken, with multiresistant *Pseudomona aeruginosa* growth; antibiotic treatment was enhanced with endovenous colistin. Control CT scan was done, showing persistence of fluid collection beneath surgical wound, sized in 4 cm diameter. We performed new surgical debridement with resection of surgical margins (Friedrich procedure), leaving open wound and cure with wet gauze.

The patient presented nosocomial pneumonia and urine tract infection, both due to *P. aeruginosa*, and died ten days after the second surgery.

### 3. Discussion

Previously, ischioanal masses of different origin have been reported, but none of them was due to a hematoma. Soft tissue infections and soft tissue tumors<sup>6</sup> are more common in immunocompromised patients.

MDS, such as RAEB, can yield infectious complications due to dysfunctional white blood cells. The commonest diseases are pneumonia and soft tissue infections, accounting more than 60% of deaths.<sup>7</sup> MDS can cause bleeding disorders, associated either to thrombocytopenia or platelet malfunction. Even more, diclofenac is a non selective NSAID, which inhibits COX1, present in platelets that can increase bleeding.<sup>8</sup> It is far known that intramuscular injections are a iatrogenic common cause of hematomas.

Pyomiositis is a prevailing condition in immunocompromised (HIV, hematological diseases) and diabetic patients. At physical examination the area may have a “woody” feel. In the 90% of cases the etiologic agent is *S. aureus*. Blood cultures are positive in less than 30% patients. MRI is the recommended imaging test. Early drainage of purulent material should be performed.<sup>9</sup>

After debridement of a documented infected hematoma, it seems that continue cure (cure with wet gauze, negative pressure wound therapy), instead primary closure with suction drains, allows better control of infection.<sup>10</sup>

#### 4. Conclusion

Intramuscular administration of drugs should be avoided in patients with thrombocytopenia. Gluteal region is connected to perianal area through the sciatic notch. Usually, perianal mass in immunocompromised patients arises from proctologic origin, but other less common causes may be taken into account.

#### Conflict of interest statement

Dr. Aranzazu Calero-Lillo and Dr. Enric Caubet have no conflict of interest.

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#### Ethical approval

None.

#### Author contributions

A. Calero-Lillo was the Digestive surgeon who took part on the first surgery and who wrote the paper. E. Caubet was the chief Consultant surgeon.

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