

Case Report

Rectal perforation, a rare presentation of a swollen limb

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ABSTRACT

Soft tissue infection of right lower limb secondary to perforation of the gastrointestinal tract is very rare and the true incidence is probably higher, as some cases will be misdiagnosed as gas gangrene unless careful clinical examinations are performed. Only rapid recognition of the probable origin of the gas, coupled with aggressive, definitive therapy, can prevent the usually fatal course of this condition. In the absence of trauma or infection in a previously normal leg, subcutaneous emphysema of a limb should alert the clinician to the possibility of a gastrointestinal perforation as a source of the gas. Perforations of the gastrointestinal tract into the subcutaneous tissue can occur anywhere from the neck to the lower extremities. The mechanisms and anatomical pathways are discussed in this case report. Diversion colostomy with incision and drainage of the lower limb of the same is a safe and feasible option.

Keywords: Soft tissue infection, Perforation of rectum, Diversion colostomy

INTRODUCTION

Here, we present a case of 40 year old male patient who presented with initial features suggestive of soft tissue infection of right lower limb. Assessment and further intervention revealed necrotising fasciitis of right lower limb with complex perianal fistula connecting to right lower limb secondary to perforation of rectum. Patient underwent fasciotomy of the right lower limb with Sigmoidostomy.

CASE REPORT

A 40 year old male presented with swelling of right lower limb since 1 week and jaundice since 2 days. He is a known chronic alcoholic and gives history of incision and drainage for perianal abscess 2 weeks ago. Thorough examination revealed, pale and icteric patient with diffuse right lower limb swelling and erythema with pitting oedema and induration noted upto mid-thigh, crepitus was

present. Peripheral pulses were feeble due to oedema. No wound/sinus/scars noted.



Figure 1: Right lower limb fasciotomy incision with feculent matter.

On per abdomen examination - soft, no distension, no guarding/rigidity, non-tender, bowels sounds were present.

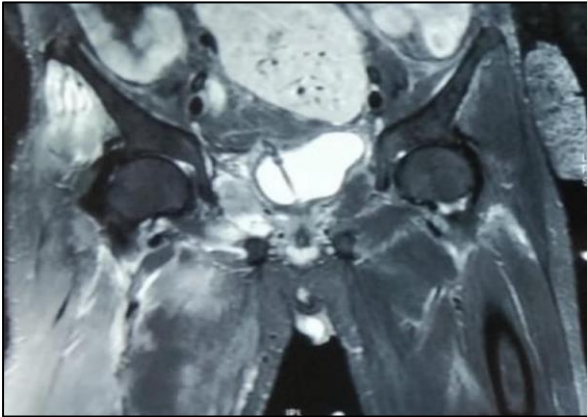


Figure 2: T2 weighted image showing pus tracking right great sciatic foramen along the obturator internus.

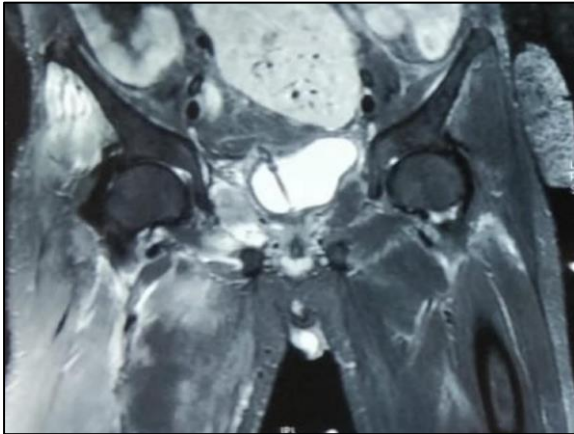


Figure 3: STIR image showing abscess within the right gluteal region.



Figure 4: Sigmoidostomy.

Per rectal examination- Incision and drainage scar was noted on right perianal region healed by secondary intention.

Other systemic examinations were normal.

Routine investigations showed haemoglobin - 8.9 gm/dl, TC- 15,210, DC- N92L06E02, LFT - TB -2.5 mg/dl, DB- 2.1 mg/dl, ALP- 149 mg/dl, GGT- 11 U/L. Gas gangrene was suspected and Right lower limb X-ray showed no gas shadows were noted.

Patient underwent fasciotomy of the right lower limb under local anaesthesia due to induration. Feculent matter noted in the incision site. Sample taken for pus culture sensitivity and tissue culture was negative for clostridium perfringens.

Following which patient underwent Magnetic resonance imaging (MRI) of the pelvis, which revealed - Rectal perforation at 9-11'o clock position measuring 1.3cm shows multifocal collection noted around peri - urethral, peri-rectal and right ischiorectal fossa extending into right sciatic foramen and tracking down along gluteal muscle and obturator internus muscle to form multiple intramuscular gluteal abscesses with air foci, largest measuring 5.6×4.3×4.2 cms.

Intra operatively lower rectal perforation with ischiorectal collection and complex fistula connecting to right lower limb noted. Neither pus collection nor muscle necrosis was found.

Hence patient underwent fasciotomy of the right thigh and lower limb with Sigmoidostomy (Figure 4).

Post operatively patient underwent multiple dressings and was on extensive broad spectrum antibiotics with nutritional support. Patient was discharged after 47 days of hospitalisation in a stable condition.

DISCUSSION

Subcutaneous emphysema of the leg may rarely occur secondary to perforation of the gastrointestinal tract, prompt diagnosis and aggressive treatment is imperative.¹

Surgically, in addition to wide incision and drainage, fasciotomies and a diversion colostomy are mandatory.²

The major mechanism of necrotising soft tissue infection in this case was not bacterial but rather the pressure gradient between the lumen of the rectum and surrounding tissue.²

The usual route of extravasation is directly through a pathological defect in the parietal peritoneum or fascia with the defect and into the intramuscular plane and subcutaneous spaces.³

These pathways of disease spread are related to the insertion & fascial investments of psoas major and iliacus muscles below the inguinal ligament through greater

sciatic foramen/ through lesser sciatic foramen along obturator internus muscle.³

Another important pathway is along the course of the branches of internal iliac vessels that penetrate the pelvic fascia to the gluteal region, particularly the superior gluteal artery that courses through the greater sciatic foramen.³

CONCLUSION

The underlying condition of subcutaneous soft tissue infection of the leg is a serious condition. When caused by gastrointestinal perforation and fistulous tract formation, or by direct spread of abscesses, the mortality rate is about 50%. In cases of spontaneous myonecrosis the mortality rate is 80%. Therefore, prompt diagnosis is important if therapy is to have a chance of success. In addition to the established supportive measures, a wise choice of antibiotics is important, and the enteric Gram-negative flora and specifically the anaerobic group, should be covered. This usually requires the simultaneous use of two or three antibiotics. Prompt attention should be given to the nutritional status of these patients. Surgically, in addition to wide incision and drainage, fasciotomies and a diverting colostomy are mandatory.

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