

# Ruptured Right Gluteal Abscess with Type II Diabetes Mellitus

Andee Dzulkarnaen Zakaria<sup>1,\*</sup>, Wan Zainira<sup>1</sup>, Syed Hassan<sup>1</sup>, Mohamad Sadiq Abdul Rashid<sup>2</sup>,  
Tanveer Azam<sup>2</sup>, Amer Hayat Khan<sup>2</sup>

<sup>1</sup>Department of Surgery, School of Medical Sciences, Universiti Sains Malaysia, Health Campus, Kelantan, Malaysia

<sup>2</sup>Department of Clinical Pharmacy, School of Pharmaceutical Sciences Universiti Sains Malaysia, Penang, 11800, Malaysia

**Abstract** Ruptured Gluteal abscess of unknown origin is not common in diabetic individuals. We report a case of gluteal abscess due to the non-compliance. Patient was 59 years old male with sign of ketoacidosis. Primarily patient was admitted due to disorientation and constitutional symptoms with lethargic feeling. Physicians observed an abscess on the buttock on examination when patient showed signs of restlessness and anxiety. The patient was treated successfully for surgical abscess drainage and a six week therapeutic regimen including tramadol, and Ampicillin and sulbactam were given to counter the infection. Treating an abscess in diabetic navies needs a complete follow up plan to avoid any opportunistic infection.

**Keywords** Gluteal Abscess, Soft Tissue Infection, Diabetes Mellitus

## 1. Introduction

Accumulation of fluid in tissue due to the inflammatory process secondary to any infection is known as abscess. Foremost, abscess appears as a hard lump surrounded by inflamed tissue with a feeling of warmth and pain. Abscess can appear in any tissue region. Pelvic abscess can be result of intramuscular injection, trauma or colon surgery[1, 2]. *Pseudomonas*, *Klebsiella*, *E. Coli*, *Staphylococcus lugdunensis*, *Staphylococcus aureus*, *M. chelonae*, *M. fortuitum* and *M. abscessus* are important microorganisms that are associated with gluteal abscess[1, 3]. Gluteal abscess grow in perianal area and are formed under the skin on the subcutaneous plane of the buttock muscle, secondary to any infection[4]. Injecting drug user are more likely develop gluteal abscess due to the unhygienic injection[5, 6].

Immunocompromised and diabetic individuals remain at high risk of developing bacterial infections and management of such infection needs an aggressive treatment approach[7]. Gluteal abscess is uncommon in such individual[8]. We are presenting a case of gluteal abscess in a diabetic naive without any known cause.

## 2. Case Presentation

A 59 year male presented with chief complaint of pain at the site of gluteal swelling for two weeks with regular pus

discharge and low grade fever. Patient had type II diabetes for 12 years and history of treatment for unstable angina. Random blood glucose level (BGL) was 27.8 mmol/l with high blood pressure (161/92) and normal body temperature, upon arrival. Patient was already prescribed with Isordil 10mg, Antrapid 14u, 1000u/H, Aspirine 150mg, clopidogrel, Atrovastatin, insulatard 14u, Ramipril 5mg and bisoprolol 2.5mg. However, patient was noncompliant to his medication. When admitted, patient was lethargic with stable physical profiles. Clinical examination revealed a tender swelling on right gluteal region measuring 10 x 10 cm. Laboratory investigations showed a normal blood picture except a slight increase in white blood count. Moreover, chest and spine X-ray were both clear.

Operation was considered for pus drainage from gluteal swelling. Sliding scale insulin regimens was started to lower the BGL and patient was further initiated on metformin, Ampicillin and sulbactam were indicated for abscess while tramadol for pain. About 23cc pus was aspirated under general anaesthesia and was sent for pathology examination. Therapy was continued with insulin, metformin, tramadol, Ampicillin and sulbactam, atorvastatin with regular dressing change. Patient recovered completely after six weeks follow up and was discharged from the hospital. Proper counselling was provided to the patient about use of medication to avoid future complications.

## 3. Discussion

Diabetic patients remain at risk of developing soft tissue infection[9]. Patient in this case was non-compliant to his medication, had a high blood glucose level and hence, was at

\* Corresponding author:

andee@kb.usm.my (Andee Dzulkarnaen Zakaria)

Published online at <http://journal.sapub.org/surgery>

Copyright © 2013 Scientific & Academic Publishing. All Rights Reserved

increased risk for a bacterial invasion[10]. Gluteal infections usually develop due to any traumatic conditions to the buttock area. According to published studies, gluteal abscess can even develop as a result of injection in the specific region[1, 11-13]. Patient in this case was injected with intramuscular injection of insulin six month before but started feeling the abscess only a month earlier of the hospitalization. Patient might have encountered problem while acclimatizing with the change in diabetes management plan and patient only felt the abscess when it came in contact with the skin and pus discharge. Deep soft tissue infections are hard to diagnose earlier until aggravated, and needs aggressive management[8]. Provided that a gluteal abscess is not managed properly, it might result in tissue necrosis and gangrene[14].



**Figure 1.** Abdominal x ray revealing the site of abscess

Available treatment to eradicate a gluteal abscess is surgery[15]. Surgical procedure is usually done under local anaesthesia. However, in this case, size of abscess was enough large so that the patient was operated under general anaesthesia. Blood glucose control being important before any surgical procedure to avoid risk of opportunistic infection[16, 17] diabetic individual glucose control was hence recommended before the surgical procedure. In this case the first consideration was given to control the blood glucose level. Furthermore, use of antibiotic without cultural sensitivity test is irrational. The area of abscess after pus drainage was carefully examined and cleaned to see any follicle in the abscess as in this case, a large number of pus filled sacs were observed at the abscess site. A proper follow up plan was scheduled so as to minimize the future risk.

#### 4. Conclusions

Patient that show non-compliance develop medical complications. Patient-physician relationship is important in diabetes control. Insufficient patient counselling can result in life threatening circumstances. This case not only represents a gluteal abscess, but also alerts us to the importance of

patient counselling and medical compliance. The patient was treated successfully with surgical abscess drainage and a six week therapeutic regimen including tramadol, Ampicillin and sulbactam.

#### REFERENCES

- [1] Yuan J, Liu Y, Yang Z, Cai Y, Deng Z, Qin P, *et al.* Mycobacterium abscessus post-injection abscesses from extrinsic contamination of multiple-dose bottles of normal saline in a rural clinic. *Int J Infect Dis* 2009,13:537-542.
- [2] Harisinghani MG, Gervais DA, Hahn PF, Cho CH, Jhaveri K, Varghese J, *et al.* CT-guided Transgluteal Drainage of Deep Pelvic Abscesses: Indications, Technique, Procedure-related Complications, and Clinical Outcome. *Radiographics* 2002,22:1353-1367.
- [3] Ükinç K, Bayraktar M, Uzun Ö. A Case of Type 2 Diabetes Complicated With Primary Pyomyositis. *The Endocrinologist* 2009,19:129-130.
- [4] Amitai A, Sinert R. Necrotizing fasciitis as the clinical presentation of a retroperitoneal abscess. *The Journal of emergency medicine* 2008,34:37-40.
- [5] Gordon RJ, Lowy FD. Bacterial infections in drug users. *New England Journal of Medicine* 2005,353:1945-1954.
- [6] Takahashi TA, Amy Baernstein MD M, Ingrid Binswanger MD M, Katharine Bradley MD M, Merrill JO. Predictors of hospitalization for injection drug users seeking care for soft tissue infections. *Journal of general internal medicine* 2007,22:382-388.
- [7] Al-Shehri AM, Al-Ghamdi SM, Khalil A, Al-Amoudi A, Baslaim A, Mamoun I. Multi-drug-resistant tuberculosis in a patient presenting with bilateral gluteal abscesses and right leg swelling with end-stage renal disease. *Saudi J Kidney Dis Transpl* 2007,18:603-608.
- [8] Stevens DL, Bisno AL, Chambers HF, Everett ED, Dellinger P, Goldstein EJ, *et al.* Practice guidelines for the diagnosis and management of skin and soft-tissue infections. *Clinical Infectious Diseases* 2005,41:1373-1406.
- [9] Homer-Vanniasinkam S. Surgical site and vascular infections: treatment and prophylaxis. *International journal of infectious diseases* 2007,11:S17-S22.
- [10] Kao LS, Knight MT, Lally KP, Mercer DW. The impact of diabetes in patients with necrotizing soft tissue infections. *Surgical infections* 2005,6:427-438.
- [11] Ahmed ME, Fahal AH. Acute gluteal abscesses: injectable chloroquine as a cause. *J Trop Med Hyg* 1989,92:317-319.
- [12] Brand S.[Toxic shock syndrome in a gluteal abscess caused by an injection]. *Schweiz Med Wochenschr* 1984,114: 960-965.
- [13] Ozucelik DN, Yucel N, Coskun S, Cobanoglu M, Kunt MM. Gluteal abscess following intramuscular injection of dissolved biperiden tablets. *Int J Clin Pract* 2007, 61: 1417-1418.
- [14] Boyle-Vavra S, Daum RS. Community-acquired methicillin-

resistant *Staphylococcus aureus*: the role of Panton–Valentine leukocidin. *Laboratory investigation* 2006,87:3-9.

- [15] Schimp VL, Worley C, Brunello S, Levenback CC, Wolf JK, Sun CC, *et al.* Vacuum-assisted closure in the treatment of gynecologic oncology wound failures. *Gynecologic oncology* 2004,92:586-591.
- [16] Ouattara A, Lecomte P, Le Manach Y, Landi M, Jacqueminet S, Platonov I, *et al.* Poor intraoperative blood glucose control is associated with a worsened hospital outcome after cardiac surgery in diabetic patients. *Anesthesiology* 2005,103: 687-694.
- [17] Ascione R, Rogers C, Rajakaruna C, Angelini G. Inadequate blood glucose control is associated with in-hospital mortality and morbidity in diabetic and nondiabetic patients undergoing cardiac surgery. *Circulation* 2008,118:113-123.