

BILATERAL GLUTEAL ABSCESSSES AND MYOFIBROSIS COMPLICATING INTRAMUSCULAR PENTAZOCINE ABUSE: A CASE REPORT

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ABSTRACT

BACKGROUND: There is paucity of reports on the musculoskeletal complications of pentazocine abuse in Nigeria. The aim was to report a case of bilateral gluteal abscesses and myofibrosis as a consequence of parenteral pentazocine abuse.

CASE SUMMARY: We report a case of a 39 year old housewife who presented with bilateral gluteal pyomyositis and myofibrosis following intramuscular pentazocine abuse. The patient had received parenteral pentazocine for pain relief for about 3 weeks seven years ago. She gradually developed dependence on this drug and received increasing doses of this drug by self injection on both buttocks. She subsequently developed bilateral gluteal abscesses and myofibrosis that was treated by surgical drainage, debridement, wound dressing and antibiotics.

CONCLUSION: Pentazocine abuse should be considered a differential diagnosis in cases of multiple gluteal abscesses. Clinicians should be cautious in the use of pentazocine as routine painkillers.

KEYWORDS: Pentazocine abuse, gluteal abscesses, Nigeria.

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INTRODUCTION

Prescription drug abuse is a major health problem globally.¹ Various drugs, such as analgesics, cough syrups, vitamin preparations and laxatives among others are being used by individuals for reasons other than the medical indications. The abuse of opioid analgesics such as pentazocine is a growing public health problem worldwide.² Pentazocine is a kappa opioid receptor agonist that is widely used for pain relief. Intramuscular injection of pentazocine has been associated with various complications, including skin ulcers, skin abscesses and abnormal skin pigmentation.^{3,4} Fibrous myopathy has also been reported by some authors.^{5,6} In Nigeria, the abuse of pentazocine is under-reported and there is paucity of reports on the cutaneous and musculoskeletal complications of parenteral pentazocine abuse. We report a case of multiple gluteal abscesses and extensive fibrosis of the gluteal muscles caused by

parenteral pentazocine abuse.

CASE SUMMARY

Mrs. M.S, a 39 year old housewife presented to us on the 1st of July, 2015 with three weeks history of swelling on the left buttock. She was in apparent good health until she developed progressive painful swelling on the lateral aspect of the left gluteal region. There was associated fever and generalized body weakness. She was not a known diabetic or sickle cell anemia patient but had been treated for pulmonary tuberculosis twice in 2000 and 2008 respectively.

On examination at presentation, she was chronically ill-looking, pale, afebrile and anicteric. Her pulse rate was 90 beats per minute and blood pressure was 100/60mmHg. She was in obvious painful distress and had difficulty in sitting down on account of pain in the left buttock.

Examination of the musculoskeletal system revealed a mass on the left gluteal region measuring 5x6cm, firm

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and tender with differential warmth. There was severe wasting of the gluteal muscles on both sides, worse on the left (figure 1). No neurological deficit was noted. There were healed scars and sinuses and hyper pigmented skin changes on both gluteal regions. A diagnostic needle aspiration was done which yielded pus. A diagnosis of left gluteal abscess was made. Her full blood count result showed: PCV = 18%, WBC = $12.8 \times 10^3 / \mu\text{L}$, N = 69%, L = 29%, E = 2%, ESR = 65mm/1sthr. C-reactive protein assay was not done. Retroviral screening was negative. Her urinalysis and fast blood glucose tests were normal. Screening for tuberculosis was negative. Pelvic x-ray revealed no bony involvement. However, chest x-ray showed consolidation of the left mid and lower lung zones. Microscopy and culture of the aspirate yielded moderate growth of *Staphylococcus aureus*. She received three units of blood and was commenced on intravenous ceftriaxone according to the sensitivity pattern, which was changed to augmentin tablets after 5 days. Surgical drainage was done and 250ml of pus was drained. Intra-operative findings included leathery thick skin that was adherent to the underlying tissues. There was also extensive fibrosis of the gluteal muscles harbouring pockets of pus with necrotic tissues. The pus was drained and all necrotic tissues were excised. Tissue biopsy showed acellular myofibrosis with chronic inflammation. Fungal and mycobacterial cultures of tissue specimen were negative. The wound continued to drain purulent exudate despite antibiotics administration and wound dressing for about 60 days, which was rather unusual. This prompted further enquiries that revealed that patient had been abusing pentazocine injection. She received pentazocine injections regularly for 3 weeks while on hospital admission in 2008 for treatment of pulmonary tuberculosis for pain relief and subsequently developed dependence to the drug. After discharge, she started self injection of the drug due to the euphoric effect. The injections were procured without prescription from neighboring pharmacy shops. She initially took two intramuscular injections daily but presently injected herself with 6 ampoules of pentazocine injections daily. Her preferred site of the injection was the buttocks. She denied abuse of other drugs. The patient was referred to the clinical psychologist and psychiatrist for counseling and management. She was subsequently discharged home following complete wound healing.

However, 3 weeks after discharge, she was readmitted with swelling and multiple discharging sinuses on the right buttock. While undergoing counseling by the psychiatry team, she developed withdrawal symptoms of restless, anxiety and intense craving for the drug and subsequently had a relapse. Findings on clinical and at

surgery were similar to those on the left buttock, except for multiple discharging sinuses (figure 2). She had an uneventful surgical drainage and debridement with approximately 200ml of pus drained (figure 3). The wounds healed after 6 weeks. She is presently being managed by the psychiatrist.

DISCUSSION

Reports on incidence and complications of pentazocine abuse in our environment are scanty. Cutaneous complications of pentazocine injections have been described in few case reports.^{4, 7, 8} These complications include deep, punched out ulcers, fibrous plaques, sinuses and hyper pigmentation.^{3, 4, 7, 8} Other rarely reported complications of pentazocine injection are deep vein thrombosis, toxic epidermal necrolysis,⁹ fibromyositis and contracture¹⁰ and gluteal abscesses.¹¹

Our report highlights the fact that pentazocine abuse is an important public health problem in our environment. It also reveals that pentazocine injection abuse can present with atypical gluteal abscesses and extensive myofibrosis. The gluteal abscesses most likely were caused by the inoculation of the site with bacteria from the syringe or needle or due to poor site preparation during self injections. This may also explain the bacteria culture of *Staphylococcus aureus* which is a common skin commensal. The exact mechanism of the myofibrosis is not clearly understood. However, it has been suggested that pentazocine is most soluble in acidic conditions and may get precipitated in the slightly alkaline pH of the extracellular fluid, which may then initiate a chronic inflammatory response.³

Some authors have suggested that hormone sensitive lipase present in normal adipose tissue, when stimulated locally by pentazocine may lead to break down of fat and subsequent inflammatory reaction.¹²

Often times, the recognition of pentazocine abuse in clinical practice is difficult. The patients often conceal the use of this drug and merely present to hospital for symptomatic treatment of the complications. This may pose a diagnostic challenge particularly in atypical cases where the more common causes of these complications have been excluded. This was the case in our index patient who had atypical gluteal abscesses with skin and soft tissue changes. A high index of suspicion is therefore required. Clinicians should always consider the possibility of pentazocine abuse in the presence of atypical skin and soft tissue complications such as ulcers, sinuses and abscesses. This is particularly important when they occur in the gluteal region or thighs which are common sites of intramuscular injections.

We noted that confidence building with such patients can help to unravel the etiology of these complications and furthermore help to build a therapeutic alliance to wean the patients off the drug and maintain abstinence. It was also observed that our patient received injection pentazocine for up to 3 weeks while on admission in a hospital for treatment of pulmonary tuberculosis. This most likely predisposed the patient to drug dependence. It is therefore pertinent for clinicians to acquaint themselves with the WHO guidelines for management of chronic pain in order to avoid the dangers of drug dependence in patients with chronic pain. The abuse of pentazocine is being increasingly reported across the globe⁹ including Nigeria.¹³ With free over the counter access to this drug in Nigeria and many developing countries, the awareness of these complications is important so that unwanted sides effects can be avoided. There should be a stricter enforcement of laws guiding the use precipitation drugs in Nigeria. This will help in controlling the abuse of these drugs and its complications.

Our patient had free access to pentazocine even though it is a precipitation drug and this encouraged the abuse of the drug. The prolonged discharge of pus from the sinuses may be explained by the fact that pus and necrotic tissues were trapped within the fibrotic muscles thus making it difficult to drain easily and inaccessible to antibiotics. Prolonged antibiotics administration is therefore recommended for such atypical abscesses.

CONCLUSION

This report highlights important musculoskeletal complications of parenteral pentazocine abuse. It also underscores the significance of the precaution that should be taken while prescribing pentazocine as a routine painkiller. Pentazocine abuse should be considered a differential diagnosis in cases multiple and recurrent gluteal abscesses especially when there are associated skin and soft tissue changes. Finally, legislation against indiscriminate use of control drugs should be enforced.



Figure 1 showing left gluteal atrophy and right gluteal abscess (arrow) and discharging sinuses



Figure 2 showing right gluteal abscess communicating with the sinus



Figure 3 showing drainage of right gluteal abscess

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