
Injectable Pentazocine-induced Ulcers: Two Case Reports in Nigerian Patients

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Abstract

Background

History of medicine is filled with models of substances which were introduced as safe drugs but later showed to have considerable harmful and addiction potential. An example of this is pentazocine; however, reports on injectable pentazocine abuse are scanty in sub-Saharan Africa.

Aim

We hereby report two cases of injectable pentazocine abuse in Nigerians who presented to the outpatients clinic of the department of psychiatry, Lagos State University Teaching hospital, Ikeja, Lagos, Nigeria.

Results

The two patients developed multiple ulcerations and abscesses on bilateral upper limbs and bilateral gluteal areas of the bodies. Management was in-patient treatment and it consisted of withdrawal of pentazocine, vigorous management of pre-existing physical and mental illness and supportive psychotherapy.

Conclusions

Continuous advocacy and awareness programmes on the complications and consequences of pentazocine abuse should be carried out by medical personnel and policy makers. Pentazocine should be made a prescription medicine in all pharmacies.

Keywords: Pentazocine, abscesses, ulcerations, Lagos, Nigeria social support, social networks, chronic illness, older adults, aged, elderly, self-management, and self-care

Introduction

Previous studies have shown that pentazocine, a synthetically-prepared prototypical mixed agonist/antagonist narcotic drug of the benzo-morphin class of opioids is indicated in severe

acute or chronic physical or surgical pain (1-3). When pentazocine is used when not prescribed, it can easily be abused and may lead to psychological and physical dependence (4-5). Those who are dependent on pentazocine will frequently have withdrawal syndrome. Studies have indicated that complications of injectable pentazocine include cutaneous ulcerations, arm and leg ulcers, skin fibrosis, abnormal skin pigmentations, amputations and deaths (4-5). Globally, case reports and case series have discussed on the cutaneous complications of injectable pentazocine, however, there are fewer case reports on injectable pentazocine abuse from Nigeria.

Manual and literature searches on the study topic in the Nigerian literature showed only one study on injectable pentazocine abuse in sickle cell anaemia patients (5). It is therefore essential to publish the health consequences of injectable pentazocine abuse in patients who received treatment for injuries sustained from road traffic accidents. These two case reports are to showcase the addictive potentials of pentazocine and to also inform policy makers on the need for strict guidelines in prescribing dangerous drugs such as pentazocine for acute and chronic physical and surgical pains.

We hereby present two cases of injectable pentazocine dependence with bilateral cutaneous complications on the upper and lower limbs and gluteal regions of two patients seen at the Department of Psychiatry, Lagos State University Teaching Hospital, Ikeja, Lagos, Nigeria. We also sought the permissions of both patients for their written consents to take the pictures of their ulcers after explaining to them that the pictures are for research purposes and their identity would never be disclosed.

Case report no 1

Miss O.G. a single, female 25-year-old registered nurse was seen at the outpatient clinic of department of psychiatry of the Lagos State University Teaching Hospital, Ikeja, Lagos, Nigeria after being referred from a general hospital facility in another area of Lagos State on account of 2-year history of persistent use of injectable pentazocine. According to her, she was placed on the injectable pentazocine (Talwin) when she had a fracture of the right femur following a road traffic accident for symptomatic relief. She became dependent on the medication and began self-administration primarily into distal upper extremities. According to her, she began to develop superficial cutaneous ulcers. She stated that she was treated for her cutaneous ulcers on several occasions but she continued with her use of the injectable pentazocine.

She had difficulty controlling her addictive behaviour, and had developed tolerance to pentazocine. She admitted that she takes 800 mg of injectable pentazocine daily at the cost of N1000 (\$3.00/ day) which she funds mainly from her monthly salary. When she tries to abstain, she experiences physical and psychological withdrawal symptoms. She also mentioned that her habit affected her social and occupational functioning. She stated that she had been sad for about nine months associated with reduced energy levels when she does not use the pentazocine.

Two months prior to presentation, she experienced loss of interest in pleasurable activities, reduced energy levels, poor appetite, sleep disturbances, poor concentration and was always

thinking of attempting suicide because she thought she was worthless and hopeless. She also developed guilt feelings for abusing pentazocine as a nurse, which made her to want to attempt suicide. The mental state examination showed a cachectic young woman, with depressed mood and congruent affect.

Physical examination revealed bilateral ulcers of both forearms. The right forearm-wound is on the plexus surface of forearm, rectangular in shape with pigmented island of scars which measured about 8cm to 16cm, plexus surface showed multiple scars making the wound near circumferential, auxiliary nodes observed to be present (Figure 1). The left forearm revealed a more extensive wound also rectangular in shape, with a measurement of about 10 to 18cm diameter (figure2). The floor of both wounds had granulated tissues with some areas of serous discharge.

A diagnosis of mental and behavioural disorders due to pentazocine abuse was made. She was subsequently admitted into the psychiatry ward of the hospital for proper assessment and management. The ulcers were dressed daily. While on the ward, she was monitored with a withdrawal chart. A consult was sent to the burns and plastic unit of the hospital for assessments and co management. A suicidal observation card was also opened to monitor her behaviour throughout the day. She was placed on oral amitriptyline which was gradually increased to 75mg per day. Motivational interview was also carried and she had supportive psychotherapy.

After four weeks of admission, the wounds healed and the symptoms of depression subsided. She was discharged to the outpatients' clinic on same medication and weekly monitoring with serial toxicology screens. Subsequent assessments of her mental and physical states two weeks post admission by both managing teams revealed significant improvement in the ulcers of both arms and successful withdrawal with abstinence. Her mental state remains stable. She continued with her relapse prevention and cue exposure programme because of the nature of her work (health worker).



Figure 1: Right arm



Figure 2: Left arm

Case report no 2

A 50 year-old business man presented to the outpatient's clinic for assessment and evaluation of several ulcers on the right and left arms, gluteal areas and upper parts of the right and left thighs. He sustained the ulcers from injectable pentazocine. Two years prior to presentation, he had a road traffic accident and had a severe head injury and was in pain. Part of the prescribed medications included injectable pentazocine for the relief of the severe pains.

He also mentioned that after he was discharged from the hospital, he continued self-administration of the injectable pentazocine; by progressively increasing the dose to get the earlier feeling of excitement, there is craving for it which makes him continually feigning pain to get prescription from doctors and recently started buying without prescription. He has tried to stop in the past but went back due to withdrawal symptoms.

He continued to inject the both arms and after a while he also injected upper and lower parts of the gluteal areas and the upper areas of the both right and left thighs. He stated that the ulcers developed about eight months prior to presentation and he was afraid to tell his wife and children. Physical examination showed fresh and healing ulcers and several injection scars on both right and left arms, both right and left gluteal areas and right and left upper limbs (Figures 3 and 4). Both right and left gluteal areas had several deep non-healing ulcers associated with pain and tenderness. Likewise, there were many healed injection scars on both upper areas of the gluteal region (Figures 5 and 6).

His mental state did not show any abnormalities. He was diagnosed as having mental and behavioural disorders due to opioid dependence. The patient was admitted into the psychiatric ward for complete physical and mental health assessment. The microscopy and culture findings of the wounds showed growth of gram positive and negative bacteria. He was also placed on the recommended antibiotics. A consult was also sent to the burns and plastic unit of the hospital for

co-management of the deep ulcers. The ulcers were dressed daily. While on admission he had motivational interview, relapse prevention and cue exposure. After two weeks, the upper and lower limb ulcers began to heal gradually.

Four weeks after admission, the ulcers were completely healed. He was discharged to the outpatients' clinic where he continued the psychological interventions and followed up for about six months before he stopped coming. .



Right Arm



Left arm



Left upper thigh

Right upper thigh

Discussion

These were cases of Nigerians that were dependent on injectable pentazocine with several cutaneous ulcer complications on both upper and lower limbs. These observations were hitherto reported to be scarce in the Nigerian environment (4). However, reports on injectable pentazocine abuse with extensive ulcers in the Nigerian society such as the presented cases have not been given adequate priority. The two cases were restricted to parenteral pentazocine that was self-administered at doses much higher than the usual therapeutic dose. The abuse was related to pain due to road traffic accidents and part of the treatment they received for their acute pain was injectable pentazocine. But when the pains from their injuries subsided they continued to feign pain in order to continue to get the injectable pentazocine due to psychological craving and the effect of withdrawal symptoms.

In this light, the continuous abuse of the injectable pentazocine in the absence of any pain led to the patients to development of cutaneous ulcers. In both cases, the patients went on to become dependent and required clinical treatment to wean from the substance. Although studies have shown that pentazocine prescription, use and abuse have declined considerably in the United States of America and Western Europe due to its decreased usage in their hospitals (6). On the contrary, pentazocine is still being prescribed for acute pain in developing countries (1-2,5). When individuals become physically dependent on injectable pentazocine, they are likely to develop complications from injection sites due to the solubility of pentazocine in acidic conditions where it also precipitates in the alkaline extracellular fluid which leads to inflammatory response (3,5). Other findings suggested that inflammatory responses could also be due to vaso-occlusive and vaso-constrictive effects of pentazocine (2-4). For these reasons, complications of injectable pentazocine may manifest as fibrocystic deep vein thrombosis, toxic epidermal necrolysis, thrombophlebitis, fibrous myopathy, pyoderma gangrenosum and malignancies (1-4,7-8).

In the Nigerian society, cannabinoids, cocaine and heroin abuse are reported to be common while reports on injectable pentazocine were believed not to be common until recently (5,9). Unfortunately, pentazocine is readily available as over-the-counter drug in Lagos, Nigeria where it is sold in almost every chemist illegally without medical prescription. These two presented cases demonstrated the one of the overwhelming complications that can result from injectable pentazocine. It also showed that the abuse of injectable pentazocine may be more common than reported. Policy makers should make legislation on indiscriminate prescription of pentazocine by clinicians. In situations where pentazocine is to be prescribed, the clinician should inform them on the possibility of dependence on the drug.

Conclusion

Clinicians should be cautious in prescribing injectable pentazocine for individuals who are experiencing acute or chronic pain. After prescribing injectable pentazocine, clinicians should

also be vigilant on the possibility of abuse. Pentazocine should therefore be made strictly a prescription drug with same significance given to other hypno-sedatives in Nigeria.

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