

Biopsychosocial Complications of Pentazocine Dependence: A Case Report from a co-occurring Treatment Facility in Lagos

Olajumoke M. Koyejo¹, Olugbenga A. Owoeye²

¹Addiction Treatment, Education, Research, and Advocacy Unit, Federal Neuropsychiatric Hospital Yaba, Lagos, Nigeria, ²Adult General Psychiatry Department, Federal Neuropsychiatric Hospital Yaba, Lagos, Nigeria.

Abstract

Pentazocine, a synthetic, prescription opioid analgesic, can now be obtained from the Nigerian illicit market. This development is not without concomitant medical and psychosocial complications. This is a case of psychosocial and cutaneous complications of 8-year history of pentazocine dependence in a 44-year-old married male health worker with features of severe depression, multiple cutaneous abscesses, and punched-out, deep, painless ulcers surrounded by hypopigmented halos. There were associated fibrosis of the skin, strained relationship with wife, and imminent dismissal from work. This report underscores the need for standard prescription procedure adherence by health workers, especially for medications that are potential drugs of dependence for patients with physical conditions.

Keywords: Complications, dependence, pentazocine

INTRODUCTION

Pentazocine was initially introduced in 1967 as a synthetic mixed agonist–antagonist, potent nonnarcotic, nonaddictive analgesic opioid. However, by 1969, its addictive potential was recognized.^[1]

The addictive nature of pentazocine has led to its opioid use disorder which occurred more among middle-aged, married men.^[2-5] Moreover, majority of those affected were health workers.^[2,3] High doses of pentazocine were usually administered by over two-third of most of these patients, whereas a fifth used more than the 360 mg/day recommended daily dose for adults.^[2,3] Studies have further documented that these patients did not only use pentazocine, but they were multiple psychoactive substance users.^[2,4]

The etiology of pentazocine abuse has been linked to chronic painful medical conditions.^[2,4] To relieve the pain from these medical conditions, patients have sought different routes of administration, for example, “blind dating” (a desperate attempt at injecting in an area with the preknowledge of the injection probably missing the vein), skin popping (subcutaneous injection), and mainlining which is a desperate attempt at intravenous route.^[6]

The exact pathogenesis of the cutaneous complications of chronic pentazocine use is not well known. However, it has been suggested that the alkaline pH of the extracellular fluid could precipitate crystals of pentazocine if not rapidly absorbed, causing inflammatory reactions which led to abscesses and ulcers.^[1] Another school of thoughts explains that the vasoconstrictive and vaso-occlusive properties of pentazocine may lead to ischemia and eventual necrosis of tissue around the injection site.^[7]

The chronic use through these routes of administration is associated with several complications. These vary mostly from cutaneous tissue damage from repeated injections, leading to pentazocine sclerosis, punched-out, irregularly shaped ulcers, fibrosis, difficulty in venous accesses, and calcifications of the muscles.^[4,5] Other less reported complications are deep vein thrombosis, toxic epidermal necrolysis, ischemia, skin

Address for correspondence: Dr. Olajumoke M. Koyejo,
Federal Neuropsychiatric Hospital Yaba, P. M. B. 2008, Yaba,
Lagos, Nigeria.
E-mail: omjummy@yahoo.com

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow_reprints@wolterskluwer.com

How to cite this article: Koyejo OM, Owoeye OA. Biopsychosocial complications of pentazocine dependence: A case report from a co-occurring treatment facility in Lagos. *Niger J Med* 2020;29:720-2.

Submitted: 13-Apr-2020

Revised: 10-Jun-2020

Accepted: 09-Oct-2020

Published: 24-Dec-2020

Access this article online

Quick Response Code:



Website:
www.njmonline.org

DOI:
10.4103/NJM.NJM_29_20

necrosis, contractures, gangrene, or autoamputation and generalized erythematous desquamation rash with altered follicle histopathology.^[8]

This report is aimed at bringing to fore the need for standard and strict prescription procedure adherence by health workers, especially for medicines that are potentially addictive for patients with physical conditions.

CASE HISTORY

A middle aged, separated laboratory scientist, presented at the emergency unit of the hospital with a 10-year history of pentazocine use. He commenced the use through prescribed intramuscular pentazocine 30mg b.d for two days in 2003 following rectal haemorrhoidectomy. This relieved the surgery pain and gave him some euphoric effect which he enjoyed. Within a period of 2 years, he increased use to an average of 150mg TDS and sometimes exceed 600mg/day without prescription. However, on reaching an excess of 600 mg/day, he experienced restlessness and drowsiness. Out of desperation, sometimes, he would travel several kilometers to buy the medication without a prescription. The withdrawal symptoms he experienced were sad mood, muscle aches, excessive yawning, and sweating. His social and occupational functioning was affected negatively by his inability to control his use of psychoactive substances. Despite the hypertrophic scars on his hands/legs and several abscesses which resulted in ulcers from the repeated injection sites, he continued the use of the substances for years. The routes of administration of the drug were frequently intravenous (“mainlining”), sometimes intramuscular and sparingly subcutaneous (“skin popping”). However, when desperate, he injected himself in the same area despite the awareness of the injection probably missing the vein (“blind dating”).

After about six years of use, the patient experienced intermittent sad mood, loss of interest in previously pleasurable activities, loss of energy, low self-esteem, and loss of confidence. He had pessimistic thoughts about the

future and a high sense of guilt which further contributed to his continued use of pentazocine.

He claimed that he had 12-week residential treatment and rehabilitation programs in a tertiary mental health hospital twice. However, within a month of discharge on both occasions, he had relapsed. He has had three previous unsuccessful hemorrhoidectomies.

Examination of the musculoskeletal system [Figure 1] showed hypertrophy of the subcutaneous tissue of the right and left legs, both feet, subcutaneous tissue of both the lower third of the right and left arms, and the whole of the right and left forearms.

Right upper limb

The circumference of the upper third of the right forearm was 46 cm, middle third of the right hand was 36 cm, lower third of the right leg 34 cm, and middle third of the right foot 33 cm. There were several depressed scars on the right arm, forearm, and hand [Figures 1 and 2].

Left upper and lower limb

The circumference of the middle third of the left forearm was 42 cm, middle third of the left hand 35 cm, lower third of the left leg 34 cm, and middle third of the left feet 32 cm

There were multiple ulcers on the left forearm with the widest being 3 cm × 4 cm. The ulcers were painless and not purulent. There were areas of hyperpigmentation around the ulcers. The ulcer sites were punched out, bases were hard, and the edges were irregular.

A diagnosis of mental and behavioural disorder due to use of opioids with depressive symptoms (F11.5.54) with cooccurring chronic rectal haemorrhoids and lymph-oedema (International Classification of Disease Version 10, 1994).

Within 48 h of admission, he was referred to a multidisciplinary center where he was untimely discharged due to financial incapability. One-year telephone follow-up revealed that the patient had died.



Figure 1: Cutaneous complications of the upper and lower limbs



Figure 2: The right upper showing cutaneous complications of pentazocine dependence

DISCUSSION

There is a paucity of data reporting cutaneous and psychosocial complications of pentazocine dependence in Nigeria. Are there few cases of pentazocine dependence in Nigeria or is there under-reporting?

The age, marital status, and occupation of the patients comparable with previous studies.^[2,3] The patient showed a high level of tolerance from 60 mg/day to 600 mg/day, and other dependence symptoms were evident through his desperate administration through mainlining, skin popping, and blind dating to relieve the withdrawal symptoms.^[6]

This patient had access to pentazocine, an opioid analgesic over the counter contrary to the National Drug Policy (2003).^[9] This case report also exemplifies some of the consequences of uncoordinated drug distribution in Nigeria that has been reported by the National Drug Distribution Guidelines (2012).^[10] The high dependence property, unauthorized availability, and access to the drug are factors associated with the advanced level of morbidity demonstrated in this patient.

In conclusion, this case report underscores the need for proper and strict prescription procedures by health workers, especially for medicines that are potential drugs of dependence for patients with physical conditions. It can also serve as another wake-up call for better coordination of drug distribution in Nigeria.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

- Schlicher JE, Zuehlke RL, Lynch PJ. Local Changes at the Site of Pentazocine Injection. *Arch Dermatol* 1971;104: 90-1
- Saxena S, Mohan D, Adityanji. Pentazocine abuse : review and a report on eighteen cases. *Indian J Psychiatry* 1985 22];27(2):149-52.
- Darçın AE, Noyan OC, Nurmedov S, Dilbaz N. Pentazocine abuse in a healthcare professional. *BMJ Case Rep* .2016
- Agashe VM, Patil H, Gundavda MK. Multiple Skin Abscesses and Myofibrosis of Bilateral Lower Limbs Following Repeated Intramuscular Injection of Pentazocine with Concomitant Tuberculous Infection. *J Orthop case reports* . 2015 22];5(1):15-8.
- Kumar D, Gupta A, Sharma VP, Yadav G, Singh A, Verma AK. Pentazocine-induced contractures: Dilemma in management. *Indian J Pharmacol* . 2015 ;47(4):451.
- Bhateja G, Subodh BN, Grover S, Basu D. Cutaneous complications with parenteral pentzocine dependence. *Ger J Psychiatry* 2006;9:53-6.
- Parks DL, Perry HO, Muller SA. Cutaneous complications of pentazocine injections. *Arch Dermatol* 1971;104:231-5
- Mahajan SS, Tandon VR, Sarin R, Roshi , Gupta AK, Kohli A. Digital gangrene induced by inadvertent intra-arterial cocktail injection of anesthetic agents such as pentazocine, promethazine, and atropine: A serious adverse drug experience. *Indian J Pharmacol* 2018;50:354-7.
- National Drug Policy (2003) Revised Edition. Federal Ministry of Health in collaboration with World Health Organisation. Sections 6.7.0 – 6.7.6.
- National Drug Distribution Guidelines (2012). Federal Ministry Health 2nd ed. Federal Ministry Health Nigeria; 2012. p. 1.