

Pyrex Journal of Medicine and Medical Sciences

Vol 3 (1) pp 001-004 March, 2016

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*Case Report*

## **A Report of Personality Disposition and Pentazocine Abuse in Sickle Cell Anemia Patients: A report of two cases**

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Accepted 25<sup>th</sup> February, 2016

**Pentazocine abuse among sickle cell anemia patients is a major concern for health care providers. This study hopes to expose the addictive potential, associated problems and personality disposition of individuals with sickle cell disease that depend mainly on pentazocine as an analgesic drug and to emphasize on the necessary treatment procedure for health care providers. Two case reports of pentazocine abuse at the rehabilitation unit of the Federal Neuropsychiatric Hospital, Maiduguri Nigeria were made. It was found that both patients who were sickle cell anemia (HbS) were given intramuscular pentazocine in a government hospital during an episode of bone pain crises became dependent on the substance along side with other behavioral problems. In conclusion, we suggest that standard guideline should be made available for health care providers on the management of chronic pain. Mild form of analgesic should be considered first before considering stronger analgesic that has been found to have high potential for addiction and a comprehensive psychological assessment should always be done for all patients with sickle cell anemia co-morbid with substance use to determine any behavioral problems.**

**Keywords:** Nigeria, Pentazocine abuse, Personality disposition, Sickle cell anemia.

### **INTRODUCTION**

Sickle cell disease (SCD) is an inherited blood disorder caused by abnormal hemoglobin. SCD affects millions of people throughout the world (Creary *et al.*, 2007). Studies indicate that approximately 1 in 12 African-Americans are heterozygous for the disorder, and approximately 1 in 500 African-American newborns are diagnosed annually with SCD (Boyd *et al.*, 2005). Overall SCDs affect approximately 72 000 individuals in the United States (Steiner & Miller, 2006). SCD is found to be the most common blood disorder among families whose ancestors came from Sub-Saharan Africa, South America, Cuba, Central America, Saudi Arabia, India, and the Mediterranean regions (Creary *et al.*, 2007). SCD is

accompanied by numerous physical symptoms and medical complications such as recurrent pain, anemia, low exercise tolerance, splenic sequestration, and susceptibility to infections, lung problems, growth delay, late onset of puberty, strokes, priapism, enuresis, and decreased life expectancy (Whitten & Nishiura, 1985). Furthermore, patients can have acute and chronic pain syndromes. Physiological complications for children include pneumococcal infections, meningitis, osteomyelitis, cerebral vascular infarction, and enuresis (Stefanatou & Bowler, 1997). The severity and the presenting symptoms associated with SCD vary greatly from individual to individual (Bloom, 1995).

Recurrent painful crises represent the most common reason patients with SCD seek acute medical care. In a study among sickle cell anemia patient on substance dependence, pain-related symptoms were more frequent accounting for 88% of all symptoms reported (Elander *et al.*, 2003). In Nigeria, pentazocine is commonly used in the management of surgical and chronic pains and it is commonly used in the management of bone crisis of sickle cell anemia (Makanjuola & Olatunji, 2009). Opioid analgesics are the mainstay of therapy for acute pain crises in SCD. Therefore, by adulthood, most patients have had many years of intermittent exposure to opioids. It helps control pain, improve functional capacity, and decrease hospitalizations in patients with SCD (Brookoff & Polomano, 1992).

Concerns about dependence on prescribed analgesia may compromise pain management, but there was previously little reliable evidence about substance dependence among patients with sickle cell disease (SCD). Study in the United Kingdom among patients with sickle cell disease later included pain-related symptoms in the assessment, 31% of the sample met the DSM-IV criteria for substance dependence, compared with only 2% when the assessment was restricted to non-pain-related symptoms (Elander *et al.*, 2003). Opioid abuse and addiction behaviors can be difficult to define when prescribed for chronic pain. While there is little evidence in the medical literature that suggests addiction is frequent in SCD, physicians and other healthcare providers routinely overestimate its risk and prevalence (Labbe *et al.*, 2005). Over 60% of nurses believe addiction is prevalent in SCD (Pack-Mabien *et al.*, 2005), >50% of emergency department physicians and 25% of hematologists thought that >20% of SCD patients are addicted (Shapiro *et al.*, 1997). Some of this distorted perception results from failure to distinguish between physiological tolerance and dependence versus addictive behaviors (Elander *et al.*, 2004).

Despite various scientific and academic evidence on pentazocine abuse and dependence among individual with sickle cell anemia diseases, in Nigeria, there is no adequate documentation of the abuse of pentazocine especially among sickle cell anemia patients. Based on this gap, this index study aimed to further expose the addictive potential, associated problems of the addiction and personality disposition of individuals with sickle cell disease that depend mainly on pentazocine as an analgesic drug. Also, to emphasize on the necessary treatment procedure for healthcare providers when some of the opiates that has high potential for addiction are to be used for treatment in sickle cell disease or other chronic pain problems.

## METHODS

A report of two cases of pentazocine dependent, seen at the rehabilitation unit of the Federal Neuropsychiatric Hospital, Maiduguri. It is a government owned specialized mental health institution located in Maiduguri, Borno State Capital in North-Eastern Nigeria rendering psychiatric services in neighboring states and countries like Cameroun, Chad and Niger republic among other neighboring countries.

### Case Reports One

Mr. X is a 28 year old Nigerian graduate with sickle cell anemia whose electrophoretic pattern was HbS. He presented on the

24th of August 2015 with a five year history of self injection of pentazocine. The patient had been treated for the sickle cell bone crisis in a government hospital in Maiduguri, Borno State, Nigeria 10 years ago with diclofenac injection and tablets once daily. He became addicted following his admission 5 years ago into the same government hospital in Maiduguri on account of bone pain crises which he claimed was affecting the elbows, knees and ankles. While on admission, he was treated with tramadol, one tablet twice daily and intramuscular pentazocine 30mg once daily. The patient claimed that while on admission for three days, the crises lasted only 24hours but was given pentazocine throughout the duration of stay. He enjoyed the feeling of quick relief of the pains, being able to function normally and to sleep comfortably. This made him to cunningly check the name of the drug that performed the long awaiting magic from his prescription note before he was discharged. Thereafter, whenever he starts experiencing pain, he goes to a nearby pharmacy where he had known the attendants over time to buy without a prescription. The patient claimed he injects 30mg pentazocine thrice daily, which translates to about 700 Naira (\$5) per day. Delay in procuring pentazocine causes joint pains, insomnia and intense craving for the drug.

Three years later he had another bone pain crisis affecting the back, knees and ankle and was admitted at a government hospital in Damaturu, Yobe State, Nigeria where he was prescribed pentazocine injection 30mg daily and oral celecoxib one daily for two weeks. Following the last admission, the patient increases the use of pentazocine injection on a daily basis by injecting about four to five vials of 30mg per day. He injects it intravenous on the distal half of the arm, proximal half of the forearm and occasionally on the dorsum of the hand, when he cannot access veins on the other areas. He learnt how to inject intravenously while on industrial training at the university of Maiduguri teaching hospital as an undergraduate student. He sustains the habit through pilfering from the family business and the salary he earns monthly from his workplace.

He works as a civil servant with the Yobe State, Nigeria earns about 42,000 Naira (\$300) per month. He admitted that the drug behavior made him to mismanage his funds and became increasingly disobedient. Despite working, he still found himself unable to take care of his basic needs as buying clothing, shoes, fueling his car and consistently depends on his parents for his daily meals. The patient expressed a wish to be treated for drug abuse (pentazocine). He came in company with his sister and expressed the desire to be admitted and was admitted into the drug detoxification ward and subsequently rehabilitation ward for management.

On mental state examination, the patient was well kept, calm and cooperative, and appears quite motivated. He had no hallucinatory experience or behavior suggestive of it. There was no abnormality of stream, form, content and possession of thought. His cognitive functions were within normal limits. He had full insight. On physical examination, his weight was 54.5kg, height 1.41meters tall, anicteric and has slightly long upper limbs. He had multiple hyper pigmented macules on the anterior aspects of the distal half of both arms, anterior proximal half of the forearm and two macules on the dorsum of the right hand (from needle pricks). A diagnosis of mental and behavioral disorder due to use of opiod (pentazocine) with dependence syndrome was made and was admitted to the drug detoxification ward. While in the ward, he was placed on oral Amitriptylline 25mg at night. After one month, he was transferred to the rehabilitation ward and maintained on oral folic acid 5mg.

At the rehabilitation unit, assessment of his personality was done with the MMP1-2 profile indicates a valid and

interpretable result. The interpretation shows somatic discomfort, often present as physically ill. He is often preoccupied with health and bodily functions likely overreact to minor physical dysfunction, often present multiple somatic complaints, he complains of dizziness, insomnia, weakness, fatigue, and tiredness. He often reports feelings of depression, unhappiness, or dysphoria, irritable and tend to worry about many things. He is introverted and shy in social situations, particularly with members of the opposite sex, and tend to be somewhat withdrawn and seclusive. Harbor many doubts about his abilities, and is indecisive about even minor, everyday matters.

## Case Reports Two

Miss Y is a 24 yr old Islamic theology student with sickle cell anemia whose electrophoretic pattern is Hbs. She presented on the 19th of February 2014 on account of 2 years history of self injection with pentazocine. She was diagnosed at the age of 1 year with sickle cell anemia when she started having hand and foot swelling but was then managed with injectable nonsteroidal anti-inflammatory drugs, prophylactic folic acid and proguanil, her attacks were then characterized by infrequent mild to moderate pain At about the age of 10 she started having more frequent moderate to severe pain crises, she was then introduced to oral analgesic opiates specifically tramadol at the state specialist hospital Maiduguri Nigeria by her physician. Four years prior to her presentation, she was admitted at state specialist hospital maiduguri and was treated for vaso-occlusive crisis with intramuscular 30mg of pentazocine. She admitted that it relieved her pain instantly and in addition made her happy.

She then noticed that it became the drug of choice each time she presents with severe bone pains at most of the health centres. It later became a reason for her to exaggerate her pain so that she could be given some injections of pentazocine. Several weeks later she started feigning attacks of pain in order to get an adequate dose of pentazocine. Her desire for an additional dose led her into purchasing pentazocine at privately owned pharmaceutical stores using forged prescription. The patient revealed that she has been self administering pentazocine intravenously on her arms and forearms. She spends a minimum of N800 (\$5) daily to purchase her 30mg injections and sometimes twice the amount to obtain higher doses. She often finances the habit by using her daily pocket money, selling her belonging, stealing money from her parent and neighbor and buying on credit. She admitted that since she started injecting pentazocine by herself, she abandoned her school work and spent a great deal of her time looking for the drug and using it. She was found to be anemic on two occasions and had to be transfused two pints of blood, no history of hepatitis B or HIV infection. The patient was referred from the state specialist hospital and came with her parents. She presented with nausea and diarrhea with excessive sweating and was said to have used up her supply 8 hours before being brought to the hospital.

On Examination she was found to be a young, slender looking lady agitated and restless with teary eyes and running nose but had no delusion or hallucinatory experience. She presented with yellowish tinge of the eyes and contaminated wound on the left forearm surrounded by hyper pigmented lesions resulting from needle pricks. Needle prick sites were also found on the dorsum of the hands. A diagnosis of mental and behavioral disorder due to the use of opioid (pentazocine) with dependence syndrome coming in moderate withdrawal

state was made based on the findings on Opioid withdrawal scale and was admitted to the drug detoxification ward. She was placed on oral 500mg Naproxen and 0.5mg of clonidine in order to relieve her symptomatically. She completed the detoxification phase and willfully joined the rehabilitation treatment program where she attained some level of cognitive change regarding certain aspects of the disorders co-occurring in her; she also succeeded in completing her thesis within the rehabilitation period.

At the rehabilitation unit, assessment of her personality was done with the MMP1-2 profile indicates a valid and interpretable result. The interpretation shows somatoform disorder or pain disorder diagnoses. The somatic complaints associated with her code type include headache, chest pain, back pain, numbness of the extremities. Other physical complaints associated with her code type include weakness, sleep disturbance, fatigue, and dizziness. Her physical symptoms increase in times of stress, and often there is clear secondary gain associated with her symptoms. She sees herself as someone who is psychologically normal, responsible and without fault. She makes excessive use of denial, projection, and rationalization and blames others for her difficulties. She prefers medical explanations for her problem, but lack insight into the psychological factors underlying her symptoms. She tends to be rather immature, egocentric, and selfish. She is insecure and has a strong need for attention and sympathy. She tends to be outgoing and socially extroverted, but lack skills in dealing with the opposite sex.

## DISCUSSION

We suggest that the presence of one or a combination of needle prick points is an indication of an increase in frequency of use and as a matter of fact, this will translate to more financial demand from the abuser. The two case vignettes in the study revealed that they were both exposed to the use of pentazocine (opiod) as a result of the unfortunate situation they found themselves (sickle cell anemia disease). This condition is majorly characterized with the bone pain crisis, which necessitate the sufferer to seek treatment from health practitioner that invariably prescribed injectable analgesic (Pentazocine). Sequentially, the patient were noticed to be on the prescribed drug (pentazocine) for too long before it was terminated; also the prescription note was not properly protected which made him to have access to his prescription note.

It was observed that the two patients started feign pain after genuine pain had subsided in order to continue receiving prescription of pentazocine or self inject it. Based on this, ones can conveniently say that patients are becoming addicted and the primary aim of using pentazocine is becoming secondary while addiction takes the lead as a result of its euphoric effects. At this juncture, clinical expertise and judgment of the physician is highly needed to distinguish genuine pain from feigned pain in sickle cell anemia patient with pentazocine abuse. As a result of this, the physician is in dilemma, it is unethical to deny patients of his right to treatment and it is morally wrong to neglect the danger of addiction in pentazocine abuse taking into consideration of its addictive nature. It is therefore pertinent for Health Care Providers (HCP) to outline a comprehensive guideline on how to deal with the pains; by understanding the cause of the pain, recognizing the difference between short and long-term pain and types of analgesic to prescribed should also be

considered; this ranges from paracetamol (e.g. Panadol, Dymadon) to nonsteroidal anti-inflammatory drugs; NSAIDs such as ibuprofen (e.g. Nurofen) and diclofenac (e.g. Voltaren). Other NSAIDs such as tramadol, codeine, pentazocine, morphine, and oxycodone are stronger, but highly addictive with side effects and not readily available except through prescription. Therefore, the less addictive analgesic should be considered first after considering the nature of the pain before jumping to stronger analgesic that have high potential for abuse with other behavioral and medical problem. And when stronger analgesic is considered to be the best option due to the nature of the pains, the duration of use should be relatively short and the identity of the drug should be completely protected from the patient and the relative to avoid abuse of any form.

Furthermore, the management of sickle cell anemia is demanding and becomes more complicated when substance dependence is established. The physical, psychological, social and financial burden involved cannot be overemphasized on the side of the caregivers/family members. The dependence patient continues to inject pentazocine in order to alleviate or eliminate withdrawal symptoms. These are some of the antisocial behavior engages in by the patients in order to sustain the drug habit; lying, begging for money, stealing, selling properties at a very cheap price, extravagant, recklessness. However, if this antisocial behavior goes on unchecked, their dignity as a human being will be eroded and this will further compromise their physical and mental health. In view of this, there is a need to go further by ensuring that a comprehensive psychological assessment of the patient is done in order to understand the predisposing, precipitating and maintaining factors of his/her addiction problem and to know different ways of he/she uses to finance the drug use.

In conclusion, the authors suggest that standard guideline should be made available for health care providers on the management of chronic pain. Mild form of analgesic such as; paracetamol, ibuprofen, diclofenac should be considered first before considering stronger analgesic such as; tramadol, codeine, pentazocine, morphine that has been found to have high potential for addiction. A comprehensive psychological assessment should always be done for all patients with sickle cell anemia co-morbid with substance use (pentazocine) to determine any behavioral problems such as antisocial behavior, malingering, drug dependence and so on. Thereafter, sickle cell patients that meet the diagnostic criteria for "Mental and behavioral disorder due to use of opioids" according to the International Classification of Mental and Behavioral Disorders (ICD-10) should be referred to a detoxification unit and later rehabilitation unit in a mental health facility where their bone pain crisis and substance abuse problem will be attended to by a team of experts. A vignette study like this cannot be completed without its own limitation. Firstly, patients would have been referred to a self-help group after rehabilitation program, but we could not because none of the group exists within the state and neighboring states. Secondly, failure to follow up the case after discharged due to the security situation in the northeastern part of the country.

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