

## Dependence Syndrome in a Male Nigerian Adult with Sickle Cell Anaemia : A Case Report

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To present a case of a male adult with sickle cell anaemia and dependence (opioid) syndrome. Mr. A.E. was a 30year old unmarried, unemployed male with sickle cell anaemia from a polygamous family. He had limited education. He became dependent on intramuscular pentazocine because he felt unfulfilled and underachieved. His drug dependence became complicated by abscess formation in his right thigh, laterally. He had neglect of self, hygiene, and groom and, his behaviour became embarrassing. He lost the attention of significant others, and finally developed a depressive disorder.

The life-threatening nature of sickle cell anaemia, its unpleasant features, and its adverse social consequences (e.g. stigmatization) could lead a vulnerable patient to seeking refuge in mood-altering/euphoric substances. Therefore, a multi-disciplinary approach to the management of sickle cell anaemia with emphasizes on psychosocial interventions in the adult, is suggested.

**Key words:** Sickle cell anaemia; Dependence syndrome; Psycho-social intervention.

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It is well known that chronic debilitating medical conditions, such as sickle cell anaemia (SCA), are often complicated by psycho-social malady<sup>1,2</sup>. Generally, psycho-social problems include depression, suicidal ideation, role reversal, anxiety states, adjustment disorder and drug abuse/dependence<sup>2</sup>. Some psycho-social complications of sickle cell disease in the Nigerian patient have been studied<sup>3</sup> with little or no attention paid to drug/substance abuse.

This index case describes dependence syndrome and its complications in a male adult Nigerian with sickle cell anaemia. It is of interest as it shed more light on the probable magnitude of psycho-social complications of sickle cell anaemia that may be encountered more in the future with improved longevity of patients with sickle cell anaemia.

### Case Report

A 30years old male Nigeria with SCA presented at the Central Hospital, Oleh, a suburban community in Isoko South Local Government Area of the oil-rich Delta State, Nigeria, with the fear of death from drug abuse and a painful swollen right thigh. He had a 4year history of self-administration of intramuscular pentazocine and, a three month history of depression following the death of a friend who was also a SCA patient dependent on a narcotic analgesic. Subsequently, the parents were

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invited and interviewed for additional information.

He was born into a polygamous family of 8 children without evidence of neglect. His mother, the first wife, had 5 children with only the index patient and the fourth sibling ( a female ) having the SCA condition; while the second wife had 3 "normal " children. The patient, whose both parents were secondary school teachers, was the first child of the family. He was diagnosed to have SCA (Hbss ) at the age of 6 months. Since then he had had many hospital admissions due to vaso-occlusive crises and, has had blood transfusions on several occasions. The majority of his admissions were at the Central Hospitals, Oleh and Ughelli, about an hour drive from the index hospital . At home, his mother was determined to nurse him through to adulthood.

In spite of his perceived high level of intelligence and apparently good social support, he had limited education. He was able to acquire 2 credits and 5 passes at the ordinary level of general certificate of education. Further attempts to improve this result proved abortive. He claimed that his inability to get good grades was due to frequent interruptions in his school programmes by sickle cell crises. At the time his mates were in the university, he enrolled for a diploma course ( Estate management ) in a private institution but was unable to complete the course for the same above stated reason. He, however, maintained a good social rapport in spite of the disadvantages imposed by his chronic illness and its psychosocial challenges.

At the age of 25 years he began to feel unfulfilled and underachieved, as he saw himself as a failure. He became worried about his future and was always sad. As a result, he began to administer intramuscular pentazocine on daily basis even when not in pain, in order to alleviate his moods. He had previously experienced the euphoric effect of pentazocine when it was used therapeutically to relieve his pains while in hospital. He was initially on 30 – 90mg ( 1 – 3 ampoules) of pentazocine per day. He enjoyed the euphoric and sleep-inducing effects of this drug and was always looking forward to the next dose. He claimed to have overcome the nauseating effect of pentazocine over time . Whenever he failed to administer these drugs at the appropriate time, dysphoria, restlessness, cough and insomnia would occur.

This was an unpleasant experience for him, so he ensured that the drugs were always available. He gradually increased the dose of pentazocine to 270mg ( 9 ampoules), in divided doses, over a period of 4 years.

He used his thigh muscles ( right and left ) for the intramuscular administration of the drug. Initially, he administered the drugs secretly but later openly under the pretense that he had bone pain crisis. Owing to cost, he used unsterilized hypodermic needles repeatedly without taking any precaution against infections. In 2006 he developed a left thigh abscess at injection sites which was incised and drained. In January 2007, he had an infection in the posterior aspect of his left thigh which required antibiotic therapy.

On further questioning of the parents and the index patient, it was revealed that in order to have a steady supply of pentazocine, the patient told a lot of lies to get money from family members, friends and even strangers; and he became very manipulative. He, however, denied ever engaging in anti-social activities in return for money. He neglected his personal hygiene and groom so that he would have enough money for the drugs.

All these acts, when they became known to the family, produced considerable embarrassment and consequently a gradual withdrawal of their social and financial support. He had had no serious relationship with the opposite sex all his life because of what he claimed to be due to "this problem". Recently, he began to avoid his peers because he felt embarrassed by his "failure to achieve" which he also attributed to the SCA and his drug dependence.

His physical state at presentation revealed weight loss, pyrexia and an indurated and tender right thigh, laterally. No other system abnormalities were detected. His packed cell volume ( PCV ) was 25% ( being his normal steady state value ), white cell count was  $4.7 \times 10^9/L$  with normal differentials and platelet count was  $207 \times 10^9/L$ . HIV and Hepatitis B surface antigen ( HBsAg ) status were not determined at the time of report ( May 2007 ) because of non-availability of such reagents.

Pre-morbidly, he was described as being an introvert, attention-seeking and of labile emotions. His mental state evaluation on presentation revealed a depressed mood, lack of

feeling of enjoyment, guilt over his drug habit, high level of motivation, suicidal ideation, a reasonable degree of insight and an intact cognition.

The following diagnoses were then made : Moderate depression episode( F32.1 )( ICD- 10 )<sup>4</sup> ; dependence syndrome( opioid ) ( F1x .2 )( ICD- 10 )<sup>4</sup> and cellulitis of right thigh. Consequently, he was admitted and commenced on amitriptyline( an antidepressant ), ampiclox( intravenously for the first 48hours and orally for another 5days ) and psychological counseling among other treatment modalities.

He was gradually weaned off pentazocine, (with the help of intramuscular promethazine 25mg 8hourly for three days, then 25mg daily for the next 4days ), over time. He was discharged home on the 9<sup>th</sup> day of admission after another round of counseling, with a referral to the psychiatrist( about one and half hour drive away from the index hospital ) for further management; which patient willingly agreed to.

## DISCUSSION

As with most chronic diseases, depression, anxiety and other psychiatric disorders are common in sickle cell disease (SCD)<sup>5</sup>. Rates of depression are similar to those found in other serious chronic disorders ranging from 18% to 44%<sup>6</sup>; and are increased over rates in the general population even when one controls for illness-related physical symptoms<sup>6</sup>. In a Nigeria study<sup>7</sup>, subjects with SCD had a prevalence rate of depression greater than those with cancer or malaria( but less than those with HIV/AIDS). All these reasons seem to shape an environment under which this index patient sought solace in mood-altering/euphoric-giving pentazocine. Additionally, this patient was still single and unemployed and he believed that his SCD was responsible for these and his inability to achieve and lack of fulfillment<sup>8,9</sup>. This results from living with a chronic, stigmatizing disease associated with chronic pain, unpredictable painful crises, multiple serious complications, poor health-related quality of life, and high mortality among other SCD sequelae.

In spite of the high social support from his family, he became drug dependent. The fear of complications, including contracting HIV/AIDS

and viral hepatitis infections and the financial implications, associated with this habit were not sufficient to discourage him<sup>10</sup>. This might imply that his histrionic personality trait may have contributed to his becoming drug dependent<sup>11</sup>. Although, inadequate management of vaso-occlusive crises may result in pseudo-dependence/addiction on a narcotic analgesic<sup>12</sup>, there was no reason to suspect that such was the case in this index patient. Studies have reported drug abuse/dependence in adults with SCA<sup>13, 14</sup>. With improving medical care, sickle cell patients are growing into adulthood<sup>15</sup> and therefore facing life challenges, including psycho-social complications, which may constitute major health problem in future as shown in this index case, if management strategies are not mapped out to take care of the psychological and social needs of these individuals.

There were no facilities to screen for viral hepatitis or HIV markers, in this patient, at the time of this report. It is to be noted, however, that transfusion or parenteral drug abuse related hepatitis B virus( HBV ) and HIV infections are possibilities<sup>16</sup>.

The management of this index case should be multi-disciplinary<sup>17</sup>. This may be compromised in rural settings where there are general lack of medical resources including personnel. However, the presence of Family Physicians in some of these rural health facilities may ameliorate such lack; as in this index case, where the patient was managed by the attending Family Physician. This did not, however, preclude referring the patient to the psychiatrist for further management. The management programme should aim at preventing and treating physical and psycho-social complications. This should include health education, psycho-education, psycho-social intervention and immediate treatment of any medical complications<sup>17</sup>. Interaction among SCA sufferers in the form of a "sickle cell club" may also provide a group therapy forum where members could ventilate their feelings and encourage one another. This may improve the quality of life of individuals with SCA and therefore prevent them indulging in substance abuse<sup>18</sup>. Organised and intensive, non-directional genetic counseling should be available to the general public, more especially at risk individuals( sickle cell trait, HbAS ). This intervention may reduce the incidence of

sufferers in the community<sup>19</sup>; but in the meantime, the psycho-social care of the SCA adult patient should not be neglected.

### CONCLUSION

It is hoped that this report will stimulate further studies on the incidence and pattern of drug abuse/dependence in large population of patients with SCA.

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