

A Need for Daycare Unit for Sickle Cell Disease Patients in Oman

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THERE IS WIDESPREAD AWARENESS AND acceptance of the medical harm issue, and in the past decade, great efforts have been made to expand healthcare safety. Vincent simplified the definition of patient safety as avoiding, preventing and improving negative outcomes or injuries caused by the healthcare process.¹ The World Health Organization (WHO) suggested that almost 10% of patients admitted to hospitals in Arab countries experience unintended harm.² A safety issue is an event that causes specific harm related to a break or problem in the care process.³ The number of patients with sickle cell disease (SCD) in Oman is alarming; the number of patients with SCD in Oman was 3 in 1,000 in 2017 and 5 in 1,000 in 2020, compared to 1 person in 4,600 in the United Kingdom.^{4–6} Oman has more than 10 times the prevalence in the UK. Due to the frequency of consanguineous marriages in Oman, SCD's prevalence is increasing.⁷ In 1994 in the USA, the estimated survival age of people with SCD was 42 years for males and 48 years for females.⁸ In 2006, the WHO identified SCD as a global issue.

Overuse of opioids is associated with serious medical harm. The most common clinical symptom of SCD is severe pain leading to opioid consumption, hospitalisation and a high risk of shorter survival.^{9,10} The increased use of opioids in pain management has led to an increase in intended and unintended consequences. Opioid analgesics can produce many serious side effects including respiratory depression, cardiovascular disorders, opioid-induced hyperalgesia, endocrine system suppression, opioid dependence and convulsions.¹¹ To maximise patient safety and improve patients' quality of life, habitual morphine use for all patients with SCD should be monitored and supplemented with other pain relief methods to reduce incidents of opioid dependence and other severe complications such as respiratory depression. It is difficult to achieve high-quality care through medical treatment only; the patient, family and professional team should be involved in planning and delivering safe healthcare from all perspectives, including a safe environment, pharmacological and non-pharmacological care, a professional team and family-centred care.

Opioid prescription abuse has increased in the USA, reaching epidemic levels.¹² Over 20,000 deaths were caused by opioid prescription overdose in 2016, and opioids are responsible for more than 50% of all medicine overdose mortalities.¹³ Opioids can potentially cause drug dependence, even when prescribed in appropriate doses.¹⁴ The use of opioids has negatively affected the country's economy. In the USA, from 2015–2018, the opioid epidemic cost approximately \$631 billion, whereas the cost of opioid use in 2020 was nearly \$1.5 trillion.¹⁵ In Oman, the number of patients admitted with an SCD crisis increased from 361 patients in 2021 to 535 in 2022 in Ibri Hospital alone (statistics were generated from Alshifa 3+ [hospital information management system]). In 2022, the total number of morphine ampoules used in female medical and surgical wards was 3,080 in Ibri Hospital (generated manually from the narcotics register).

There is increasing reported harm from opioid use in many countries, including Canada and the USA.^{16,17} Opioids cause 13% of drug errors and complications.¹⁷ Drug errors are usually avoidable and are a global concern but are often not documented or reported and, therefore, cannot be resolved.¹⁸ It is difficult to ignore the consequences of drug errors as they have harmful effects on the safety of patients, their families, health professionals and the healthcare industry. Learning from adverse events leads to integrating new actions that can prevent recurrence and reduce risk.¹⁹

A daycare unit is suggested to overcome the issue of opioid dependency. A daycare unit would raise the patients' awareness of various pain management methods and will help the patients by guiding their need of opioids and sharing decisions with their doctors. Thus, when the patients know the adverse events of over-consumption of opioids, they can attempt to adapt and accept other methods of controlling pain. The daycare unit team should include a medical doctor, a pain management nurse, psychotherapist and nutritionist. Such a unit would make the patients feel cared for rather than neglected.

New patients should be referred from healthcare centres to a daycare unit to raise their awareness of SCD management strategies. New patients should be

followed-up and educated on preventing disease crisis early, preventing them from developing morphine dependence. Admitted patients can share their experiences, thereby affecting each other's decision-making. Increasing patients' awareness of pain management strategies will help the patient to judge and determine which method is suitable for them without being influenced by patients dependent on morphine. Patients are less tolerant of the advice when experiencing pain. In addition to raising the patients' awareness and knowledge before they are admitted to the hospital and experience pain, a daycare unit should also treat the symptoms and provide pain relievers, hydration and intravenous infusion, regular blood tests and blood transfusions.

The significance of using morphine to relieve SCD pain cannot be denied; it should be used according to clear guidelines for the pharmacological and non-pharmacological measures on treating disease symptoms. A daycare unit would need to follow clear policies and protocols. In a survey of opioid use in adult SCD patients, Madu *et al.* sought to discover the perspectives of healthcare providers regarding pain management.²⁰ Of the doctors surveyed, 88.9% described a need to provide a clear policy or guidelines on the opioid use ladder and SCD management.

Opioid use is mentioned in the fourth point of the revised WHO guidelines for managing moderate to severe pain.²¹ Non-steroidal anti-inflammatory drugs are safer than opioids, with fewer side effects and the same pain-controlling effects.²² In a qualitative study, many participants expressed their displeasure at being exposed to intravenous opioids at a young age, leading to increased hospitalisations in adulthood and dependence on opioids.²³ Therefore, raising patients' awareness of alternative methods and opioids' adverse effects should not be neglected as this could contribute to limiting frequent use of morphine.

Non-pharmacological therapy should be utilised, including cognitive behavioural therapy, which can relieve pain by influencing behavioural and emotional responses to life events and experiences. A daycare unit is meant to care for the patients from a different perspective; the nutritionist would offer information about maintaining a healthy diet and the importance of hydration and the psychotherapist will help patients adapt to the disease and guide family members on how to deal with the patient.

Additionally, all healthcare providers must have adequate knowledge on managing pain to ensure they can safely deliver care for SCD patients. Costello and Thompson conducted a survey to determine the role of staff in preventing opioid misuse by exploring their knowledge of opioid use and comparing their

understanding before and after providing a session on SCD management and opioid use.²⁴ The results showed that, as staff knowledge regarding opioid use improved, patients received better health education and increased awareness of SCD management.

Nurses and physicians must be encouraged by the decision-makers to report errors without fear of punishment as the first step in making a good plan is identifying the risk factors and reporting errors. Measures need to be taken to manage the uncontrolled over-prescribing opioids for SCD patients. However, efforts to reduce excessive prescribing should not ignore the needs of the patients. Applying protocols and policies will regulate the treating teams approach to stop patients from suffering from pain and opioid complications. Compliance of controlling the over-prescription of opioids should be monitored regularly to ensure patient safety and high-quality care. Designing a daycare unit specialising in managing SCD symptoms would create a safe environment for treating patients. Additionally, the daycare unit will offer continuous follow-up to prevent patients from experiencing an SCD crisis. The daycare unit will reduce the load on medical wards and out-patient departments, which could reduce the financial burden that results from admission. Further research is needed on factors that could enhance patient safety for this group.

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