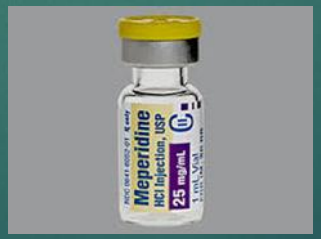
SICKLE CELL CRISIS: HOW MUCH NARCOTICS



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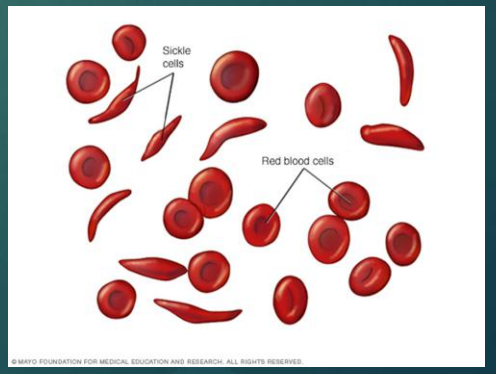
- Sickle hemoglobin is not like normal hemoglobin. It can form stiff rods within the red cell, changing it into a crescent, or sickle shape.



- The lack of tissue oxygen can cause attacks of sudden, severe pain, called pain crises.

Initial management of these patients includes :

- aggressive pain management
- hydration
- assessment of the cause of the current crisis
- and a search for additional complications

- Investigation on pain and its treatment in SCD remained under explored until recently.

- Patients with SCD often remain undertreated due to opioid inefficacy and providers' fear of addiction potential.

Pain management

- We can use:

-Acetaminophen and NSAIDs for mild and moderate pain

-Opioids for moderate to severe pain , typical initial doses include:

- Morphine, 0.1–0.15 milligram/kg IV
- Hydromorphone
- Reassess response in 15–30 min, may repeat with one fourth to one half of the initial dose

Tintinalli's Emergency Medicine 7th edition. Table 231-2 Guidelines for the Assessment and Management of Acute Vaso-Occlusive Crisis

- Lack of literature..

- In a single-center retrospective cohort study:
- 414 ED visits for vasoocclussive crisis were identified.

Mathias MD, McCavit TL. Timing of opioid administration as a quality indicator for pain crises in sickle cell disease. Pediatrics. 2015 Mar;135(3):475-82. doi: 10.1542/peds.2014-2874. Epub 2015 Feb 9.

- Total intravenous morphine sulfate and safety was evaluated in 603 patients.
- The total ED dose for morphine sulfate administered for ED visit was 63 mg.

Tanabe P, Martinovich Z, Buckley B, Schmelzer A, Paice JA. Safety of an ED High-Dose Opioid Protocol for Sickle Cell Disease Pain. J Emerg Nurs. 2015 May;41(3):227-35. doi: 10.1016/j.jen.2014.07.014. Epub 2014 Sep 18.

- Telfer et al..

Telfer P, Bahal N, Lo A, Challands J. Management of the acute painful crisis in sickle cell disease- a re-evaluation of the use of opioids in adult patients. Br J Haematol. 2014 Jul;166(2):157-64. doi: 10.1111/bjh.12879. Epub 2014 Apr 18.

- A retrospective study researched the role of a low-dose iv ketamine-midazolam combination in the management of severe painful sickle cell crisis.

Tawfic QA, Faris AS, Kausalya R. The role of a low-dose ketamine-midazolam regimen in the management of severe painful crisis in patients with sickle cell disease. J Pain Symptom Manage. 2014 Feb;47(2):334-40. doi: 10.1016/j.jpainsymman.2013.03.012. Epub 2013 Jul 12.

- Franceschi et al carried out a crossover study on adult SCD patients,
- They compared ketorolac, tramadolar and fentanyl buccal tablet for painful crises.

De Franceschi L, Mura P, Schweiger V, Vencato E, Quaglia FM, Delmonte L, Evangelista M, Polati E, Olivieri O, Finco G. Fentanyl Buccal Tablet: A New Breakthrough Pain Medication in Early Management of Severe Vaso-Occlusive Crisis in Sickle Cell Disease. Pain Pract. 2016 Jul;16(6):680-7. doi: 10.1111/papr.12313. Epub 2015 May 26.

- According to a systematic review:
- Opioid dose requirements vary widely, often exceeding guideline recommendations,

Solomon LR. Pain management in adults with sickle cell disease in a medical center emergency department. J Natl Med Assoc. 2010 Nov;102(11):1025-32.

What happens in high dose long term use?

- may exacerbate existent organ damage,
- physiologic tolerance,
- hyperalgesia,
- respiratory depression

Review: Mihir Gupta, Lilian Msambichaka, Samir K. Ballas, and Kalpna Gupta. Morphine for the Treatment of Pain in Sickle Cell Disease. The Scientific World Journal. Volume 2015 (2015), Article ID 540154, 10 pages. http://dx.doi.org/10.1155/2015/540154

THANK YOU FOR YOUR PATIENCE…