ANAESTHETIC MANAGEMENT OF ELECTRICAL BURN IN A PATIENT WITH SICKLE CELL DISEASE

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BACKGROUND Sick cell disease (SCD) and electrical burn injuries are unique entities.

SCD is an inherited condition due to a mutation in the β -globin gene.

Electrical burns result in morbidity higher than expected based on burned area.

CASE REPORT

- 19 years old man, native of Equatorial Guinea, with a history splenectomy, admitted due to **high-voltage electric burns**.
- On arrival at the hospital he was stable. He had 2% burned body surface to deep dermis.
- Laboratory analysis showed normocytic anaemia (**Hb 8,4 g/dL; MCV 91.3fL**).
- The haematology consultant observed **poikilo-drepanocytosis, target cells and schistocytes** on blood smear, being diagnosed with **SCD**.
- Had an **acute sickle cell exacerbation** with abdominal pain that was controlled with adequate hydration and correction of anaemia.
- Required transfusions to maintain a Hb up to 7.5g/dl.

ANAESTHETIC MANAGEMENT FOR BURNS **DEBRIDEMENT**

General anaesthesia, with a laryngeal mask and standard monitoring.

- Inspired oxygen fraction was set to $\text{SatO}_2 > 95\%$.
- Adequate hydration.
- Fluid heater and thermal blanket.
- Morphine chloride and paracetamol for postoperative analgesia.

DISCUSSION

- Avoid triggers of acute attacks, specially: **HYPOXIA**, **DEHYDRATION**, **PAIN** AND **COLD**

GOOD HYDRATION, TAKING INTO ACCOUNT THE LOSSES BEFORE AND DURING SURGERY, ADEQUATE OXYGENATION, PROPER MANAGEMENT OF THE AIRWAY, PREVENTING DISCOMFORT DURING HANDLING AND ADEQUATE ANALGESIA DURING AND AFTER SURGERY

REFERENCES

- Electrical burns in sports fishing: A case report. Valença-Filipe R, Et al., Burns. 2014 Nov;40(7):e53-6. doi: 10.1016/j.burns.2014.02.018. Epub 2014 Apr 3.