**THE CYANOSED NORMOXIA GENTLEMAN: A rare presentation of dapsone-induced methaemoglobinemia**

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**Introduction:**

When encountering a cyanosed patient, we often anticipate a poorly saturating patient with airway compromise. This may not be the case in a phenomenon we rarely encounter- methaemoglobinemia.

**Description:**

We present a 44 year old HIV+ve gentleman with multiple admissions for Pneumocystis Pneumonia. He was started on Tablet Dapsone 200mg OD during his clinic appointment, after which he came to us complaining of generalised rashes. He appeared cyanosed over the lips and peripheries. His saturation under room air was 88% but strangely, he wasn’t tachypneic. Interestingly, his arterial blood gas did not demonstrate hypoxia; with a PO2 (partial pressure of oxygen) of 435.3; and yet he failed to saturate even when started on High Flow Nasal Cannula (HFNC) 60/60. With the given history of Dapsone consumption, a bedside methaemoglobin test taken revealed elevated levels of methaemoglobinemia at 14.3%. We also noticed he had chocolate blood during blood-taking. He then given IV Methylene Blue 1mg/kg, after which his central and peripheral cyanosis resolved. Methaemoglobin levels reduced from 14.3% to 4.6%.

His saturation also improved.

**Discussion:** Methaemoglobinemia is a condition whereby there is oxidation of iron from ferrous form (Fe 2+ ) to ferric form ( Fe 3+) which induces a haemoglobin structural change that shifts the oxygen dissociation curve to the left, reducing the unloading of oxygen at the tissues. This phenomenon can be genetic or drug-induced; and the latter is usually associated with oxidative drugs such as dapsone. Studies show that the incidence of dapsone-induced methaemoglobinemia to be at 15% and usually associated with doses of 200mg OD or more. A discrepancy in the partial pressure oxygen (p02) and the saturation of the patient; called the ‘saturation gap’, is pathognomonic of this phenomenon. Another feature is ‘chocolate blood’ that is noticed during blood-taking. The mainstay treatment is methylene blue but is limited to drug-induced methaemoglobinemia.

**Conclusion:**

Methaemoglobinemia is rarely encountered in the emergency room but clinicians have to develop a high clinical acumen when obtaining relevant drug history, or when facing a patient with a classic ‘chocolate blood’ and ‘saturation gap’. Prompt recognition of the entity is truly life-saving.