Could your patient have carbon monoxide (CO) poisoning?

Common symptoms include:
- Headache (commonest complaint)
- Drowsiness / tiredness / lethargy
- ‘Flu’-like symptoms / myalgia
- Nausea / vomiting
- GI upset (especially in children)
- Dizziness
- Confusion

Higher level exposure will lead to:
- Altered conscious level
- A comatose patient
- Focal neurology possible

Commonest misdiagnoses:
- Chronic fatigue / ‘Tired all the time’
- Migraine or other cause of acute headache
- Labyrinthitis/ear infection
- ‘Stroke’ / TIA
- ‘Collapse ? cause’
- A ‘viral illness’/URTI

TESTS:

Do NOT rely on so-called ‘cherry pink’ colouration of mucous membranes.

Carboxyhaemoglobin (COHb) is the only useful test, but interpret with extreme caution. COHb has half-life of just FOUR hours breathing ‘clean’ air (shorter with O2). You must not use low/normal COHb to rule out CO poisoning – a careful history is much more likely to give the diagnosis – but raised levels (>4% in non-smokers, >10% in smokers) suggest recent CO exposure.

To measure COHb use pulse CO-oximetry (needs dedicated pulse oximeter designed to read COHb), breath analysis, or blood gas analysis as soon as possible, and preferably before commencement of oxygen therapy; but do not delay oxygen. Blood for analysis can be arterial, venous, or capillary. Ordinary pulse oximeters are unreliable in presence of CO – they mis-read COHb as oxy-Hb.


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