How Noninvasive Haemoglobin Measurement with Pulse CO-Oximetry Can Change Your Practice: An Expert Review

Lindner G., Exadaktylos A.K. Emerg Med Int. 2013;2013:701529.

Trauma related haemorrhagic anaemia is rarely diagnosed by physical examination alone but typically includes measurement of blood haemoglobin, one of the most frequently ordered laboratory tests. Recently, noninvasive technologies have been developed that allow haemoglobin to be measured immediately without the need for intravenous access or having to take venous, arterial, or capillary blood. Moreover, with these technologies haemoglobin can be continuously measured in patients with active bleeding, to guide the start and stop of blood transfusions and to detect occult bleeding. Recent studies on the accuracy of the devices showed promising results in terms of accuracy of hemoglobin measurement compared to laboratory determination. The present review gives an overview on the technology itself and reviews the current literature on the subject.