

Severe Methemoglobinemia Detected by Pulse Oximetry.

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Abstract

An elderly surgical patient acquired a life-threatening methemoglobinemia as a result of topical benzocaine spray to the oropharynx in preparation for awake endotracheal intubation. A new multi-wavelength pulse oximeter, the Masimo Rad-57, detected this methemoglobinemia an hour before it was confirmed by laboratory CO-Oximetry. The Rad-57 monitored the patient's methemoglobin levels during diagnosis and treatment with methylene blue, and the values it provided (as high as 33%) were very close to those of the laboratory CO-oximeter. The new pulse oximeter gave continuous readings of methemoglobin level at the bedside, whereas the laboratory values were delayed by up to an hour. This case demonstrates the clinical application of a multi-wavelength pulse oximeter in the diagnosis and treatment of a life-threatening dysmethemoglobinemia.