

Noninvasive Measurement of Hemoglobin during Cesarean Hysterectomy: A Case Series.

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Abstract

Obstetric patients diagnosed with abnormal placentation (placenta accreta, increta or percreta) are at increased risk of major postpartum hemorrhage and cesarean hysterectomy. Obstetric anesthesiologists are primarily involved in intraoperative transfusion management in these cases. Hemoglobin assessment is invaluable for assisting transfusion decision-making during the acute period of obstetric hemorrhage. However, laboratory and point-of-care tests of hemoglobin concentration are time-dependent and intermittent, and do not provide a real-time assessment of change during the acute phase of blood loss.

A new non-invasive hemoglobin monitor has been introduced recently, which provides real-time measurement of hemoglobin values (SpHb) using multi-wavelength Pulse CO-Oximetry. We present a review of five patients with suspected abnormal placentation who received SpHb monitoring during cesarean hysterectomy at our institution. We discuss the potential clinical utility of non-invasive hemoglobin monitoring for pregnant patients at high risk of obstetric hemorrhage, and the potential role of SpHb in guiding transfusion therapy.