

Masimo SpHb® Alerts Surgical Team to Potentially Deadly Hemoglobin Drop

SpHb Proves Indispensable in High Blood Loss Surgery

Location Medical City Hospital of Dallas, Texas

Clinician Reporting Jeffrey Fearon, MD, FACS, Pediatric Plastic Surgery, PLLC & Katherine Blakely, MD, PA

Patient Event A possible tragedy averted by physician's quick response to a drop in SpHb level

> The Situation

An 8-year old girl underwent a unique and complex craniofacial surgery to move the mid-face forward. This type of surgery is a particular specialty of the surgical team at Medical City. As is common with other craniofacial surgeries, this procedure often results in significant blood loss, so the patient was monitored using the Masimo Radical-7™ with noninvasive and continuous total hemoglobin (SpHb) to track blood loss.



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> The Problem

After completing the surgery, the patient was being prepared for transfer out of surgery to the recovery room. Before releasing the patient, the treating clinicians noted that her SpHb level, to their surprise, had dropped significantly—from 9.2 g/dL to 6.5 over a 5-minute period. When the lab results came back at a critically low level of 5 g/dL, confirmation was received for what Masimo® SpHb had already helped the clinician conclude—occult internal hemorrhage.

> The Masimo Difference

During craniofacial surgeries it's very common for patients to lose a significant amount of blood, but it is often difficult to estimate exactly how much. In pediatrics, it can be even more difficult, as many of the signs of hypovolemia are diminished or absent until a very significant amount of blood has been lost. In this case, the patient's volume status appeared stable until clinicians were alerted by the SpHb measurement that the hemoglobin had fallen to a dangerous level. This patient was very fortunate because the SpHb measurement provided this information before transferring the patient—enabling treating clinicians to immediately respond in the OR by giving blood. After transfusing one unit of packed red blood cells, the hemoglobin level stabilized between 9-10 g/dL and the patient was transferred to the ICU with continuous SpHb monitoring. There were no other significant events and the patient was discharged from the hospital in good condition.

Without the early warning of Masimo SpHb, the child would have been transported out of surgery in a hypovolemic and critically anemic state. A delayed response may have resulted in tissue hypoxia, acidosis, or even cardiac arrest. During surgeries with significant bleeding like this one, SpHb may provide a potentially lifesaving advantage by picking up declining hemoglobin trends early—enabling the surgical team to make clinical decisions earlier, instead of waiting critical minutes for lab results from traditional blood tests.

“Masimo SpHb helped prevent a potentially life-threatening event. I am now using it for all my major craniofacial procedures and can't see doing a surgery without it.” — Dr. Jeffrey Fearon, MD