

CASE SPOTLIGHT CARDIOVASCULAR SURGICAL PROCEDURE

Unilateral cerebral desaturation in CABG detected by INVOS™ cerebral/somatic oximeter

This 72-year-old patient was undergoing quadruple coronary artery bypass graft. The patient presented with a history notable for diabetes, hypertension, congestive heart failure, and coronary artery disease. As the procedure began, induction and line placement were performed without complication. The patient's baseline cerebral rSO₂ values were recorded at the outset of the procedure, with baseline values of 54 and 53, for the right and left hemisphere respectively.

Soon after induction and intubation a unilateral right sided cerebral desaturation was observed. During this time, etCO₂ and all other the patient vital signs remained within normal limits (WNL). At the lowest point of desaturation (occurring at the 14:38 mark on the case graph) the patient's right hemisphere cerebral rSO₂ values had descended to 33 from a baseline of 53. At 14:39 a supportive neck roll from under

the patient's head and neck was removed and the head was repositioned, resulting in an immediate improvement in cerebral oxygen saturation. Following this intervention, cerebral saturation normalized quickly and this CABG procedure continued without additional events.

During this CABG procedure, the INVOS™ system provided the sole indicator of a profound cerebral desaturation, which could have resulted in a severe neurologic event for this patient. While etCO₂ and other vital signs remained WNL, monitoring cerebral oxygen saturation with the INVOS™ system provided the first and only alert to a significant cerebral desaturation. In this case, the desaturation was corrected through a simple intervention of repositioning of the patient's head. Without the alert provided by the INVOS™ system the cerebral desaturation would have gone undetected.

