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LETTER TO THE EDITOR

Cerebral oximetry for cesarean delivery in a Moyamoya case

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To the Editor:

Patients with Moyamoya disease have abnormal intracranial blood vessels [Online Resource 1], the presence of which results in frequent strokes. Anesthesia further enhances the risk. We report cerebral oxygen saturation (rSO_2) observations using noninvasive near-infrared spectroscopic (NIRS) cerebral oximetry during a cesarean delivery (CD) under combined spinal epidural anesthesia in a Moyamoya case.

A 30-year-old G_1P_0 Moyamoya patient had an elective CD at 37 weeks. Her rSO_2 was monitored using an NIRS cerebral oximeter. Eight milligrams of intrathecal heavy bupivacaine was sufficient for an optimum block. An intravenous bolus of 5 IU oxytocin at a volume of 5 ml was injected over a span of 1 min immediately following the delivery. Her rSO_2 remained normal (60–75 %) and was relatively higher after the delivery [Online Resource 2]. We postulate that the increase in rSO_2 after the delivery resulted from oxytocin-induced cerebral vasodilatation.

Oxytocin leads to dilatation or constriction in a myriad of blood vessels [1]. It has a vasopressin-like weak vasoconstrictive effect, and some reports [2] suggest that it may reduce cerebral blood flow (CBF), although other articles suggest an increase in CBF in experimental animals [3]. The rSO_2 monitoring in obstetric anesthesia is currently scarce. We propose that rSO_2 should be monitored in Moyamoya patients undergoing anesthesia, particularly when oxytocin is administered.

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Conflict of interest None.

Consent This report is presented with the written consent of the patient.

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