Subarachnoid Hemorrhage following Cesarean Section under Spinal anesthesia: A Case Report

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ABSTRACT
Intracranial hemorrhage is a rare potentially devastating complication of spinal anesthesia. There are very few articles reporting subarachnoid hemorrhage after spinal anesthesia though there is no verified relationship between the two. We report a parturient who had a cesarean section under spinal anesthesia and developed severe headache with fall in Glasgow Coma Scale (GCS) and motor deficit three hours after the operation. She had Magnetic resonance imaging (MRI) done which showed subarachnoid hemorrhage with intraventricular extension. She got discharge seven days later with recovery of full GCS and recovering motor deficit with full recovery after six weeks. Subarachnoid hemorrhage should be considered when assessing obstetric patients with atypical headache with any other neurological abnormal findings.

INTRODUCTION
Spinal anesthesia is safe and effective alternative to general anesthesia for cesarean section. Severe headache in parturient after spinal anesthesia has broad differential diagnosis including post dural puncture headache, drug induced headache, pre-eclampsia and intracranial pathology.

Intracranial pathological causes include hemorrhage (subarachnoid, intraventricular, intraparenchymal), venous sinus thrombosis and postpartum cerebral angiography. Although there is no verified relationship between spinal anesthesia and subarachnoid hemorrhage (SAH), there are few articles reporting subarachnoid hemorrhage after spinal anesthesia. Here we describe a rare case of a parturient presenting with subarachnoid hemorrhage with intraventricular extension, three hours after receiving spinal anesthesia for cesarean section. A diagnosis of intracranial pathology like subarachnoid hemorrhage should be considered when obstetric patient present with atypical headache and other neurological deficits.

CASE REPORT
A 33 year old parturient (with history of previous lower uterine segment cesarean section seven years back) was planned for elective cesarean section (CS). There was no other significant medical or surgical history. Current pregnancy was uneventful and didn’t have any history of elevated blood pressure and had normal blood reports. CS was performed in spinal anesthesia with 27 gauze quincke spinal needle and 2.2 ml of 0.5% heavy bupivacaine was given and block achieved was T4 level. The intraoperative period was uneventful with intraoperative blood pressure in the range of 110-130/76-84 mm of Hg and pulse rate in range of 80-100 beats per min. Three hours after patient was transferred to postoperative ward, patient had severe frontal headache with drop in GCS to 13/15 (E3V1M5) with

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motor weakness power of 3/5 in upper limb and 1/5 in lower limb bilateral. Neuromedicine consultation was done and MRI brain plane done (later contrast MRI brain with Magnetic resonance angiography in same setting) which revealed subarachnoid hemorrhage with intraventricular bleed. Since no any aneurysm was seen, Digital subtraction angiography (DSA) was done which revealed vasoconstriction of pericallosal artery. Later after six hours of postoperative period, patient had abnormal movement of right hand without uprolling of eyes or clenching of teeth which was subsided with injection midazolam two mg iv stat and inj Levitracetam two gm stat ( later followed by 500 mg every 12 hourly) and didn’t require any mechanical ventilator support. Patient was admitted in intensive care unit (ICU) with tab Nimodipine 60 mg png every 4 hourly and levera 500 mg every 12 hourly. Postoperative blood count, renal function test and liver function test were normal. Patient had gradual improvement in GCS to 15/15 and residual weakness in lower limb to 3/5 power, rest being normal. Then patient was discharge on fifth day from ICU to ward and later to home after two more days with advice for follow up with neurology team. On subsequent follow up at six weeks, patient had no residual symptoms and neurological deficit.

DISCUSSION

Spinal anesthesia is the most commonly used method to achieve anesthesia in obstetrics patient due to advantage of avoidance of complications of general anesthesia and more direct experience of childbirth. But there are complications in spinal anesthesia such as hypotension, post-dural puncture headache, nerve damage, meningitis, intracerebral hemorrhage, spinal, and cranial hematoma. Postdural puncture headache is a common cause of headache after spinal anesthesia. But there are many differential diagnosis of severe headache after spinal anesthesia, we should keep in mind as a neurological complication after spinal anesthesia, when a patients presents with atypical headache or any abnormal neurological examination finding.

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Consent: NMJ Case Report Consent Form was signed by the patient.

Conflict of Interest: None

REFERENCES