

Ondansetron-induced headache in a parturient mimicking postdural puncture headache

Rajeev Sharma, MD · Asish Panda, MD

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To the Editor,

Ondansetron is widely used for prophylaxis and treatment of perioperative nausea and vomiting.¹ We present an unusual case where postoperative headache was initially attributed to spinal anesthesia while, in retrospect, it was likely caused by ondansetron. Written consent was obtained from the patient to publish this case.

A 26-yr-old primigravida was admitted to our hospital in labour. She was booked for emergency Cesarean delivery in view of cephalopelvic disproportion. Her history and physical examination were unremarkable and hematological investigations were within normal limits. The patient requested spinal anesthesia, and ranitidine 50 mg and metoclopramide 10 mg were given intravenously. Under aseptic conditions, a 27-G Whitacre spinal needle was inserted following a single attempt at the L₃–L₄ level, and 0.5% hyperbaric bupivacaine 10 mg was injected intrathecally. A sensory block to the T₆ dermatome level was achieved. The surgery was completed uneventfully over the next 45 min, and the patient was sent to the postanesthesia care unit for further management. Postoperative analgesia was provided using intramuscular diclofenac.

The patient's vital signs remained stable, but at 12 hr postoperatively, she complained of nausea and vomiting. Ondansetron 6 mg *iv* was administered every 12 hr. Nausea and vomiting decreased, but at 14 hr postoperatively, she complained of severe headache with aggravation triggered by postural change. Her headache was in the frontal region;

there was no associated fever or neck rigidity, and her total leukocyte count was normal. A provisional diagnosis of postdural puncture headache (PDPH) was made, and the patient was advised to lie supine and take plenty of oral fluids. Ondansetron was continued. However, she continued to complain of headache, and there was a marked aggravation of headache during the morning and the evening hours. A computed tomography scan of the patient's head ruled out any intracranial pathology. We thought it might be an early and atypical presentation of PDPH. Caffeine tablets were prescribed but proved ineffective, and there was no symptomatic relief to the patient even at 90 hr postoperatively.

Just before we decided to perform an epidural blood patch, her case was reviewed to rule out other causes of headache. Considering the aggravation of symptoms in the morning and evening coincident with administration of ondansetron, the drug was suspected as a possible cause. Therefore, ondansetron administration was discontinued. The patient improved dramatically within hours and recovered completely over the next 24 hr. She was discharged from the hospital after two days.

Ondansetron is a selective antagonist at 5-HT₃ receptors.¹ Headache is one of the most common side effects of ondansetron, being reported in 3–17% of cases.^{2,3} Studies indicate that ondansetron-induced headache is dose dependent and responds well to discontinuation of the drug.³ Severe migraine-type headache has also been reported with use of ondansetron.⁴ The cause of headache is not known but has been postulated to be related to 5-hydroxytryptamine dysfunction in the brain.⁴ In this case, the presentation and timing of headache made the diagnosis difficult and we confused it with PDPH. We therefore suggest that ondansetron-induced headache should be ruled out before making a diagnosis of PDPH and going ahead

R. Sharma, MD (✉)
ESI Hospital, Rohini, New Delhi, India
e-mail: rajeevkrsharmaji@gmail.com

A. Panda, MD
Maulana Azad Medical College, New Delhi, India

with more invasive procedures such as epidural blood patch.

Conflicts of interest None declared.

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