

Ventriculitis following neuraxial block

Dear Editor,

Ventriculitis has been mostly reported following neurosurgical procedures such as external ventricular drains, ventricular shunts, trauma, immunocompromised host, intrathecal chemotherapy, or meningitis.^[1-3] It is uncommon to have ventriculitis following neuraxial blockade for a non-neurosurgical procedure.

The incidence of meningitis after a neuraxial block is extremely low (about 0–2 cases every 10,000 procedures).^[4] To best of our knowledge, no case of ventriculitis has been reported following a neuraxial block. We report a case of a patient developing ventriculitis following a neuraxial block.

A 53-year-old Indian male presented to the trauma center with circumferential degloving injury of the left lower extremity following a road traffic accident. After a primary survey the patient was taken to the operation theater for debridement and skin grafting. The procedure was done under combined

neuraxial-epidural block in L4–5 intervertebral space and the epidural catheter was left *in situ* for postoperative analgesia. Two days later, a second debridement was done under neuraxial block in L3–4 intervertebral space. The epidural catheter was removed 2 days after this surgery.

On the third postoperative day, the patient complained of a severe headache and continued to deteriorate and on the seventh day became irritable with febrile episodes. Emergent intubation was done in the ward to secure the airway and the patient was shifted to ICU. By the end of the second day in the ICU, the GCS/Glasgow coma scale deteriorated even further. Non-contrast computerized tomography of brain did not reveal any abnormalities. The patient continued to worsen clinically with absent pupillary and corneal reflexes and doll's eye.

MRI of the brain was done, which showed signs of debris in the occipital horns of both the lateral ventricle and cisterna magna suggestive of periventriculitis [Figure 1].

The CSF samples were collected after external ventricular drain insertion which showed *Acinetobacter baumannii* infection sensitive only to Colistin. Colistin was initiated, both systemic

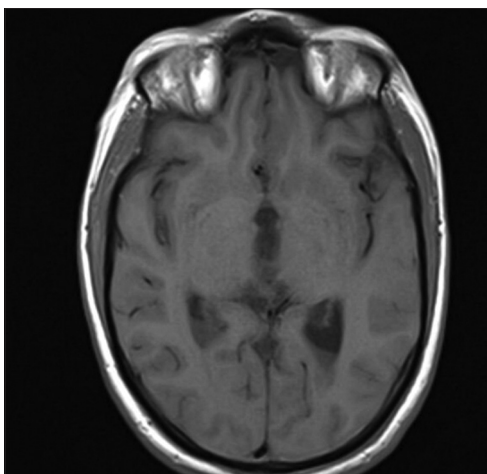


Figure 1: Isointense-dependent contents in occipital horns of bilateral lateral ventricles and cisterna magna, likely ventriculitis

and intrathecal. By the end of the third day of colistin initiation, improvement in GCS was observed. CSF became sterile by the end of the fourth day. EVD/external ventricular drain as replaced by ommaya reservoir and intrathecal colistin administration was continued through ommaya reservoir for 4 weeks. By the end of 1 week GCS improved significantly. The patient was extubated and discharged after a 4-week course of intrathecal therapy. In the absence of the causes mentioned above we postulate that the possible source for ventriculitis could be related to the procedure of neuraxial block at the time of the second surgery as there was *Acinetobacter baumannii* suggesting hospital-acquired infection rather than community-acquired.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship -
Nil.

Conflicts of interest

There are no conflicts of interest.

**Nitin Rai, Kapil D. Soni², Richa Aggarwal²,
Anjan Trikha¹**

Department of Critical Care Medicine, King George's Medical University, Lucknow, ¹Department of Anaesthesiology, Pain Medicine and Critical Care, All India Institute of Medical Sciences, New Delhi, ²Department of Critical and Intensive Care, Jai Prakash Narayan Apex Trauma Centre, All India Institute of Medical Sciences, New Delhi, India

Address for correspondence: Dr. Kapil D. Soni,
Department of Critical and Intensive Care, Jai Prakash Narayan Apex
Trauma Centre, All India Institute of Medical Sciences, New Delhi,
India.

E-mail: kdsoni111@gmail.com

References

1. Kaufman BA, Tunkel AR, Pryor JC, Dacey RG Jr. Meningitis in the neurosurgical patient. *Infect Dis Clin North Am* 1990;4:677-701.
2. Tunkel AR, Hasbun R, Bhimraj A, Byers K, Kaplan SL, Scheld WM, *et al.* 2017 Infectious Diseases Society of America's clinical practice guidelines for healthcare-associated ventriculitis and meningitis. *Clin Infect Dis* 2017;64:e34-65.
3. Tunkel AR, Hartman BJ, Kaplan SL, Kaufman BA, Roos KL, Scheld WM, *et al.* Practice guidelines for the management of bacterial meningitis. *Clin Infect Dis* 2004;39:1267-84.
4. Brull R, McCartney CJ, Chan VW, El-Beheiry H. Neurological complications after regional anaesthesia: Contemporary estimates of risk. *Anesth Analg* 2007;104:965-74.

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Access this article online	
Quick Response Code:	Website: https://journals.lww.com/joacp
	DOI: 10.4103/joacp.JOACP_672_20

How to cite this article: Rai N, Soni KD, Aggarwal R, Trikha A. Ventriculitis following neuraxial block. *J Anaesthesiol Clin Pharmacol* 2022;38:679-80.

Submitted: 26-Dec-2020

Revised: 12-Jun-2021

Accepted: 13-Jun-2021

Published: 26-Mar-2022

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