

Intrathecal Catheterisation after an Accidental Dural Puncture: A measure to Decrease the Incidence of Post Dural Puncture Headache

Gundala Shashidar Rao¹, Yugandhar Kandula², Kiran Kumar Suggala³

How to cite this article:

Gundala Shashidar Rao, Yugandhar Kandula, Kiran Kumar Suggala/Intrathecal Catheterisation after an Accidental Dural Puncture: A measure to Decrease the Incidence of Post Dural Puncture Headache/Indian J Anesth Analg. 2023;10(1)33-34.

Abstract

Accidental dural puncture is the most common major complication during epidural anaesthesia and causes high risk of post dural puncture headache (PDPH). Intrathecal catheterisation in such cases helps in preventing leakage of CSF and thereby decreasing the incidence of PDPH. Here is one such case report of inadvertent intradural puncture during epidural anaesthesia.

Keywords: Intrathecal Catheterisation; Accidental dural puncture; Anaesthesia.

INTRODUCTION

Background

Accidental dural puncture during epidural anaesthesia causes high risk of post dural puncture headache (PDPH). Intrathecal catheterisation, in such cases helps in preventing

leakage of CSF, thus decreases the risk of PDPH. It can also be used to administer local anesthesia it can provide safe surgical anesthesia through out the surgery.

CASE REPORT

A 70 year old male presented with chief complaints of pain and restricted movements in right hip in one week due to fall while climbing stairs. Hip X-ray revealed intertrochanteric fracture of right femur. Patient is chronic smoker with 20 pack years. PFT showed moderate obstruction with poor reversibility. All investigations were within normal limits. The patient was posted for ORIF with proximal femoral nailing under ASA-II. After obtaining informed consent, patient was shifted to OR and standard monitors were connected and baseline vitals were recorded. Under strict aseptic

Author's Affiliation: ¹3rd Year Postgraduate Student, ²Assistant Professor, ³Professor & HOD, Department of Anesthesia, Mamata Medical College, Khammam 507002, Telangana, India.

Corresponding Author: Yugandhar Kandula, Assistant Professor, Department of Anesthesia, Mamata Medical College, Khammam 507002, Telangana, India.

E-mail: yugandhar0004@gmail.com

Received on: 07.04.2022

Accepted on: 27.05.2022



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0.

precautions, Epidural anesthesia was performed at L3-L4 space.

The dura got punctured accidentally during the procedure, and clear CSF was appreciated in the LoR syringe. Immediately an epidural catheter was inserted, 23 cms into the subarachnoid space, catheter position is confirmed by easy aspiration of clear CSF. The catheter is secured and properly labelled to prevent unintentional injections in to the catheter. 3ml of 0.5% Bupivacaine heavy was injected through the catheter. Level of blockade achieved was T10. Later, 2ml of 0.5% Bupivacaine heavy is injected between intervals when the level has regressed by two segments. The surgery lasted for 3 hrs, patient was shifted to post operative ward with catheter left insitu. Adequate hydration with normal saline was maintained in the post operative ward. Spinal catheter was removed after 48 hrs and followed up for one week for any complaints of headache. The patient had no complaints of

headache in the post-operative period.

DISCUSSION

Post dural puncture headache can occur following spinal anesthesia or, more commonly, inadvertent dural puncture during attempted epidural catheter placement. The headache is usually positional (worse when upright, better when lying flat) and is often accompanied by neck stiffness, photophobia, nausea, or subjective hearing symptoms. Intrathecal catheterisation after an accidental dural puncture in such cases is an easier technique providing adequate level of anesthesia with small intermittent doses of local anesthetic. An intrathecal catheter left insitu for >24 hrs induces an inflammatory reaction, due to the fibrinous exudate or edema seals the hole in the dura, preventing leakage of CSF there by preventing PDPH



Fig. 1: An intrathecal catheter left insitu after an accidental dural puncture provides a safe and easy to use method.

CONCLUSION

An intrathecal catheter left insitu after an accidental dural puncture provides a safe and easy to use method, which can reduce the chances of PDPH while offering adequate level of anesthesia for prolonged surgeries. It also reduce the need for epidural blood patch (EBP).

REFERENCES

1. Ejaz Khan, Rovnat Babazade, Mohamed Ibrahim, Michelle Simon, Lindsay Juarez, Mandonca Roni, Vadhera Rakesh, It's not always spost dural puncture headache, *Brazilian Journal of Anesthesiology (English Edition)*,10.1016 j.bjane.2021.06.003, (2021).
2. Robert P.S. Introna, John R. Blair, John B. Neeld; What Is the Incidence of Inadvertent Dural Puncture during Epidural Anesthesia in Obstetrics?. *Anesthesiology* 2012; 117:686-687 doi:<https://doi.org/10.1097/ALN.Ob013e3182639d88>.