

Epidural Blood Patch for Post Dural Puncture Headache in a Parturient with Active Coronavirus Disease 2019 in Early Postpartum

V.Mijovic MD, D.Chiu MD, J.Cambria CRNA, K. Davis CRNA



Introduction

COVID-19 is a severe infectious disease particularly of the respiratory system characterized by fatal complications such as severe acute respiratory distress syndrome (SARS), pneumonia, cardiac arrhythmia, kidney failure, multiple organ failure and even death.

COVID-19 infection poses increased risks of poor outcomes during pregnancy including preterm birth and stillbirth. Headache is a recognized complication of neuraxial block.

Epidural blood patch (EBP) is an effective treatment for postdural puncture headache.

The safety of EBP in patients with active COVID-19 disease is unknown and currently there are limited case reports in the literature.

References

1. Norris MC et al. Epidural Blood Patch for Postdural Puncture Headache in a Patient With Coronavirus Disease 2019: A Case Report
2. Ibrahim, M et al. Epidural blood patch for a post-dural puncture headache in a COVID-19 positive patient following labor epidural analgesia. *International Journal of Obstetric Anesthesia*
3. Tom Dj et al. Epidural blood patch in the HIV-positive patient. Review of clinical experience. San Diego HIV Neurobehavioral Research Center. *Anesthesiology*. 1992

Case Presentation

A 26 year-old G2P0 parturient with PMH remarkable for anemia was admitted to the L&D floor with contractions.

Laboratory results showed anemia, hypocalcemia and COVID-19. Patient was not immunized against COVID-19.

Epidural placement for labor analgesia was complicated by accidental dural puncture.

Patient developed post dural puncture headache (PDPH) symptoms postoperative day one, which were resistant to conservative treatment with hydration and Butalbital/Acetaminophen/Caffeine.

Potential risks and side effects of EBP in the setting of a COVID-19 infection were discussed, as there is limited data regarding performing an EBP during an active COVID-19 infection and potential viral spread into cerebrospinal fluid. Since the patient was afebrile, had no major laboratory abnormalities and accepted the risks, EBP was performed.

Her symptoms significantly improved within several hours and no complications were reported in the immediate postpartum period or during the 10 week follow-up period.

Discussion

To our knowledge, there are only two reported cases in which an EBP was performed on a COVID-19 positive patient. (1,2) Our understanding of the neurobiology of COVID-19 infection remains incomplete. Involvement of the central nervous system, including headache, dizziness, and impaired consciousness, has been reported to occur in up to 25% of patients with COVID-19 disease. Loss of sense of taste or smell, which likely represents cranial nerve involvement, is reported in up to 70% of patients. In the past, clinicians expressed similar concerns regarding the placement of EBPs in HIV positive patients. Though HIV routinely invades the CNS, subsequent data showed EBP placement was safe in these patients. (3)

Summary

Though we cannot definitely comment on the safety of performing EBPs in patients with COVID-19 infections, based on this case report and limited published data, EBPs should be considered a therapeutic option. However, risks and benefits should be weighed for each individual patient.