

Cortical Vein Thrombosis As Cause For Postpartum Headache

S Kulandayan

Citation

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Abstract

A 37-year old Chinese lady G5,P4 had epidural analgesia for normal vaginal delivery and bilateral tubal ligation. There was no dural puncture during the epidural procedure. The patient had headache, nausea, and vomiting 6 days later at home, and developed subsequently a left-sided weakness and convulsions. The case was investigated, diagnosed as cerebral vein thrombosis and treated.

Accidental dural puncture occurs during epidural procedures. Headache is the main complaint in dural punctures and low-tension headache is usually treated conservatively. If it does not subside, an epidural blood patch can be applied. Headache and central nervous system complications after epidural labor analgesia without dural puncture is usually primarily attributed to the epidural but there are many other causes for postpartum headache and central nervous system complications.

CASE REPORT

A 37-year old healthy Chinese lady, gravida 5, para 4 was admitted for delivery and requested an epidural anesthesia for labor pain relief. She had a history of severe migraines in 1997 and admitted treated as inpatient without significant disease. The antenatal period and blood pressure was normal.

IV access was obtained under sterile precautions. Using the loss of resistance to saline technique an epidural catheter was introduced through a 16 g Touhy needle at a level of the L 3-4 interspace. The catheter was kept at 10 cm skin level. A test dose of 3 ml of 0.5% marcaine was given, and after 5 minutes a first dose 0.25 % marcaine 8 ml with 50 mcg fentanyl was administered. 2 hours later, a spontaneous vaginal delivery occurred with top up marcaine 0.25 % 6 ml. 6 hours later, bilateral tubal ligation was performed under top up epidural anesthesia of 0.5 % marcaine 10 ml. The labor period and operation period was pain free and uneventful. The catheter was removed and the patient was discharged on the same day without any complaints. The epidural technique was a one shot technique without any dural puncture.

She rested for 6 days at home, but had low-tension headache,

nausea, and vomiting. She took Chinese medicine without returning to the hospital. On the evening of the 6th day she had left-sided weakness and jerky movements in the left leg followed by generalized convulsions with loss of consciousness for 3- 5 minutes. It looked like a grand-mal seizure and she was admitted to the hospital. She underwent hematological, biochemical, echo, ECG and chest X-ray investigations and all tests were found normal. After that, she underwent MRI and MRV. Clinically, patient was conscious, well oriented with normal sensation. The power in all the four limbs was normal and no focal signs or deficits were present. Fundoscopy was normal.

MRI & MRV REPORT

Lumbar spines appeared normal without epidural fluid collection. The MRI scan suggested postpartum sinus thrombosis in the parietal segment of the superior sagittal sinus with resultant venous infarct in the fronto-parietal cortex.

The patient was treated with heparin infusion followed by warfarin. The patient was discharged after one week with full recovery. However, there was a significant memory loss for the events at the time of admission.

DISCUSSION

G.M. Stocks et al reported a case of postpartum headache who received epidural analgesia for labor pain relief with accidental dura puncture. They performed two epidural blood patches. The problem was not corrected and the investigators found subsequently a cerebral vein thrombosis as a cause for the postpartum headache. In our case, the epidural was given and no dural puncture was noted. The patient had headache, nausea and vomiting for 6 days, but unfortunately did not turn to the hospital. Patient was rushed to the hospital after she had left-sided weakness and grand-mal seizures. This complication was first attributed to the epidural anesthesia by her husband, a lawyer who downloaded all complications about epidural anesthesia from the Internet.

MRI & MRV is more sensitive investigation than CT scan. CT scan is normal in 26% of the cases. Since the epidural space was free from any fluid collection, we decided to administer anticoagulants. The coagulation profile was normal.

Table 1: Possible causes for postpartum persistent headache

- Spinal headache after regional anesthesia
- Non-specific
- Migraine
- Pregnancy induced hypertension
- Meningitis
- Cerebral tumor
- Subarachnoid hemorrhage

- Subdural hematoma
- Cerebral vein thrombosis

Cerebral vein thrombosis: The incidence is 8.9 cases per 100,00 deliveries and confidential enquiries into maternal deaths showed only two deaths from cerebral vein thrombosis. However, both were associated with deep vein thrombosis. Cerebral vein thrombosis presents with headache associated with neurological symptoms such as focal, multifocal or generalized seizures, coma, hemiparesis or bilateral papillo-edema. CT scan is normal in 26 % of the cases. MRI & MRV will clinch the diagnosis. The etiology is uncertain but the pro-coagulable state of pregnancy is a predisposing factor. Known thrombophilic patients should undergo a thrombophilia screen. Anticoagulants in this condition are controversial. Anticoagulant therapy is to be continued up to 2- 3 months and even continued for 6 months and in future pregnancies.

CONCLUSION

In summary, this case serves to highlight postpartum headache after epidural anesthesia without accidental dural puncture. A similar case was reported in The British Journal of Anaesthesia¹. The Internet has proven to be a good information-gathering medium. The differential diagnosis of postpartum headache is discussed.

References

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Author Information

S Kulandayan, MD

Specialist in Anaesthesia, Queen Elizabeth Hospital