Epidural Blood Patch Made Easier

Abstract Type: Case Report/Case Series
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Introduction: Epidural blood patch (EBP) is the definitive treatment for low cerebrospinal fluid pressure (CSF) resulting from dural puncture after failure of conservative management. EBP usually requires two anesthesia providers, one to do the epidural, the other to draw blood steriley. In a busy OB service, we have to wait for the opportunity to have two people available.

Case Series: In July, 2010, we had 11 accidental dural punctures, 3 of whom needed EBP. One patient was morbidly obese at 5’ 5” and 310 lbs. Although we located good venous access, we were unable to obtain the blood sample after locating the epidural space. Rather than abandon the technique, we obtained blood from an arterial stick. We encountered a similar patient who also required arterial stick for an adequate blood sample. In the following months, as we performed five more EBPs, we decided to use the 18g BD Nexiva 1.25” IV catheter system with intraflash needle technology and luer access split septum that our L&D and ED nurses use for starting IVs and obtaining blood samples. These catheters are easy to draw blood from even when placed below the antecubital vein. The IV catheter is inserted before the EBP. As the epidural space is located, two 10ml syringes of blood are drawn from the IV catheterer and given to the anesthesiologist. As the EBP is completed, the IV inserted in the other port is opened and infused if desired. Since our nursing staff is facile with the use of these IV catheters, we are able to enlist their help in inserting them under aseptic technique using chloraseptic prep sponges and sterile drapes. They draw the blood for us under sterile technique so the attending anesthesiologist can more closely supervise the resident. The attending can also now do the EBP with nursing staff assisting with the insertion of the IV and drawing the blood for the EBP.

Conclusion: The use of a closed IV catheter system that allows reliable blood drawing can save a lot of difficulties in obtaining blood for an EBP. With this heplock already in place, the anesthesiologist can more closely supervise the anesthesia resident in doing the EBP. Moreover, the anesthesiologist can do the EBP by him/herself by enlisting the help of the nursing staff trained to insert the IV catheter system under sterile technique acceptable to standards necessary for EBP. We also envision using this technology with extensions and stopcocks to ensure continuous flow in treating Jehovah's Witnesses patients.