Toddler with a Back Abscess at the Epidural Insertion Site

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Case Report: A 20 mos 11.8 kg M was diagnosed with a stage 4 adrenal neuroblastoma and scheduled for an open resection. After induction of anesthesia, a thoracic epidural was placed for postoperative pain control using sterile techniques.

On POD#2, the epidural was removed, the site was checked, and there was no evidence of infection—no erythema, edema or tenderness. On POD#4, the patient presented with a painful 1”x1” raised and erythematous lesion at his epidural insertion site from which yellow purulent material was expressed. An anesthesia team was called in that night to perform an MRI that showed a T6-T7 enhancing fluid collection in the subcutaneous fat without epidural involvement (Figure 1). He was started on empiric antibiotics and the abscess was surgically incised and drained under general anesthesia the next day.

Discussion: In this case, our patient was at an increased risk for infection given his compromised immunity from chemotherapy. Fortunately, the abscess did not invade the epidural space.

Anywhere from 7-44% of patients have infections of minimal clinical significance after neuraxial procedures and 0.01% to 0.1% develop epidural abscess which leads to death in 10% of cases.¹

According to the ASA practice advisory,² and ASRA³, proper sterile technique to perform a neuraxial procedure includes cap, mask, hand washing, jewelry removal, betadine or chlorhexidine alcohol based cleansing solution, sterile gloves, sterile drape, and a sterile occlusive dressing (Figure 2).²,³ Despite these inclusive guidelines, many anesthesia practitioners internationally believe that additional “essential” aseptic precautions in epidural placement include a surgical gown and a full surgical scrub.¹,⁴ We may need to adopt these practices as they are standard for prevention of surgical site and indwelling central catheter infections.¹,⁵ Additionally, antimicrobial patches⁷ and antimicrobial filters may be considered for long term catheter placement.² The ASA task force also suggests limiting disconnections/reconnections, removing unwitnessed disconnected catheters, and limiting the duration of catheter use.² Skin disinfection is essential, and colonization of the epidural site from the patient’s own skin flora may be minimized by properly cleansing a wide area around the insertion site.¹

In conclusion, we must question our current aseptic practice associated with neuraxial techniques when we have a serious complication such as an abscess at an epidural insertion site.

2. ASA Task Force, Practice Advisory for the Prevention, Diagnosis, and Management of Infectious ComplicationsAssociated with Neuraxial Techniques. Anesthesiology 2010; 112:000