Safety of Epidural Analgesia in patients who underwent surgical treatment for empyema: A retrospective review in a pediatric hospital

M. Saif Siddiqui, MD, Michael L. Schmitz, MD, Jason Parker, MD, Hatim Al-Takrouri, MD, Shireen Mohiuddin, MD, Shahid Hussain, MD, James F. Mayhew, MD.
University of Arkansas ***for Medical Sciences and Arkansas Children's Hospital, Little Rock, AR 72202***

Introduction: Epidural analgesia has gained increased application in pediatric peri-operative and chronic pain management. Although infection at the site of intended catheter placement is a contraindication to epidural analgesia, there is no consensus for placement of an epidural catheter in the febrile patient with a serious localized infection such as empyema. Therefore placement of epidural catheters in patients with systemic or localized infection remains controversial (1, 2). This study was undertaken to estimate the incidence of epidural abscess in patients receiving epidural analgesia for surgical treatment for empyema at Arkansas Children's Hospital during a period of three years.

Methods: After Institutional Review Board approval, medical records for 59 children (age 6 months to 18 years) with empyema who underwent surgical decortication and drainage between February 2000 to May 2002 were reviewed. Epidural analgesia was administered to 32 patients for post operative pain control. Abstracted variables included patient demographics, vital signs, laboratory values, days of epidural analgesia, indication for epidural catheter removal, and neurological or infectious complications such as epidural abscess or hematoma

Results:

Parameter	**Results**
Total number of Patients received Epidural analgesia	32
Average T_{max} (Maximum temperature) at the time of insertion	37.9 (range 37C-39.7C)
Indication to remove the epidural catheter	Patient started oral intake
Average days catheter in place	2.2
Any neurological complications	0

Discussion: Although epidural abscess is a rare complication of epidural catheter usage, the factors that predispose the patient to such a complication are unclear. Some anesthesiologists decline to perform epidural analgesia or place an epidural catheter in patients with signs of infection, including fever. We sought to analyze data from children with empyema, patients that are often febrile at the time of epidural catheter placement. No patient developed an epidural abscess or other infectious complication such as inflammation at the site of catheter insertion, nor did any experience spinal neurological complications. Although, there have been case reports of development of abscess associated with patients receiving post operative epidural analgesia with no obvious predisposing factors (3). In this limited review, no evidence of increased risks of epidural catheter placement and usage were found.

References:

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