

Epidual Catheter Fixation and Care-A Novel Technique

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Letter to Editor

Drug delivery *via* an epidural catheter is a safe and effective method which provides excellent postoperative pain relief [1]. In the perioperative setting epidural analgesia has numerous benefits with few complications. Among them kinking of external part of catheter and its contamination are often neglected.

A lot of emphasis is put on the technique of epidural insertion but however technique of catheter fixation is often neglected [2]. Ideally, the fixation method should be safe, non-invasive and cost-effective and maintain the sterility of the catheter. Correct catheter fixation goes a long way in preventing catheter migration and infection which ensures a safe epidural analgesia without complications [2].

Inappropriate fixation of catheter results to accidental displacement or kinking of an effective epidural which is considered to be the most common cause of epidural failure. This can result in suboptimal analgesia for the patient, which is frustrating to the anesthesiologist and distressing to the patient [3]. The incidence of epidural catheter dislodgment under adhesive dressing is around 16% according to a controlled trial by Clark et al. [4].

Conventionally, the epidural site of insertion is covered with transparent dressing once skin homeostasis is achieved. The epidural catheter is then taped to the skin using another transparent dressing up to the shoulder. The epidural catheter beyond the shoulder till the connector filter assembly is usually kept uncovered.

This uncovered part of catheter may lead to kinking, entangling and serious epidural space infection through trans-catheter microbial migration. Kinking and entangling is associated with patient movement on bed, compression of catheter while sleeping and negligence in catheter management in the post-operative period. Kinking of epidural catheter may result in failure to achieve analgesia which is very soul disturbing both to the patient and the anesthesiologist [5].

Infection of the epidural space is a rare but serious complication. One of the route through which the microorganism may reach to epidural space is along the catheter tract [6]. The microorganism may either reach the skin site or it may contaminate the epidural connector-filter assembly. The unprotected part of catheter that is left uncovered can be the source of infection in conventional methods of securing the epidural catheters. The soiling of epidural catheter with patients own oral secretions drooling out from mouth in the perioperative period can be often be seen and it's a neglected aspect in catheter care.

Therefore we introduce a novel technique of fixing and protecting the external part of epidural catheters. The epidural catheter is fixed at the insertion site with a sterile transparent dressing till the shoulder. The catheter connector along with filter is put in sterile packet provided with the epidural set. The part of catheter beyond shoulder

till the connector filter assembly is protected by a water resistant self-adhesive tape (Figure 1). It prevents undue external kinking of catheter, easy identification and also protects it from getting soiled or contaminated, reducing the chances of epidural space infection.

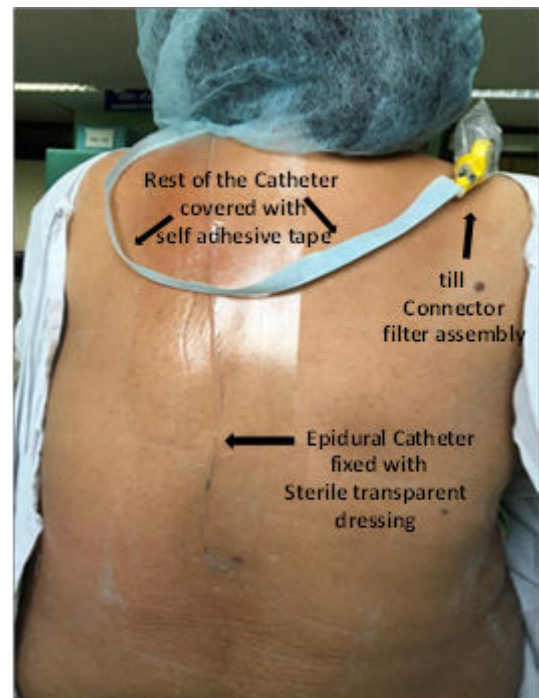


Figure 1: Dressing for the entire epidural catheter.

To conclude, correct catheter fixation and proper care of epidural catheter is utmost important for a safe and successful epidural analgesia. The novel technique of fixing and protecting epidural catheter is an easy, reliable, safe and cost effective method. It is associated with less kinking, easy identification, better care and less epidural space infection. Therefore it can be considered as a better method of securing an epidural catheter.

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