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Rectus Sheath Block to Extend the Effectiveness of Post Operative Epidural Analgesia

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Abstract : Preemptive analgesia is an established concept in the modern practice of anaesthesia. To be most effective, it is best instituted earlier than the surgical stimulus and should last beyond the offset of surgically induced pain till healing is complete. Whereas the start of afferent pain blockade with regional anaesthesia is common, its effect often falls short to cover the entire period of pain impulses making their way to CNS in the post-operative period. We tried to use a combination of two regional anaesthetic techniques used sequentially to overcome this handicap. Madam S., a 56 year old lady, was scheduled for elective surgery for pancreatic cancer. She underwent laparotomy and distal pancreatectomy, splenectomy, bilateral salpingo oophorectomy, and sigmoid colectomy. Surgery was expected to be extensive, and it was presumed that the standard pain relief with PCA with opiates and oral analgesics would not be adequate. After counselling the patient pre-operative about the technique of regional anaesthesia techniques, including epidural catheterization and rectus sheath catheter placement, their benefits, and potential complications, informed consent was obtained. Epidural catheter was placed awake, and general anaesthesia was then induced. Epidural infusion of local anaesthetics was started prior to surgical incision and was continued till 60 hours into the postoperative period. Before skin closure, the surgeons inserted commercially available rectus sheath catheters bilaterally along the midline incision used for laparotomy. After 46 hours post-op, local anaesthetic infusion via these was started as bridging while the epidural infusion rate was tapered off. The epidural catheter was removed at 75 hours. Elastomeric pumps were used to provide local anaesthetic infusion with the ability to vary infusion rates. Acute pain service followed up the patient's vital signs and effectiveness of pain relief twice daily or more frequently as required. Rectus sheath catheters were removed 137 hours post-op. The patient had good post-op analgesia with the minimal additional analgesic requirement. For the most part, the visual analog score (VAS) for pain remained at 1-3 on a scale of 1 to 10. Haemodynamics remained stable, and surgical recovery was as expected. Minimal opiate requirement after an extensive laparotomy also translates to the early return of intestinal motility. Our experience was encouraging, and we are hoping to extend this combination of two regional anaesthetic techniques to patients undergoing similar surgeries. Epidural analgesia is denser and offers excellent pain relief for both visceral and somatic pain in the first few days after surgery. As the pain intensity grows weaker, rectus sheath block and oral analgesics provide almost the same degree of pain relief after the epidural catheter is removed. We discovered that the background infusion of local anaesthetic down the rectus sheath catherter largely reduced the requirement for other classes of analgesics. We aim to study this further with a larger patient cohort and hope that it may become an established clinical practice that benefits patients everywhere.

Keywords : rectus sheath, epidural infusion, post operative analgesia, elastomeric
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