

THESIS ABSTRACT

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Title: A STUDY ON POSTOPERATIVE ANALGESIC EFFICACY OF EPIDURAL BUPIVACAINE, BUPIVACAINE WITH FENTANYL AND BUPIVACAINE WITH NEOSTIGMINE IN ADULTS UNDERGOING ABDOMINAL SURGERIES UNDER GENERAL ANAESTHESIA.

Period of study: January 2016 – June 2016

Center: Govt. Kilpauk Medical College Hospital and Govt. Royapettah Hospital, Chennai.

Objective : Since post operative pain following abdominal surgeries can produce a lot of adverse side effects on the patient. We decided to study the postoperative analgesic efficacy of epidural Bupivacaine, Bupivacaine with Fentanyl and Bupivacaine with Neostigmine in adults undergoing abdominal surgeries under general anesthesia.

Methods: Sixty patients of age 20 to 60 years of ASA status 1 or 2 admitted at Govt. Kilpauk Medical College Hospital and Govt. Royapettah Hospital for undergoing elective abdominal surgeries done under general anaesthesia were included in our study. They were randomized into three groups. Group B, Group F and Group N. Epidural catheterization was done in all these patients. They underwent surgery under general anaesthesia. At the end of the procedure, patients in Group B received 0.125% Bupivacaine, the patients in Group F received 0.125% Bupivacaine with Fentanyl (1mcg/kg) and patients in Group N received 0.125% Bupivacaine with Neostigmine (10mcg/kg) epidurally. The total volume of drug in either group was 10ml. Time to first rescue analgesia was recorded for all these patients, including post-operative heart rate, mean arterial blood pressure, respiratory rate, oxygen saturation, post-operative nausea and vomiting, pruritus, Ramsay sedation score and visual analogue scale.

Results: The average time for first rescue analgesia in Group B was 104.75 ± 1.60 , Group F was 289.25 ± 3.23 and Group N was 261.00 ± 4.13 . The post operative variations in heart rate, mean arterial blood pressure, respiratory rate and oxygen saturation were also comparable between the three groups. The parameters were also statistically significant when compared to the baseline values. Adverse effects like pruritus and gastrointestinal side effects like nausea and vomiting were significantly less in Group N and Group B, but increased in Group F where Fentanyl was used.

Conclusion: The duration of post operative epidural analgesia is higher when either Fentanyl or Neostigmine was used as an adjuvant to epidural Bupivacaine than with Bupivacaine alone. However, because of adverse effects like pruritus and gastrointestinal side effects like nausea and vomiting in Fentanyl, epidural Neostigmine can be preferred to epidural Fentanyl.

Keywords: Bupivacaine, Fentanyl, Neostigmine, Post-operative analgesia.