



## Comparison of Efficacy of Different Mode of Analgesia Postoperatively in Patients Undergoing Abdominal Surgeries.

### KEYWORDS

analgesia ,postoperative, epidural intravenous and intramuscular

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### ABSTRACT

**Background** Despite of advancement in post-operative pain management, pain continues to be inadequately treated, leading to increases incidence of post-operative morbidity and delayed recovery. In this study we are compared the efficacy of different modes of analgesia at our hospital. **Materials and methods:** This study was conducted in the post operative ward at Yenepoya Medical College Hospital over a period of from June 2015 to August 2015 . Three modalities were compared in our study epidural 0.125%, intravenous and intramuscular mode ,analysis was done using SPSS software 23.0 version. **Result** Mean age of the patients was 46.84±12.92years. we had 14 males and 14 females verbal numerical score at one hour with  $p$  value = 0.017 in the epidural group and sedation score 8hours with  $p$  value = 0.003 were the only scores with a significant difference. **Conclusion** Post operative epidural infusion provided better pain relief reduced sedation score and nausea vomiting complications

### Background and objective

Pain management is one of developing specialty and Post-operative pain management has received keen attention in recent years . Despite of advancement in post-operative pain management, pain continues to be inadequately treated, leading to increases incidence of post-operative morbidity and delayed recovery, which leads to anxiety, stress and dissatisfaction among patients. Abdominal surgeries are painful procedures and inadequately treated can effect various systems in our body. To improve the patient outcome and quality we are conducting a prospective observational study. In this study we are compared the efficacy of different modes of analgesia at our hospital. patients with the following were excluded ASA grade 3 and ,Emergency abdominal surgeries.,Mental retardation

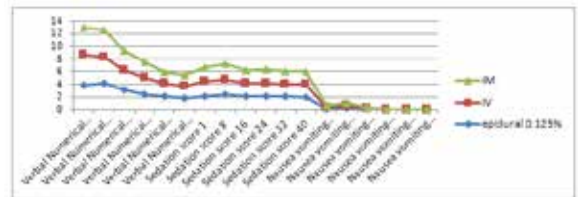
### Materials and methods:

This study was conducted in the post operative ward at Yenepoya Medical College Hospital over a period of from June 2015 to August 2015 after obtaining clearance from the ethical committee clearance and the informed consent of patients those Patients of ASA grade 1 and 11 informed consent, patients aged between 30 -60 years. Three modalities were compared in our study epidural 0.125%, intravenous and intramuscular mode

After ethical committee approval and informed consent, patients belonging to ASA grade 1 and 2, aged between 30 to 60 years, scheduled for elective abdominal surgeries was followed post operatively. The patient was followed-up at least thrice daily for acute pain ,eight hourly for two days. Pain was assessed by verbal numeric rating scale of 0-10, where 0 is no pain and 10 represents worst pain imaginable Ramsay sedation scale for sedation score was used .Nausea and vomiting was assessed on a scale of 0-3 namely 0 = none, 1 = mild nausea on inquiry, 2 = moderate nausea/vomiting - treatment required, 3 = vomiting unresponsive to simple antiemetic. Statistical analysis was done using SPSS software 23.0 version.

### Result and observations

Mean age of the patients was 46.84±12.92years. we had 14 males and 14 females .



As depicted in the graph above there were positive findings as depicted above among the three modes we used in our study epidural 0.125% is the preferred mode as has better pain scores and sedation scores followed by intravenous analgesia and the least is the intramuscular mode

Based on the statistical significance verbal numerical score at one hour with  $p$  value = 0.017 in the epidural group and sedation score 8hours with  $p$  value = 0.003 were the only scores with a significant difference. There was no difference between the two groups in the Verbal Numerical scores at 8,16,32 and 40 hours and sedation scores at 1,16,32 and 40 hours.

### Discussion

In a study by **Kęstutis Rimaitis et al** who studied 349 cases over 24 months showed that epidural analgesia had demonstrated significantly better effectiveness than intramuscular route for analgesia after undergo elective colorectal cancer surgery<sup>2</sup> epidural infusion showed excellent analgesia after colorectal cancer surgery as compared with parenteral IM analgesia in two different studies by **Cox<sup>2</sup>** and **George<sup>3</sup>**. findings similar to our study. There are also other advantages as shown by various studies which we have not evaluated in our study as the group was small like epidural administration of local anesthetics modifies perioperative hypercoagulable state and reduces the

risk of deep venous thrombosis with resultant pulmonary embolism<sup>4,5</sup> **Park WY, et al**<sup>6</sup> conducted a study on 1,021 patients who required anesthesia for intraabdominal operations with general anesthesia and postoperative analgesia with parenteral opioids (group 1) or epidural plus light general anesthesia and postoperative epidural morphine (group 2) They concluded that epidural analgesia provides better postoperative pain relief, improve the overall outcome and shorten the intubation time and intensive care

stay in patients undergoing abdominal operations. **Kehlet H , et al**<sup>7</sup> revived data from randomized controlled trials on the effects of analgesic techniques like patient controlled analgesia, with opioids, NSAIDs and epidural analgesia on postoperative morbidity concluded that continuous lumbar epidural local anesthetic technique are most effective in reducing surgical stress response , reduces postoperative pulmonary morbidity in major abdominal surgeries

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7. Kehlet H, Holte K. Effect of postoperative analgesia on surgical outcome. *Br J Anaesth.* 2001;87:62-7 Comparison of efficacy of different mode of analgesia post operatively in patients undergoing abdominal surgeries. | Conclusion: Post operative epidural infusion provided better pain relief reduced sedation score and nausea vomiting complications our study helps to develop awareness and helps in the optimal utilization of already available drugs, techniques and facilities. |