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**A Randomised study to compare the effects of NEFOPAM
HYDROCHLORIDE and TRAMADOL HYDROCHLORIDE on
Postoperative Pain in patients undergoing long bone fracture fixations.**

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INTRODUCTION:-

- Acute orthopaedic postoperative pain is a manifestation of inflammation due to tissue injury. The management of postoperative pain and inflammation is a critical component of patient care.
- Postoperative analgesic is required to achieve patient comfort and post operative rehabilitation.

- **TRAMADOL HYDROCHLORIDE** is well known as an analgesic that produces opioid-like effects primarily due to its metabolite, O-desmethyltramadol (M1). The analgesic effect of tramadol involves both opioid and noradrenaline and serotonin receptor systems. The production of analgesia is consistent with M1 formation, which commences an hour post-administration and peaks 2 to 3 hours later.
- **NEFOPAM HYDROCHLORIDE** was known as fenazocine and developed in the 1960s, and is widely used in European countries as a non-opioid, non-steroidal, centrally acting analgesic drug. It is unrelated chemically or pharmacologically to any other analgesic compound. It appears safe and seems to have no depressant action on the central nervous system (CNS).

AIMS:-

- To compare the effects of NEFOPAM HYDROCHLORIDE and TRAMADOL HYDROCHLORIDE on Postoperative Pain in patients undergoing long bone fracture fixations.

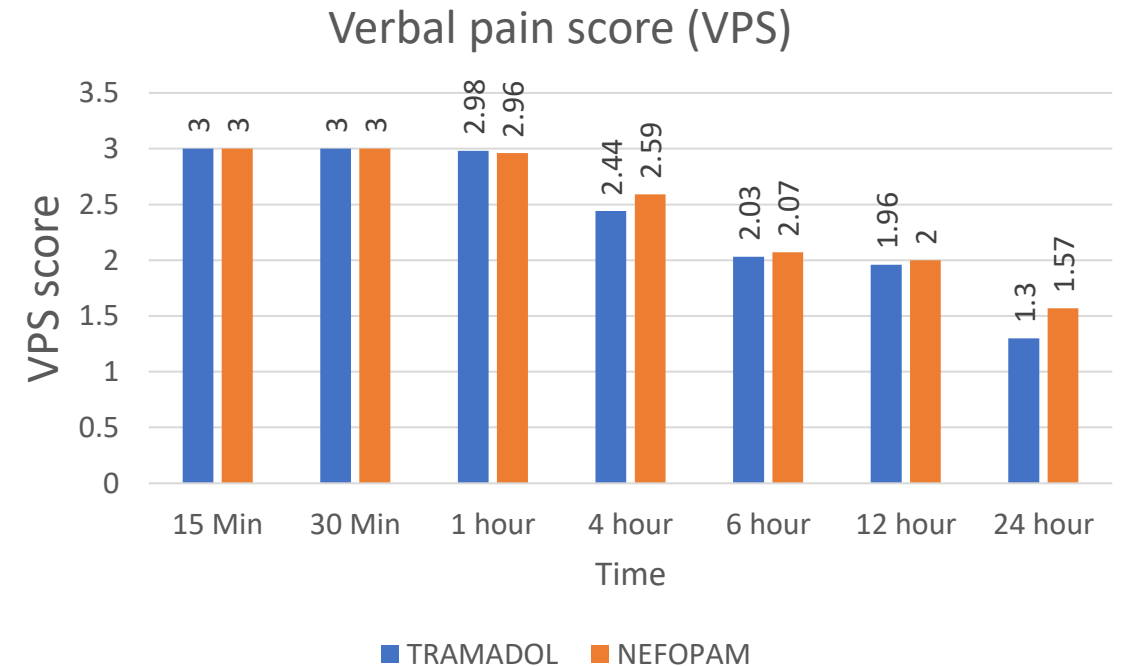
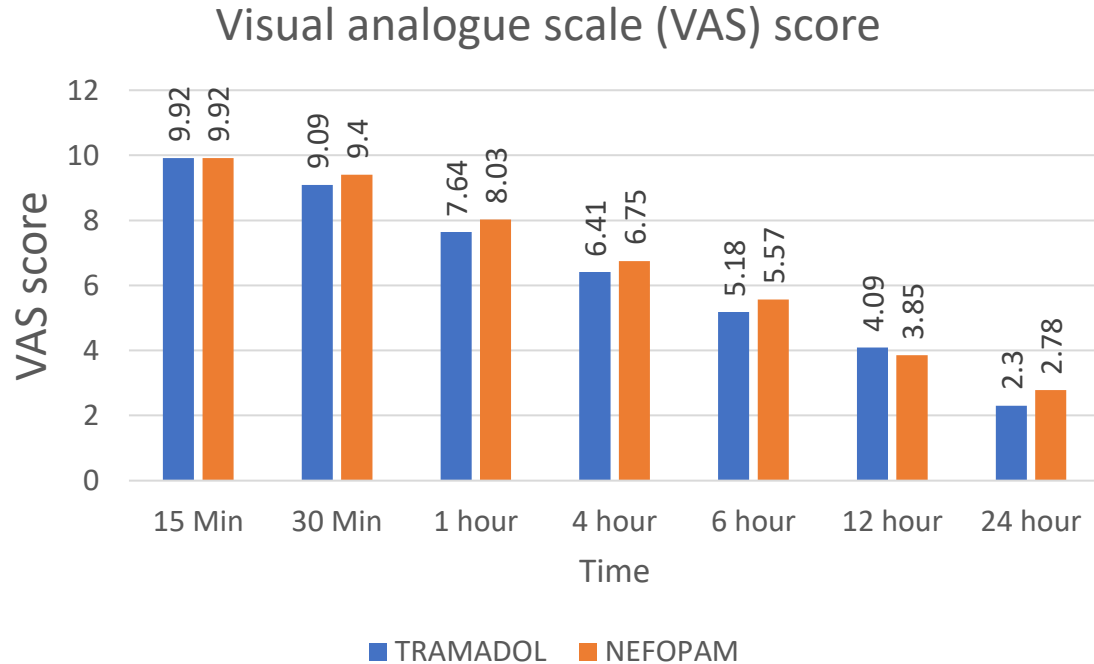
METHOD:-

- **INCLUSION CRITERIA:-** (1) All patients undergoing long bone fracture fixations. (2) Age between 18-60 years .
- **EXCLUSION CRITERIA:-** (1) Contraindications for Nefopam Hydrochloride or Tramadol Hydrochloride use. (2) Severe Cardiac disease, Renal or Hepatic insufficiency, Glaucoma, Mentally unstable, drug addicts. (3) Patients on Epidural analgesia during/after surgery.
- All patients satisfying the inclusion criteria were randomly divided into two groups.
 - > Group A :- All odd numbered patients.
 - > Group B :-All even numbered patients.
- **Patients of group A** received injection TRAMADOL HYDROCHLORIDE (100mg) in 100ml NS as an intravenous infusion over a 15-min period, three times a day.
- **Patients of group B** received injection NEFOPAM HYDROCHLORIDE (20mg) in 100ml NS as slow intravenous infusion during a 60-min period, four times a day.
- Diclofenac sodium 75 mg intramuscular used for rescue analgesia.

- Outcome was measured by Visual analogue scale (VAS) score, Verbal pain score (VPS), any side effects related to drug during 15 mins, 30 mins, 1 hour, 4 hour, 6 hour, 12 hour and 24 hour after 1st dose of drug administration.

RESULT:-

- A total of 129 patients were included in the study. There were 65 patients in Group A and 64 patients in group B respectively.



- There were no significant differences in the VAS scores (p value-0.87) and VPS scores (p value-0.83) between the groups throughout the postoperative period until 24 hours.
- The rescue analgesia requirements were slightly higher in nefopam group than tramadol group. Two patients in tramadol group and four patients in nefopam group reported minor adverse effects but serious adverse effects were not noted in this study.

CONCLUSION:-

- Intravenous Nefopam and tramadol both were effective in providing pain relief in patients undergoing long bone fracture fixations under general anesthesia, but Tramadol resulted in early pain relief.

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