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RESEARCH ARTICLE

A COMPARATIVE STUDY OF INJECTION DICLOFENAC SODIUM VERSUS INJECTION PARACETAMOL INFUSION AS POST-OPERATIVE ANALGESIA IN LAPAROSCOPIC ABDOMINAL SURGERIES UNDER GENERAL ANAESTHESIA

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Diclofenac Sodium, Paracetamol Post-Operative Analgesia, Laparoscopic Surgeries

Abstract

Post operative pain is acommon symptom causing post-operative psychological stress and anxiety leading to physiological effects. This research paper compares the analgesic effect of IV Diclofenac Sodium versus IV Paracetamol infusion in post operative period following laparoscopic abdominal surgeries. Patients are divided into 2 groups and observations are made with regards to the duration of analgesia and drug related post opertaive complications in both these groups.

Introduction:-

Pain is a common symptom in post-operative period,arising due to operative tissue damage and physiological sensation due to psychological stress and anxiety.Impact of inadequate pain relief can result in interference in early mobilization and other normal physiologic activities.NSAIDs and Paracetamol both have well-documented analgesic properties.They are now a days preferred to overcome the side effects of opioids like respiratory depression.[1]NSAIDs have additional anti-inflammatory activity(weak COX inhibitor)[2]

Aims and Objectives:-

1. To compare effectiveness for analgesia among IV Diclofenac Sodium (1.5 mg/kg) versus IV Paracetamol infusion(2 mg/kg) following laparoscopic abdominal surgeries.
2. To observe and compare post-operative complications after and during administration of analgesic drugs.

Materials and Methods:-

The study was conducted from April 2021 to April 2022 in the Anaesthesiology department of SBKS Medical Institute and ResearchCentre, Vadodara, Gujarat.Patients belonging to the age group of 20-60 years, with either ASA grade 1 or 2,posted for routine laparoscopic abdominal surgeries,who agreed to participate in study were taken. Patients receiving any other method of analgesia during immediate post operative period in the form of vaginal or rectal analgesic suppositories or other local nerve blocks were excluded from the study. Total 60 patients were included in study. They were divided in two groups,30 in each group.

Group A: Received IV Diclofenac Sodium (1.5 mg/kg) as bolus .
Group B:Received IV Paracetamol infusion(2 mg/kg) slowly over 20 minutes.

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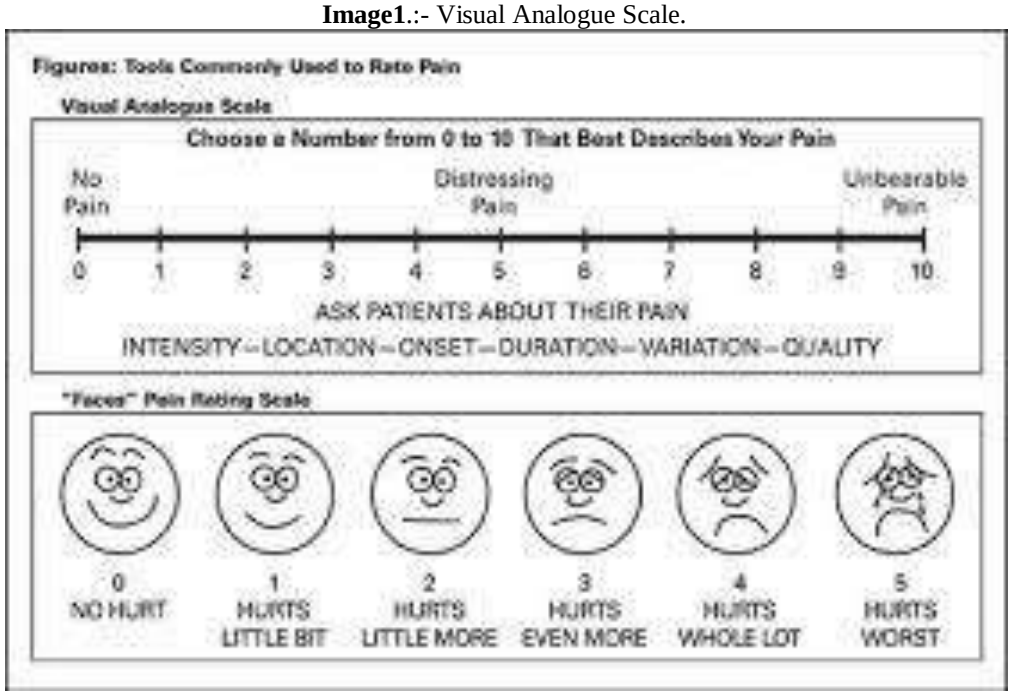
Patients were observed for onset of analgesia and time duration, for which there was no need for other rescue analgesia was noted. Patients were observed in post-operative period for general condition,vitals and any systemic complication.

Pain wasscored by visual analogue scale.

Image1.:- Visual Analogue Scale.



Observation And Discussion:-

The duration of post operative analgesia amongst the 2 groups was compared. It was observed that IV Paracetamol bolus had longer analgesic effect compared to IV Diclofenac sodium bolus. Similiar results were obtained in the study of Bisht et al[3]

Table 1:- Table showing comparison of duration of analgesia amongst the 2 groups.

VARIABLE	GROUP A	GROUP B	P Value
DURATION OF ANALGESIA (min.)	337.3 +/- 28.3	442.76 +/- 31.5	<0.0001

Significant p Value <= 0.05

The above table shows that the mean duration of analgesia in group A was 337.3 +/- 28.3 and in group B was 442.76 +/- 31.5. The difference was statistically significant (p Value <0.0001)

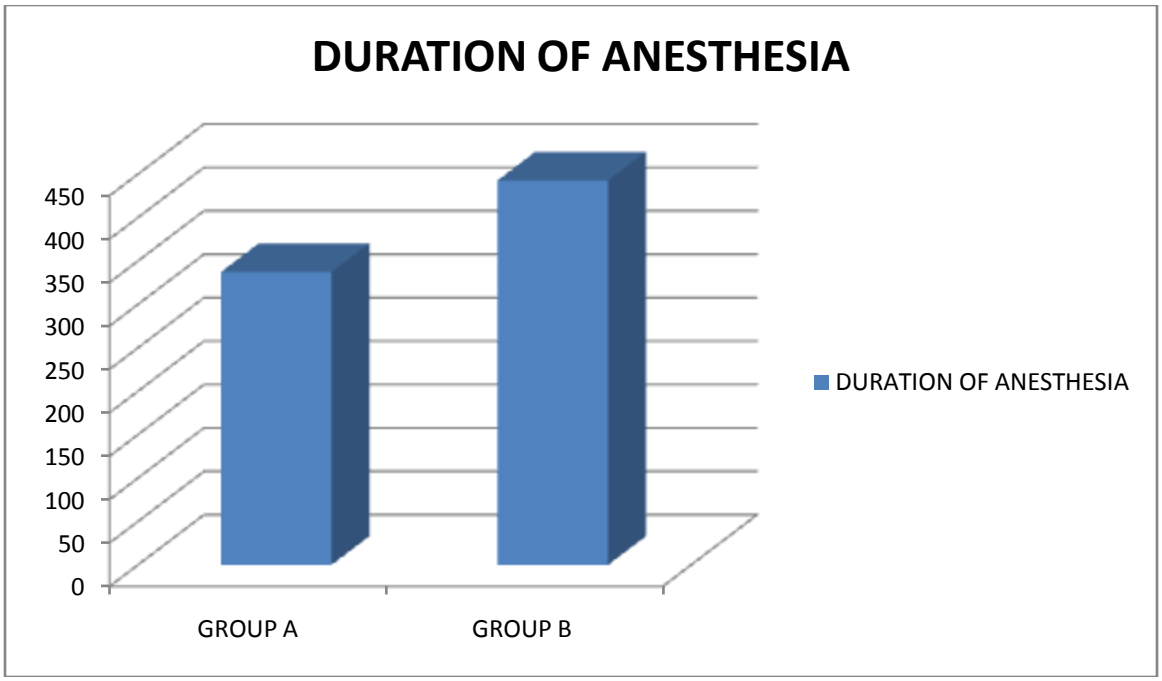
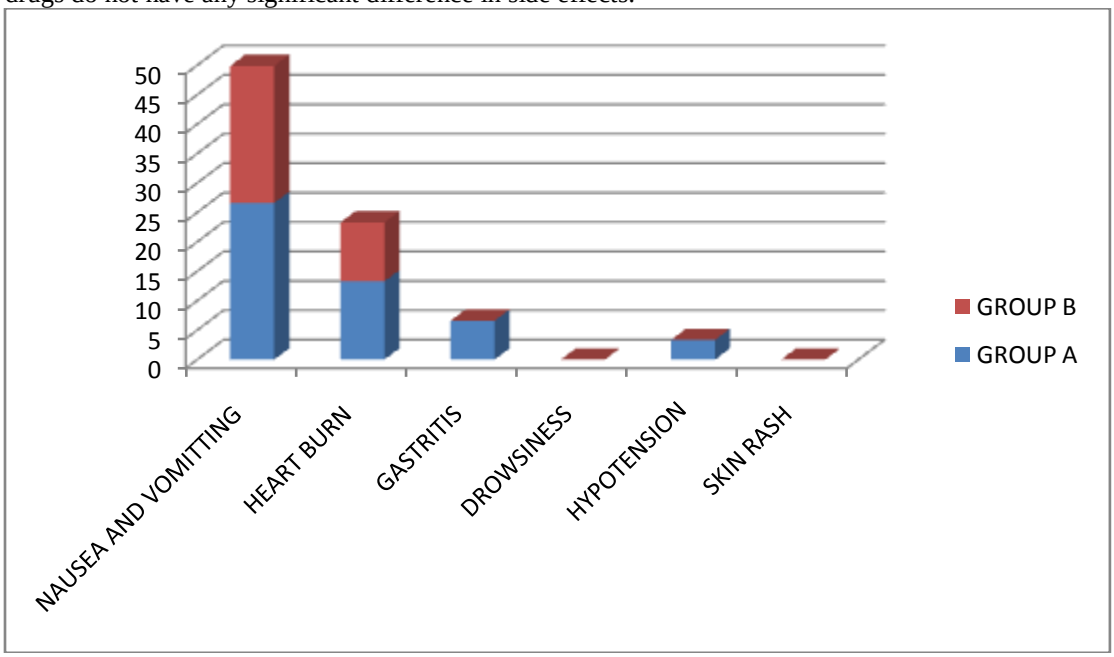


Table2:-Comparison of complications between the 2 groups.

COMPLICATIONS	GROUP A	GROUP B	P Value
Nausea and Vomiting	8 (26.6 %)	7 (23.3%)	>0.10
Heart Burn	4 (13.3%)	3 (10%)	>0.20
Gastritis	2 (6.6%)	0	>0.06
Drowsiness	0	0	
Hypotension	1 (3.33%)	0	0.08
Skin Rash	0	0	

Significant p Value <= 0.05

The above table shows that the occurrence of complications amongst both the groups was insignificant. The two drugs do not have any significant difference in side effects.



Conclusion:-

The above study concludes that IV Paracetamol provides longer duration of analgesia as compared to IV Diclofenac Sodium bolus. Any serious complication for which drug was stopped or treatment to tackle drug related complications were not noted. Injectable Paracetamol is thus a better analgesic compared to Injection Diclofenac Sodium in view of better analgesia.

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