TENS as an Analgesic Adjuvant in Postherniorraphy Pain

Postoperative analgesia is an essential part of the perioperative management. Transcutaneous Electrical Nerve Stimulation (TENS) is one of the numerous nonpharmacological methods of acute pain relief. There are several advantages to using TENS as a supplement in the management of postoperative pain. TENS can reduce the overall need for opioid analgesics by 50% or more[1,2]. This decrease may reduce the incidence of opioid side effects. Two studies failed to show any significant difference of TENS compared to SHAM TENS in relieving postoperative pain and reducing analgesic requirements[3,4]. Hence in this study, we aimed to prove

the analgesic efficacy of TENS in patients undergoing herniorraphy.

After informed consent, 50 adult ASA I patients of unilateral inguinal hernia were randomly divided into two groups of 25 each. They were premedicated with inj. diazepam (0.2 mg/kg) and atropine. Spinal anaesthesia with 1.5 ml 5% lignocaine was administered. In the immediate postoperative period of first twelve hours, electrodes of TENS were placed and one group had their supply cut off ('C' group). In the other group, the frequency and amplitude were adjusted to get a minimal tingling sensation (T group). The electrodes were just washed with soap water, dried and kept outside the closed inicision. The severity of pain was assessed by a blinded staff nurse by a 11 point numerical rating scale. The sedation scores were maintained as follows : Asleep and comfortable; Awake and comfortable and Awake with pain.

Pulse, blood pressure and respiratory rate were monitored every three hours. All patients received inj. pentazocine i.v if they complained of pain in 6 mg increments. If the three hour requirement of pentazocine exceeded 30 mg, inj. ketorolac 30 mg i.m was administered. All data were entered in a suitable proforma and subjected to statistical analysis using student 't' test.

Table - 1

Postoperative pain scores (mean±SD)

Hours	Group T	GroupC
0	4.84±2.23	6.76±3.10
3	5.36±1.83	5.56±2.5
6	4.00±1.38	4.50±2.74
9	3.44±1.44	4.64±2.26
12	3.58±1.89	3.96±2.14

The groups were homogenous with regard to age, weight and sex. Pain and sedation scores were similar in both groups (Table-1). The pentazocine requirements were significantly less in the 'T' group ($p<0.05$). With regard to kotorolac, the requirements were very low in the 'T' group ($p<0.01$) (Table-2). There was no significant difference in the vital signs between the two groups. One patient of 'C' group had vomiting which was controlled with inj. metoclopramide. No patient had postoperative infection of the incision site. To conclude, TENS, can be effectively used to decrease analgesic requirements in the postoperative period.

Table - 2

Ketorolac requirements

Group	No. of patients
T	5
C	19

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Hypersensitivity to Infiltration of Bupivacaine

We report a patient who had hypersensitivity reaction following small dose bupivacaine infiltration.

A sixty year old man with choledocholithiasis came for laparoscopic cholecystectomy. He weighed 68 kgs, had history of allergic rhinitis and had undergone tympanoplasty under general anaesthesia uneventfully. His clinical findings and laboratory investigations were normal. He was premedicated with 70 mg of pethidine and 35 mg of chlorpromazine intramuscularly 1 hr prior to surgery.