

## Achieving Most Effective Analgesia in Pain Control Post Appendectomy patients on first and second post-operative day

ISHTIAQ AHMED<sup>1</sup>, MASOOD AHMED<sup>2</sup>, MUHAMMAD KAMAL SUBHANI<sup>3</sup>, IFTIKHAR AHMAD<sup>4</sup>

<sup>1,2</sup>Senior Registrar Surgery, Khawaja Muhammad Saifdar Medical College Sialkot -Pakistan.

<sup>3</sup>Surgery Department Mayo Hospital, KEMU Lahore. Pakistan.

<sup>4</sup>Senior Registrar Surgery Al Aleem Medical College Gulab Devi Hospital Lahore –Pakistan.

Correspond to Dr. Ishtiaq Ahmed, Email: drishtiak@hotmail.com Cell:03224396815-

### ABSTRACT

Present study clinically examined the 64 patients after appendectomy. For the management of post-operative pain opioid and non-opioid analgesics were given to the patients in injectable form. The findings of this study were very realistic and it has been seen that the efficacy of Nalbuphine was excellent than diclofenac sodium and Tramadol. Nalbuphine, Diclofenac Sodium, Tramadol were given to the number of patients (25.01±0.00, 25.10±1.01, 14.10±2.21) for the duration of (3.1±1.10, 3.1±1.10, 3.1±1.10) respectively.

**Keywords:** Pain control, analgesia, appendectomy

### INTRODUCTION

Anatomically appendix is located at ileocaecal junction. Exact function of appendix is still unknown however it is considered that it plays an important role in recovering from diarrhea, inflammation and infections of the small and large intestines<sup>1</sup>. Appendicitis is an inflammatory condition of the appendix and in this condition a surgical process i.e., appendectomy is adopted for its removal from the body. Human body can function properly without an appendix. In case of appendicitis swollen appendix may burst and spread bacteria into the other organs of the body cavity which is very dangerous and life-threatening<sup>3</sup>. When the appendix becomes inflamed and swollen, bacteria can quickly multiply inside the organ and lead to the formation of pus [8]. Walking or coughing can make the pain worse. Nausea, vomiting, and diarrhea are very common indications of appendicitis. Appendectomy is the standard treatment for appendicitis in which majority of the people show fast recovery without complications<sup>2</sup>.

Postoperative pain is an anticipated and temporary condition which may be of two to five days. The main cause of postoperative pain is due to burn excision or grafting procedures. Pain may increase from newly created wounds at the site where skin is grafted because of any mishandling or any contamination infections [5]. The effective relief of pain after each surgery is most important for each patient. Postoperative Pain treated by using different analgesia depends upon the conditions and levels of complications. Pain absolutely changed the social behavior, gait, posture of an individual<sup>3</sup>. Most swine will become very reluctant to move when in pain and, if forced to move, will vocalize with even greater enthusiasm than they generally display. Opioid and non-opioid analgesics

both in injectable and oral form used for the treatment of postoperative pain<sup>6</sup>.

### MATERIALS AND METHODS

Present study was conducted at surgical unit-1, Allama Iqbal Memorial Teaching Hospital Sialkot. Total 64 patients with appendicitis were selected for this study and divided them into three groups i.e., group A, group B and group C. In group A and group B the numbers of patients were 25 in each one while 14 patients were in group C. After their appendectomy, different analgesics in injectable form were given to them for three days. Nalbuphine 0.1 mg/kg i.v, Diclofenac sodium 1.5 mg/kg i/m were injected to the patients of group A and group B respectively whereas Tramadol 1.0 mg/kg i/v was given to the patients of group C. The results were interoperated by SPSS software.

### RESULTS

There were no significant differences between the groups with respect to demographics and intraoperative data. Nalbuphine 0.1 mg/kg i.v was given to individuals of group A and its efficacy was excellent as compared to the individuals of other groups.

Table 1: Demographic Data

| Parameters                | Mean±SD      | P value |
|---------------------------|--------------|---------|
| Male                      | 48.01±00.10  | 0.00    |
| Female                    | 18.01±00.20  | 0.00    |
| Age                       | 38.29±30.20  | 0.00    |
| Weight                    | 78.20±31.10  | 0.00    |
| Duration of surgery (Min) | 127.85±13.68 | 0.00    |

<0.005

Table 2: Analgesic Effects

| Analgesic         | Number of patients Mean±SD | Duration Mean±SD | Efficacy   |
|-------------------|----------------------------|------------------|------------|
| Nalbuphine        | 25.01±0.00                 | 3.1±1.10         | Excellent  |
| Diclofenac sodium | 25.10±1.01                 | 3.1±1.10         | Good       |
| Tramadol          | 14.10±2.21                 | 3.1±1.10         | Acceptable |

<0.005

## DISCUSSION

The analgesic efficacy was considered significant if pulse rate and blood pressure changes were lesser than 20 % of baseline value<sup>6</sup>. Researchers were concluded from their studies that Pain has immunosuppressive effects and opioids analgesics may immunomodulate pain's relieving effects. Therefore analgesics provide relief in pain after surgical procedures<sup>7,8</sup>.

In the present study different analgesics were given to the patients of each group after appendectomy. Nalbuphine was given to the patients of group A (25.01±00), Diclofenac sodium was injected to the patients of group B (25.10±1.01). Tramadol was prescribed for the patients of group C (14.10±2.21). These analgesics were applied for the for the post-operative pain relief for duration of (3.1±1.10, 3.1±1.10, 3.1±1.10) respectively. Peak serum levels of these analgesics remain about six to eight hours. In this study both opioid and non-opioid analgesics were given to the patients and their efficacy is acceptable but results of Nalbuphine were excellent.

## REFERENCES

1. Malan TP, Marsh G, Hakki SI, Grossman E, Traylor L, Hubbard RC (2003). Parecoxib sodium, a parenteral cyclooxygenase 2 selective inhibitor, improves morphine analgesia and is opioid-sparing following total hip arthroplasty. *Anesthesiology* 2003;98:950-6.
2. Chew ST, Ip-Yam PC, Kong CF (2003). Recovery following tonsillectomy a comparison between tramadol and morphine for analgesia. *Singapore Med J*;44:236-8.
3. Ignacio RC, Burke R, Spencer D, Bissell C, Dossaini C, Lucha PA (2004). Laparoscopic vs open appendectomy: what is the real difference? Results of a prospective randomized double-blinded trial. *Surg Endosc*; 18: 334-7.
4. Goldman RG, Crum D, Bromberg R, Rogovik A, Langer JC (2006). Analgesia administration for acute abdominal pain in the pediatric emergency department. *Pediatr Emerg Care*. 2006;22(1):18-21.
5. Carney J, Finnerty O, Rauf J, Curley G, McDonnell JG, Laffey JG (2010). Ipsilateral transversus abdominis plane block provides effective analgesia after appendectomy in children: a randomized controlled trial. *Anesth Analg*; 111 (04) 998-1003.
6. Ousley R, Burgoyne LL, Crowley NR, Teague WJ, Costi D (2016). An audit of patient-controlled analgesia after appendectomy in children. *Paediatr Anaesth*; 26 (10) 1002-1009.
7. Thanapal MR, Tata MD, Tan AJ (2014). Pre-emptive intraperitoneal local anaesthesia: an effective method in immediate post-operative pain management and metabolic stress response in laparoscopic appendectomy, a randomized, double-blinded, placebo-controlled study. *ANZ J Surg*; 84 (1-2): 47-5.
8. St Peter SD, Adibe OO, Iqbal CW (2012). Irrigation versus suction alone during laparoscopic appendectomy for perforated appendicitis: a prospective randomized trial. *Ann Surg*; 256 (04) 581-585.