ORIGINAL ARTICLE

TOPICAL METRONIDAZOLE AND SUCRALFATE CAN REDUCE PAIN AFTER SURGERY AND PAIN ON DEFECTION IN POSTOPERATIVE HAEMORRHOIDEOCTORY.

S. K. Gahlot, S. K. Katiyar

1. Assistant Professor, Department of Anesthesiology, Major S.D. Singh Memorial Medical College & Hospital Farrukhabad.
2. Assistant Professor, Department of surgery, Rama Medical College Hospital & Research Centre, Kanpur

CORRESPONDING AUTHOR
Dr. S. K. Katiyar M. S,
FIAGES, 675, Singhpur,
Kanpur-208017,
E-mail: Drskkatiyar59@rediffmail.com,
Ph: 0091 09415044878.

ABSTRACT: Topical metronidazole (10%) and sucralfate (7%) cream has been previously demonstrated to decrease postoperative pain after hemorrhoidectomy. The aim of this study was to evaluate the effect of topical metronidazole(10%) and sucralfate (7%) cream in reducing postoperative and after defecation pain of hemorrhoidectomy. A total of 60 patients aged 25-65 Years were studied. Patient were divided into 2 group patient in group A received topical metronidazole (10%) and sucralfate (7%) in group B received placebo (petrolatum cream) pain was assessed using a visual analog scale preoperatively and postoperative hours 5 hrs, 10 hrs and days 1, 3, 7, 14 the use of narcotics, analgesics and complication were recorded. Patient in group A had significantly less postoperative pain than those in group-B upto 14 days (p<.04) in group-A after defecation pain was ranked significantly lower at day 3. Patient required lesser analgesics postoperatively on day 3 and 7 (P<.04) We concluded that topical (10%) metronidazole and (7%) sucralfate significantly reduce post hemorrhoidectomy pain and postoperative defecation pain compared with that of the placebo control group.

KEY WORDS –Metronidazole, sucralfate, Post hemorrhoidectomy, topical

INTRODUCTION: Pain is a major complication after a hemorrhoidectomy, pain management in patient is an important matter. In identifying approaches to reduce pain after a hemorrhoidectomy published studies have mainly focused on the choice of surgical techniques or prevention of secondary infection.

Both open and closed hemorrhoidectomy have been evaluated in terms of post surgical pain with antibacterial properties metronidazole has been used to diminish bacterial infection at surgery site.

In prior study, local anesthetics (bupivacaine) anti inflammatory drugs, nitrates, Lidocain aerosol have been evaluated for reducing pain after a hemorrhoidectomy these studies indicate some limitation with this medication. Such as short duration of action and serious side effects metronidazole and sucralfate in topical from has been more effective in reducing pain.

Topical sucralfate reduces pain post hemorrhoidectomy It strong adhere to damage tissue and acts as a physical barrier and protects damage tissue and facilitates healing and reduce pain.
Pain reducing with metronidazole is related to its antibacterial activity during days after hemorrhoidectomy but metronidazole’s anti inflammatory action may be also beneficial for pain reduction in hours after surgery.

The purpose of this study was to evaluate the effectiveness of topical metronidazole (10%) and sucralfate (7%) in reducing postoperative pain and pain on defecation after an open hemorrhoidectomy.

MATERIAL AND METHODS: This prospective study was conducted on 60 patients admitted in surgical wards between July 2011 and June 2012. Double blinded study evaluated the role of topical metronidazole (10%) and sucralfate (7%) on post operative pain in 60 patients who underwent open hemorrhoidectomy for grades II, III and IV hemorrhoids.

Preparation of ointment- liquid paraffin was chosen as the best levigating agent and (10%) metronidazole and (7%) sucralfate ointment was prepared by incorporation methods in a petroleum jelly base.

The patients were randomized to either metronidazole or sucralfate or placebo treatment. Patients were recommended to apply 3cm of topical metronidazole (10%) and sucralfate (7%) or placebo ointment on surgery site three times daily after a sitz bath.

Post operative pain was evaluated using a self administered visual analog scale (VAS) score-0 (no pain) to 10(very sever).

Pain scores were obtained with in 5 hrs, 10 hrs post surgery and at days 1, 3, 7, 14 pain on defecation was also recorded using VAS. Patients were asked about analgesic requirement and for any side effect.

STATISTICAL ANALYSIS: Quantitative data were compared between groups using t test qualitative data were compared using chi-squared test.

Table 1- Post surgery pain scores in group-A & group-B at 5 hrs, 10hrs, day 1, day 3 day 7, day 14 pain scores ranged from 0-No pain 10-sever pain

<table>
<thead>
<tr>
<th></th>
<th>5 hrs</th>
<th>10 hrs</th>
<th>1 day</th>
<th>3 day</th>
<th>7 day</th>
<th>14 day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Group B</td>
<td>9</td>
<td>7</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 2- Pain on defecation group-A & group-B at day 1, day 3, day 7, day 14 pain scores ranged from 0-No pain 10-sever pain

<table>
<thead>
<tr>
<th></th>
<th>5 hrs</th>
<th>10 hrs</th>
<th>1 day</th>
<th>3 day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Group B</td>
<td>3</td>
<td>4</td>
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RESULTS: Sixty patients were enrolled in the study. 32 patients received metronidazole & sucralfate and 28 patients received placebo both A & B groups were similar in age (45±15) years and (48±15) years, respectively. Most patients resided in rural area.

Patients in metronidazole and sucralfate group experienced significantly less pain at 5 and 10 hrs (P<.04) and (P<.01)

Pain on defecation was significantly lower in metronidazole & sucralfate group on day 3 (P=.02) but no significant difference was observed on day 7 and 14 (P>0.5, P=.45)

Narcotic consumption in the metronidazole & sucralfate group was significantly less compared to placebo group at 10 hrs post surgery (P<.05, additional analgesic was significantly less in metronidazole & sucralfate group on day 3 and 7 post surgery.

DISCUSSION: Post operative pain likely has two major components. Discomfort from incision and discomfort from tissue inflammation caused by infection. In primary hours and days after surgery inflammation is major cause of pain and during days after surgery infection is main causes of pain.

Metronidazole has been shown to reduces post operative pain after open hemorrhoidectomy in resent studies. The efficacy may be in part from bactericidal action in addition to its less understood anti-inflammatory action.

Topical sucralfate significantly reduce pain at day 7 and 14 after hemorrhoidectomy by its protective action on damage tissue facilitating wound healing.
Compared with the placebo group lower narcotic and oral analgesic consumption in metronidazole & sucralfate group confirms the improved pain management following an open hemorrhoidectomy.

In present study metronidazole & sucralfate topical ointment was efficacious in reducing pain on defecation at 48 hrs after surgery which suggests that inflammation may be interfering with defecation in the initial days post surgery. Overall these results suggest that addition of topical metronidazole (10%) and sucralfate (7%) to conventional pain medication may be efficacious to reduce pain in patient after a hemorrhoidectomy.

REFERENCES: