



Surgery

SINGLE SHOT OF ANTIBIOTIC IN LAPAROSCOPIC APPENDICECTOMY

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ABSTRACT **Background:** Laparoscopic appendicectomy has gained considerable popularity, both among surgeons and patients as well for the advantage of being minimally invasive, less post operative pain and faster recovery and faster return to normal routine life. This study aims to reduce irrational antibiotic use and reduce post operative hospital stay of patient
Materials And Methods: In this study 61 cases (49 male, 12 female, age range 5 to 60 year) were selected in Patna Medical College and Hospital, Patna during June 2017 to May 2018. Laparoscopic appendicectomy was done. In this study single shot of Piperacillin+Tazobactam given during operation.
Results: Overall surgical site infection rate was 10% and average hospital stay was 2.0 ± 0.4 days.
Conclusion: Thus it can be concluded that laparoscopic appendicectomy is safe and effective alternative to open surgery

KEYWORDS :

INTRODUCTION:

Appendicitis is common gastrointestinal disease, worldwide¹. Appendicitis incidence is 57/10,00,000 each year in United States². Appendicitis prevalence is highest among children and adolescents. Most common risk factors for appendicitis include age, obesity, gender, ethnicity and season. Evidence exist that appendicitis is an irreversible disease that ultimately leads to perforation and removal of appendix³. Appendicitis in 50% of patients presents with colicky abdominal (central) pain with vomiting, constipation and nausea⁴. However, migration of pain to right iliac fossa was also reported in some cases. Usually, appendicitis patients describe pain initially as peri-umbilical colicky leading towards intense and constant within 24 hours⁵. However, later on the pains migrates towards right iliac fossa. Evidence exists that initial or referred pain is due to visceral innervations of midgut. However, localized pain is due to parietal peritoneum involvement. Early diagnosis and surgery for appendicitis leads to improve quality of life⁶. Appendectomy is most common surgical procedure for appendicitis. Moreover, appropriate resuscitation following appendectomy is treatment of choice. This study aims to reduce irrational antibiotic use and reduce post operative hospital stay of patient.

MATERIALS AND METHOD

This study was performed on 61 patients (49 male, 12 female) over a period of 12 months. The mean age was 24 years. We thoroughly investigated all the patients with Performa based data collection. This includes clinical history, haematological investigations, radiological investigations chest x-ray, Ultrasonography (USG) and barium scan. CECT abdomen scan was performed in selected case only. Single shot of Piperacillin+Tazobactam antibiotic was given during operation.

Inclusion Criteria

- Patient who undergone planned laparoscopic appendicectomy.
- Patient who underwent emergency laparoscopic appendicectomy excluding findings were those whose pre operative perforated appendix, gangrenous appendix.

Exclusion Criteria

- Patient those who went emergency laparoscopic appendicectomy having perforated appendix, gangrenous appendix.
- Patient undergoing open standard appendicectomy.
- Patient on multiple dose of antibiotic.
- Patient treated conservatively.
- Pregnant female.

RESULTS:

In this study of 61 cases of laparoscopic appendicectomy performed in Department of surgery, Patna Medical College and Hospital using single dose antibiotic. This study included cases of interval

laparoscopic appendicectomy as well as cases of emergency laparoscopic appendicectomy findings were excluding those with intra-operative perforated appendix, gangrenous appendix. In a little word according to this study:

1. Most of the patient, whom appendicitis episode happened, belongs to 31-40 year age group (40%).
2. Appendicitis episode more occurred in male patient (63.33%) than female one (36.66%).
3. In this study majority of patients belongs to lower and upper lower socioeconomic group.
4. In this study most consistent symptom is right iliac fossa pain. (67%) followed by nausea.
5. As most of patients came for interval appendicectomy, it found most of patients had normal appendix (66.67%) during operation, which leads to easier dissection, and less chances of post-operative pain and surgical site infection. In this study surgical site infection in such patients was nil.
6. Patient whom preoperative observation was normal or adherent (33.33%), appendix tip in required extensive dissection which later on results in more post operative pain episode and more hospital stay time. Also such patients have more surgical site infection rate. In this study overall surgical site infection rate (10%).
7. In this study observed that when preoperative appendix is normal, it required less dissection time, such that average duration of surgery is just 31.50 ± 5.20 minute.
8. Most of post operative patient were discharged as soon as their pain subsides and patients tolerating orally, all because of normal preoperative appendix, less dissection, newer technology of dissection and post-operative higher antibiotic (piperacillin + tazobactam) use, which states in average post-op hospital stay duration which is 3.0 days.
9. In this study, half of the patients required hospitalization for only one post operative day and none of them got infected. One third of patient required hospitalization for 2 days because of pain, surgical site infection rate among them is 3.1%. One sixth of patients whom appendix dissection required more time, required hospitalization for more than 2 days for pain relief and infection rate among them is 10.00%.

DISCUSSION:

Most of the patient whom appendicitis episode happened, belongs to 31-40 year age group (40%), and were male as like other authors study. Patient, whom either appendix tip in adherent (33.33%) was found, required extensive dissection which later on results in more post operative pain episode and more hospital stay time. Also such patients have more surgical site infection rate. In this study overall surgical site infection rate (3.1%), which is much lesser than other author study. In this study when pre-operative appendix is normal, it required less dissection time. Such that our average duration of surgery is just 31.50

± 5.20 min, much lesser than other authors average 42.34 ± 8.30 min. Our post operative patient were discharged as soon as their pain subsides and patients tolerating orally, all because of normal preoperative appendix, less dissection, newer technology of dissection and preoperative higher antibiotic (piperacillin + tazobactam) use, which states in our average post-op hospital stay duration which is 3 days.

CONCLUSION:

Thus it can be concluded that laparoscopic appendectomy is safe and effective alternative to open surgery. It can be done with the use of single dose antibiotic in selected group of patients if certain criteria are fulfilled. Restricting the unnecessary criteria's are the use of antibiotic would definitely help to reduce the emergence of resistant strains of micro-organisms, chances of thrombophlebitis and associated pain, leads to less post operative hospital stay which reduces the cost of treatment to patients as well as decreases the economic burden on society.

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