International Surgery Journal
Lamture YR et al. Int Surg J. 2017 Sep;4(9):2932-2936
http://www.ijsurgery.com
pISSN 2349-3305 | eISSN 2349-2902

DOI: http://dx.doi.org/10.18203/2349-2902.isj20173873

Original Research Article

Impact of post appendectomy pain

Yashwant R. Lamture[1]*, Varsha P. Gajbhiye[2], R. K. Shinde[1], Kiran Kher[1]

[1]Department of Surgery, Jawaharlal Nehru Medical College, Sawangi Meghe, Wardha, Maharashtra, India
[2]Department of Pharmacology, Jawaharlal Nehru Medical College, Sawangi Meghe, Wardha, Maharashtra, India

Received: 01 June 2017
Accepted: 18 July 2017

***Correspondence:**
Dr. Yashwant R. Lamture,
E-mail: dryrlamture@yahoo.co.in

ABSTRACT

Background: Appendectomy is one of the commonest abdominal operation performed during emergency hours for acute appendicitis. Acute appendicitis is the common pathology in right lower abdomen. Postoperative complications following appendicectomies are not uncommon and reflect the degree of peritonitis that was present at the time of operation. Intra operative spillage and intercurrent diseases that may predispose to the complication. But all patients are not relieved of their symptoms following surgery. Few patients continue to visit surgical OPD for continuous pain in right iliac fossa even after appendectomy had been performed. So, we design proforma to find out exact cause of pain. This study is a sincere effort on our part to solve secrets of post appendectomy pain.
Methods: Evaluation of patient who continue to visit even after removal of appendix for pain in right iliac fossa. It was tried to establish correlation between relief of pain and histopathology report of appendix to justify the appendicectomies. These patients investigated to find out underlying organic cause. Functional patients were subjected for psychological evaluation.
Results: In present study from June 2006 to August 2008 we enrolled around 30 patients with complaints of pain in right iliac fossa even after appendectomy. 60% were female and 40% were male in a present study. Out of 30 cases 24 patient means 80%, were in the age group of 20 to 40 years. We found one patient means 3.33% with clinical diagnosis of stump appendicitis on radiological (barium meal follows through) examination was confirmed who responded to conservative line of treatment. All patients presented with pain in right iliac fossa symptom was the criteria for selection of patients. Exception of single patient of stump appendicitis rest were having other treatable causes.
Conclusions: Out of 30 patients only one patient was having actual stump appendicitis. It is not correct to say that post appendectomy pain is a complication of surgical procedure, as multiple treatable causes were found in 29 patients. Study demonstrated that most of these patients really had organic disease. Only two patients were simple victims of psychosomatic pain. This study enlightened nicely regarding various delayed complications of appendectomy.

Keywords: Adenocarcinoma, Carcinoma, Colonoscopy, Colorectal, Retrospective

INTRODUCTION

The classical signs and symptoms of acute appendicitis were first reported by Reginald Haber Fitz (America) in 1886. Since then it has remained the most common diagnosis for hospital admission requiring laparotomies. Approximately 6% of the population will suffer from acute appendicitis during their lifetime; therefore, much effort has been directed toward early diagnosis and intervention. This effort has successfully lowered the mortality rate to less than 0.1% for non-complicated appendicitis, 0.6% where there is gangrene and 5% for

perforated cases. The diagnosis of appendicitis can be difficult, occasionally taxing the diagnostic skills of even for the most experienced surgeon.[1] Equivocal cases usually require inpatient observation. This delay in diagnosis may increase the morbidity and costs. Attempts to increase the diagnostic accuracy in acute appendicitis have included computer aided diagnosis, imaging by ultrasonography, laparoscopy and even radioactive isotope imaging.[2]

It is the common pathology in right lower abdomen. Postoperative complications following appendicectomies are not uncommon and reflect the degree of peritonitis that was present at the time of operation. Intra operative spillage and intercurrent diseases that may predispose to the complication.[3] Wound infection is the most common postoperative complication. Late complications include post-operative adhesive intestinal obstruction and right inguinal hernia. Pain in right iliac fossa is the commonest presentation of acute appendicitis. But all patients are not relieved of their symptoms following surgery.[4] Few patients continue to visit surgical outdoor patients (OPD) for pain in right iliac fossa even after appendectomy had been performed. So, we design this study to find out exact cause of pain.[5]

This study is a sincere effort on our part to solve secrets of post appendectomy pain.

The objectives of this study were to confirm whether appendicitis or Appendicectomy was real culprit of post appendectomy pain, to study whether these symptoms are due to inadequate treatment means incomplete removal of appendix, to study whether it is a complication of surgical procedure, study whether these patients really had and still have any organic disease or they are simple victims of psychosomatic pain and to study delayed complications of appendectomy.

METHODS

Evaluation of patient done who continue to visit even after removal of appendix for pain in right iliac fossa. It was tried to establish correlation between relief of pain and histopathology report of appendix to justify the appendicectomies. These patients investigated to find out underlying organic cause. Functional patients were subjected for psychological evaluation. Present study was a retrospective and prospective observational study carried out at Acharya Vinoba Bhave Rural Hospital Sawangi Meghe, Wardha, (AVBRH), India from January 2006 to January 2008.

The source of data for our study is the patients coming to AVBRH. Numbers of cases studied were 30.

Inclusion criteria

- Patients of any age group with pain in right iliac fossa were operated for appendicititis.

Exclusion criteria

- Pregnant women
- Patients with right iliac fossa mass
- Patients with previous history of urolithiasis and pelvic inflammatory disease.

The data collected included the patient`s demographics, age and gender, the presenting symptoms.

Ethical approval for the study was obtained from the Ethics Committee Review Board of DMIMS University.

RESULTS

Figure 1 shows gender distribution in the study, around 60% were female and 40% were male in a present study. Females were more common than males because of gynecological disorders and more common urinary tract infections.

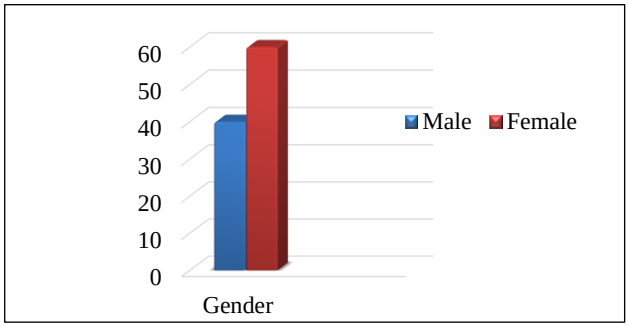


Figure 1: Gender distribution.

Out of 30 cases 24 patient means 80% were in the age group of 20 to 40 years, young age patient may have variety of other conditions like mesenteric lymphadenitis, gynecological disorders, urinary tract infections may be the cause of recurrent pain in right iliac fossa (Figure 2).

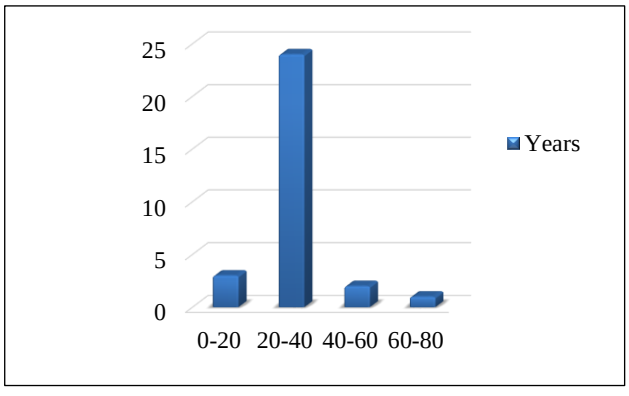


Figure 2: Age distribution.

In the present study, 20 patients were operated because of acute appendicitis in emergency and 10 were electively for chronic appendicitis (Figure 3).

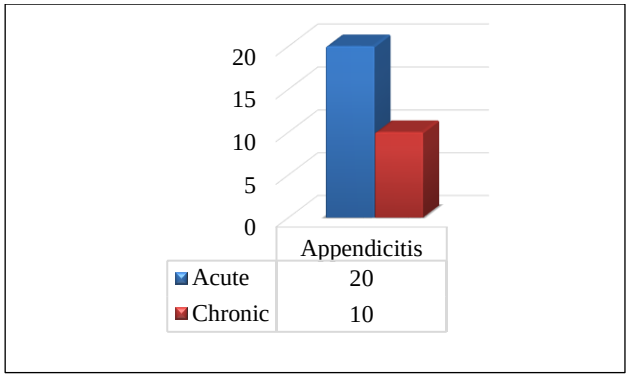


Figure 3: Distribution of appendicitis.

When investigated for cause for recurrent pain, urinary tract infection was most common disorder and stump appendicitis was least common (Figure 4).

DISCUSSION

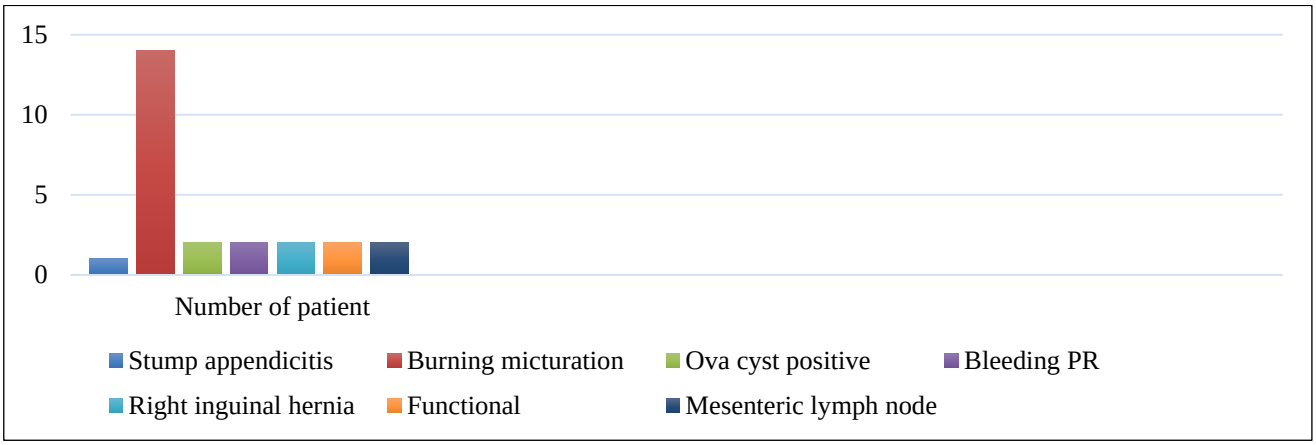
In present study from June 2006 to August 2008 we enroll around 30 patients with complaints of pain in right iliac fossa even after appendectomy.

Out of these subjects 60% were female and 40% were male in a present study (Figure 1). Piper et al have shown that diagnostic accuracy for appendicitis is low in female patient than male, there study of 1018 cases show that diagnosis was correct in 77.7% of the male and 58% of the female with error in diagnosis of 22.3% with male and 42 %with female. Main reason for it be concluded was presence of gynecological disorders in 15.5% of cases.[6]

In present studies 60% female patients presented with recurrent symptoms as against 40% of male patient suggesting diagnostic accuracy was less in female with 13.33% patient have urinary tract infection.

Out of 30 cases 24 patient means 80% were in the age group of 20 to 40 years, the preponderance of patient in this is groups can be explained by the fact that this is the age group in which patient are subjected to maximum stress and strain of life in the form of psychological trauma. Time interval between appendectomies and recurrent right iliac fossa pain was variable. Maximum number of patient's means 73.34% present 3 years after appendectomy. Out of total 30 patients 20 patients were operated during emergency hours with diagnosis of acute appendicitis. 10 patients were operated as selective cases with a diagnosis of chronic appendicitis (Figure 3).

Continuing symptoms after removal of appendix was explained by Greene JM et al that incomplete removal of appendix results because of failure of surgeon to locate true appendicocaecal junction due to abnormally situated ileocecal fold and inflammatory process that conceal the proximal portion of the appendix.[7] This remaining stump maybe a seat for subsequent inflammation. In his study, he presented with three cases of stump appendicitis. We found one patient (3.33%) with diagnosis of stump appendicitis (Figure 4).



(Stump: Stump appendicitis, Burning: Burning micturition, Bleeding: Bleeding PR, Right: Inguinal hernia, Mesent: Mesenteric lymphadenopathy).

Figure 4: Etiology wise distribution of patient.

On radiological study (barium meal follow through examination) was confirmed. Patient responded to conservative line of treatment. Pain in right iliac fossa was the major criteria for selection of patients. Urinary complaint in the form of burning micturition was associated in 14 patients (46.62 %). Out of these patients 8 patients have the demonstrable cause for their complaint, 6 patients (20%) had a right ureteric calculus in lower third, two (6.67%) patient had changes of hydronephrosis on right side without stricture on retrograde pyelography. Four (33 %) patient had chronic urinary tract infection and responded to treatment. Piper

et al also demonstrated cause of persistent right iliac fossa pain was urinary tract infection and stones in 12 out of 139 patients.

Three patients had associated vomiting out of these all had urinary tract infection.

Two patients (6.67%) presented with pain in right iliac fossa with mucoid stool. On stool examination stool for ova and cyst was positive. Both responded well to medical treatment.

Two patients (6.67%) had bleeding per anum. one had internal pile which responded to conservative treatment. One (3.3%) on Barium study found to have the inflammatory bowel disease treated by conservative management.

Two more patients (3.33%) presented with right indirect inguinal hernia. Right indirect inguinal hernia following appendix is a well described complication following appendicectomies due to segmental nerve loss and prolong sepsis.

Two patients had pain because of severe depression and anxiety.

Four patient underweight diagnostic laparoscopy for persistent pain in right iliac fossa intraoperative findings were adhesions inside at base of appendix and underwent adhesinolysis with electro cautery and got relieved of symptoms.

Two patients had mesenteric lymphadenitis diagnosed on Ultrasound examination and have symptoms due to non-specific lymphadenitis responded to broad spectrum antibiotic. In a present study histopathologically all patients were diagnosed correctly but pain more commonly found in relation to acute appendicitis than chronic appendicitis. In series done by Khairy G et al, found 9.2% of their patients had normal appendices inspite of having a preoperative CT scan.[8] This diagnostic tool has not been shown conclusive role to improve the outcome in terms of negative findings on appendicectomy and complicated appendicitis. One of the earliest studies supporting the use of routine appendiceal CT was published by Rao et al, who concluded that routine appendiceal CT should be performed to reduce the use of hospital resources. A follow-up study by the same research group demonstrated a decrease in the NAR from 20% to 7%. Many studies that have been published since then do not support the liberal use of CT scan in the diagnosis of appendicitis. Perez et al, showed no improvement in the NAR with the increased use of CT.[9,10,11] Clinical assessment without radiological imaging was shown to be superior and patients went to the operative room in a shorter time than those having preoperative CT. However, some recent publications show the significant benefit of using a preoperative CT scan in reducing NAR. Some previous reports showed that the use of laparoscopy improved the accuracy of diagnosis in acute appendicitis. The incidence rate of removing a normal appendix has been reduced to 8-20% in those patients undergoing the laparoscopic procedure compared with 10-33% in patients undergoing an open procedure. Others reported a further lower NAR for laparoscopic appendicectomy (4-13%), claiming that a normal appendix can be safely left in place. However, such a policy may expose the patient to potentially harmful investigation and risks of missing the diagnosis of an early appendicitis. Others advocated the removal of the normal-appearing appendix because at histopathology examination the normal-appearing appendix might show increased cytokines, indicating an inflammatory response. In conclusion, in spite of the advances in the diagnostic and imaging techniques, the rates of the negative findings on appendicectomy have not decreased much. Clinical judgment is still the most important factor in the management of patients with suspected acute appendicitis. The routine uses of CT scan or diagnostic laparoscopy for all patients who are suspected to have acute appendicitis is neither cost-effective nor safe. However, the use of these two diagnostic procedures in selected controversial cases can enhance the accuracy of diagnosis, reduce the cost and reduces NAR.[12-14]

In present study in 12 patient transfixation was done, in 16 patient burial and in two endoloop was as a stump treatment. Goode JV found stump invagination leads to cecal pocket abscess latter on present as right sided iliac fossa pain.[15]

In present study, even after appendectomy for acute or chronic appendicitis, few patients may present repeatedly for persistent pain in right iliac fossa that should not be neglected. Subjected for thorough examination and investigations to treat it.

CONCLUSION

Out of 30 patients only one patient was having actual stump appendicitis (Barium enema proven). Means only 3.3% patients were inadequately treated. Fortunately responded to conservative line of treatment.

It is not correct to say as it is a complication of surgical procedure, as multiple treatable causes were found.

Study demonstrated that most of these patients really had organic disease. Only two patients were simple victims of psychosomatic pain.

This study enlightened nicely regarding various delayed complications of appendectomy.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the institutional ethics committee

REFERENCES

1. Ahmed M. Al-Hashemy, Seleem MI, Appraisal of the modified Alvarado score for acute appendicitis in adults. Saudi Med J. 2004;25(9):1229-31.
2. Smink DS, Soybel DI. Appendix and appendectomy. Zinner MJ, Ashley SW. Maingot's Abdominal Operations. 11th ed. NewYork: The McGraw-Hill. 2007:589-611.
3. Williams NS, Bulstrode CJK, P Ronan. The vermiform appendix, Bailey and love's short practice of surgery. London: hodder Arnold; 2004;24:1203-18.
4. Wass SH. Chronic pain in right iliac fossa. Br Med J. 1986;2:234-6.
5. Friedlich MS, Papadatos D. Acute appendagitis as a cause of right lower quadrant pain. Canadian J Surg. 2006;49(3):215.
6. Pieper R, Kager L, Näsman P. Acute appendicitis: a clinical study of 1018 cases of emergency appendectomy. Acta Chirurgica Scandinavica. 1982;148(1):51.
7. Green JM. Incomplete removal of appendix and its complications. J College Surg. 1958;29:141.
8. Khairy G. Acute appendicitis: is removal of a normal appendix still existing and can we reduce its rate?. Saudi J Gastroenterol. 2009;15(3):167-70.
9. D Birchley. Patients with clinical acute appendicitis should have pre-operative full blood count and c-reactive protein assays. Ann R Coll Surg Engl. 2006;88:27-32.
10. Ibrahim M, Sak M, Kreshnan TR, Sharma R, Abdel-Shaheed AA, Habib MA. Ultrasonography in the diagnosis of clinically equivocal acute appendicitis: a prospective study. Kuwait Med J. 2003;35(3):271-4.
11. Williams GR. A history of appendicitis. Annals Sur. 1983;197(5):495-506.
12. Berr J, Malt RA. Appendicitis near its centenary. Ann Surg. 1984;200:5567-75.
13. 13. Stephen R. T. Evans, Appendicitis 2006,Ann Surg. 2006 Nov; 244(5): 661–662.
14. Bhasin SK, Kumar V, Mahajan M, Kumar R. A comparative study of mini-appendectomy and conventional-appendectomy in acute appendicitis. JK Sci. 2012;14(4).
15. Goode JV. Management of appendiceal stump. Annals Surg. 1943;13:956-63.

Cite this article as: Lamture YR, Gajbhiye VP, Shinde RK, Kher K. Impact of post appendectomy pain. Int Surg J. 2017;4:2932-6.