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ROLE OF DIAGNOSTIC AND THERAPEUTIC LAPAROSCOPY IN SUSPECTED CASE OF APPENDICITIS PRESENTING AS CHRONIC RIGHTILIAC FOSSA PAIN

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ABSTRACT **Objective:** To study the role of diagnostic laparoscopy and elective laparoscopic appendectomy in chronic right iliac fossa pain, correlating outcomes with histopathology and identifying other causes. **Methods:** A prospective observational study was conducted at Navodaya Medical College Hospital, Raichur, from July 2023 to December 2024 on 100 patients with chronic right lower quadrant pain (>3 months) without identifiable pathology on routine investigations. Patients were categorized by age and gender. All underwent diagnostic laparoscopy followed by laparoscopic appendectomy using the standard 3-port technique. Follow-up was done at 3 weeks, 3 months, and 6 months. The primary outcome was pain relief at 6 months, with secondary outcomes assessing correlation with histopathology and identification of alternate causes of pain. **Result:** Of 100 patients (54% female), 83% had pain relief at 3 weeks and 92% at 6 months post-laparoscopic appendectomy. Histopathology revealed acute inflammation in 24%, chronic inflammation in 36%, and normal appendix in 40%. Other causes included adhesions (5), typhlitis (1), Meckel's diverticulum (1), and PID (4). No complications or deaths occurred **Conclusion:** Diagnostic Laparoscopy with appendectomy is highly effective in alleviating chronic right iliac fossa pain in selected patients. Histopathology confirms chronic appendicitis and remains a crucial differential diagnosis. We recommend laparoscopic appendectomy as a first-line treatment option for patients with chronic right iliac fossa pain, offering faster recovery and reduced morbidity.

KEYWORDS : Chronic right iliac fossa pain, diagnostic laparoscopy, chronic appendicitis

INTRODUCTION

Chronic right iliac fossa pain poses a considerable diagnostic and therapeutic challenge. While acute appendicitis is well understood, the concept of chronic or recurrent appendicitis as a cause of persistent RLQ right iliac fossa pain remains debated.

Diagnostic laparoscopy has long been established as a valuable technique in surgical practice, providing a minimally invasive means of exploring the abdominal cavity and in diagnosing various intra-abdominal conditions and also in evaluation of intra abdominal organs such as including the fallopian tubes, ovaries, uterus,small bowel, large bowel, appendix, liver, and gallbladder. Research suggests that surgical intervention can provide pain relief for approximately 75% ofpatients.[2-3] Histopathological changes, including fibrosis and lymphocytic infiltration, luminal obstruction ,have been observed in some cases[3–5]. However, these findings are not unique to symptomatic patients and can also be present in asymptomatic individuals[6].Despite the use of advanced radiological imaging techniques, a definitive diagnosis may still remain elusive in some cases.[7]

Objective

To study the role of diagnostic laparoscopy and elective laparoscopic appendectomy in chronic right iliac fossa pain, correlating outcomes with histopathology and identifying other causes.

MATERIALS AND METHODS

A Prospective and Observational study was done in Navodaya Medical College Hospital and Research Centre, Raichur for duration of 18 months between July 2023 till December 2024.100 cases diagnosed with chronic right iliac fossa pain were included.

Inclusion Criteria:

- Patients with chronic or recurrent right iliac fossa pain for more than three months in whom routine investigations did not reveal any pathology and conservative management has failed.
- Patients aged 13 years or above among both sexes.
- Patient should have experienced continuous pain or at least one pain attack in the month prior to inclusion.

Exclusion Criteria:

- Age less than 13 years.
- Pregnant females.
- Patients not consented for inclusion in the study.
- Previous abdominal surgery
- Known case of specific gastrointestinal, gynecological or urological diseases.

Categorizing the patients according to the age group, and in our study we included individuals of the age group 13 years and above among these the incidence of the disease in each of the decade was recorded.

Categorizing the patient according to the gender, to study the incidence of the disease and post operative pain relief was measured and correlated with histopathological findings. A written informed consent was taken from all patients and they were explained about the nuances of the study. They were asked to keep a record of the intensity of their pain to compare it with the pain post-operatively.

Diagnostic laparoscopy was performed by the standard 3-port technique, with a 10mm umbilical port and 5mm supra-umbilical and left iliac fossa ports .During diagnostic laparoscopy abdomen was inspected and if any pathology is found which needs surgical intervention then it was dealt with accordingly. All patients under went therapeutic appendecetomy.Appropriate biopsies,cytology,cultures were carried out laparoscopically.

All patients were asked to follow-up in the OPD of our institute on day 10 for suture removal. They were further asked to follow-up after 3 weeks, 3 months and at 6 months and relief of pain at the end of 6 months was recorded. The pain was graded in the following manner:
Grade 1- Pain worse than before
Grade 2- Pain reduced ,but not completely pain free
Grade 3- Completely pain free

Statistical analysis was done using SPSS software. Categorical data

was represented in the form of frequencies and proportions. Chi square test was used as test of significance for qualitative data. Continuous data was represented as mean and standard deviation. Independent's' test was used as test of significance to identify the mean difference between two quantitative variables. P value (probability that the result is true) of <0.05 was considered as statistically significant

RESULTS

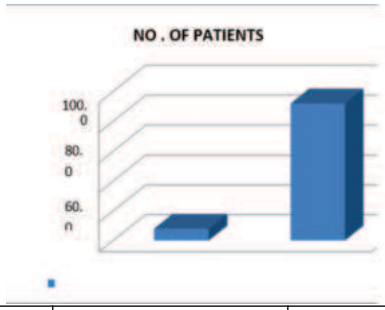
In our study, among the total population of 100 patients,54 %were females and 46% were males.The age group with maximum number of cases was the 23 –32years , in both males and females ,the total sum being 48 cases among the 100 cases, accounting to 48% of the total cases.

All 100 patients (100%) had chronic right lower quadrant abdominal pain and along with that 2 patients (2%) had fever and 11 patients (11%) had vomiting.

Table 1: Distribution Of The Study Subjects Based On Pain Relief After 3weeks.

	Frequency	Percent	Valid Percent	Cumulative Percent
1	3	3.0	3.0	3.0
2	14	14.0	14.0	17.0
3	83	83.0	83.0	100.0
Total	100	100.0	100.0	

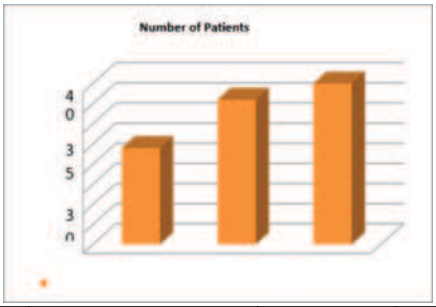
This shows 83 patients (83%) showed complete relief of pain and 14 patients (14%) showed remarkable pain relief , while 3 patients (3%) still complained of right lower quadrant pain after 3 weeks.



0.0	1	2
Series1	8.0	92.0

Fig 1. Distribution of the study subjects based on Pain relief after 6 months.

This shows 92 patients (92%) had relief of pain and 8 patients (8%) complained of right lower quadrant pain persistence after 6 month



0	Acute	Chronic	Normal
Series1	24	36	40

Fig 2. Distribution of the study subjects based On Histopathological features of removed Appendix.

This shows that 24 patients (24%) had acute features of inflammed appendix, 36 patients (36%) had chronic histopathological features and 40 patients (40%) had normal features.

DISCUSSIONS:

From our study, it has been shown that doing an appendectomy in patients presenting with chronic right quadrant pain is more likely to relieve the pain than in leaving the appendix in situ , aligning with Paredes Esteban RM et al [8] study findings.

Chronic Right iliac fossa pain was the chief complaint in all of the 100 patients (100%) and 2 patients (2%) had fever and 11 patients (11%) had vomiting. It has been identified that except chronic and recurrent right iliac fossa pain, no other clinical characteristics helps in establishing the diagnosis of chronic appendicitis, unlike in acute appendicitis. There were neither typical signs and symptoms nor routine diagnostic modalities to diagnose chronic appendicitis. In our study, it shows that 83 patients (83%) had complete relief of right lower quadrant pain after 3 weeks after laparoscopy appendectomy and at the end of the 6 months after, 92patients (92%) had complete relief but still8 patients (8%) complained of right lower quadrant abdominal pain consistent with Charles C van Rossen et al [9] findings .

In our study, other causes of right iliac fossa pain diagnosed on laparoscopy were– adhesions in 5 patients, typhilitis in 1 patient, meckel's diverticulum in 1 patients, pelvic inflammatory disease in 4 patients ,similar findngs were noted by Caroline Pardy,Kapil Rajwani, et al[10]

Though the clinical data is convincing on pain relief after the appendectomy, the histopathological findings confirm chronic appendicitis, highlighting its importance in the differential diagnosis of chronic right iliac fossa pain , aligning with studies conducted by Leardi S, Delmonaco S, Ventura T, et al [11]

CONCLUSION:

Diagnostic and therapeutic laparoscopic appendectomy is highly effective procedure in alleviating chronic right iliac fossa pain in carefully selected patients. While histopathological examination of the removed appendix confirms chronic appendicitis, it remains a crucial differential diagnosis for patients presenting with chronic right iliac fossa pain.In our study, other causes of chronic right iliac fossa pain diagnosed on laparoscopy were– adhesions, typhilitis, meckel's diverticulum, pelvic inflammatory disease..Laparoscopic appendectomy offers a superior alternative to open laparotomy, providing a minimally invasive solution with faster recovery times and reduced morbidity.

We recommend considering chronic appendicitis as a viable diagnosis and laparoscopic appendectomy as a first-line treatment option for patients with chronic right iliac fossa pain..

REFERENCES

1. Sharma, A., Sethi, D. and Sethi, A., 2018. Laparoscopy: a tool for undiagnosed pain abdomen. International Surgery Journal, 5(10), pp.3350-3355.
2. De Kok HJ (1992) Laparoscopic appendicectomy: a new opportunity for curing appendicopathy. J SurgLaparoscEndos(4):297– 302 2.
3. Mussack T, Schmidbauer S, Nerlich A, Schmidt W, Hallfeldt KK (2002) Chronic appendicitis as an independent clinical entity [German]. Chirurg; 73(7):710-5. German. doi: 10.1007/s00104-002-0437-1. PMID: 12242981.
4. Mattei P, Sola JE, Yeo CJ (1994) Chronic and recurrent appendicitis are uncommon entities often misdiagnosed. J Am CollSurg 178:385–389.
5. Falk S, Schutze U, Guth H, Stutte HJ (1991) Chronic recurrent appendicitis. A clinicopathological study of 47 cases. Eur J PediatrSurg 1:277–281
6. KroneHA,SperkeE(1989)Preventiveappendicectomyingynaecologicsurgery.Report of1718cases.GeburtsblifeFrauenbeilkd49:1035–1038
7. Husain, M., Sachan, P.K., Khan, S., Lama, L. and Khan, R.N., 2014. Role of diagnostic laparoscopy in chronic and recurrent abdominal pain. Tropical Gastroenterology, 34(3), pp.170-173.
8. Paredes Esteban RM, Salas Molina J, Ocaña Losa JM, Espin Jaime B. [Indication of appendectomyintherecurrent abdominalpain].CirugiaPediatrica:Organo Oficialde laSociedadEspanoladeCirugiaPediatrica. 2004Apr;17(2):65-69.PMID:15285587.
9. Charles C, vanRossem, KaijTreskes. Laparoscopic appendicectomy for chronic right lower quadrant pain. Int J Colorectal Dis. 2014;29:1199-202.
10. Pardy, C., Rajwani, K., Lahiri, R. and Mahomed, A., 2016. Laparoscopic appendectomyforchronicrightiliacfossapain:correlatinghistologywith outcome. Journal of Laparoendoscopic & Advanced Surgical Techniques, 26(4), pp.314-317.
11. Leardi S, Delmonaco S, Ventura T, et al. [Recurrent abdominal pain and "chronic appendicitis"]. Minerva Chirurgica. 2000 Jan-Feb;55(1-2):39-44. PMID: 10832282.