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Original Research Article

Analysis of diagnostic laparoscopy in chronic right iliac fossa pain

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ABSTRACT

Background: Chronic right iliac fossa pain with normal radiological and laboratory finding is common indication for diagnostic laparoscopy by general surgeon. Most common cause of chronic right iliac fossa pain is appendicitis. Laparoscopic appendectomy is commonly done in diagnostic laparoscopy if other cause is not found.
Methods: Patients of all the age group and either gender, undergone diagnostic laparoscopy for chronic right iliac fossa pain longer than 3 months with normal radiological finding in the surgical department. Diagnostic and therapeutic role of laparoscope was assessed.
Results: 83% patients were showing visible positive finding on diagnostic laparoscopy. On follow up after 1 month, 90% patients show reliving of pain.
Conclusions: Diagnostic laparoscopy is minimal invasive surgical procedure. It is useful when other pathological and radiological investigations are inclusive.

Keywords: Chronic right iliac fossa pain, Diagnostic laparoscopy, Pain relieved

INTRODUCTION

Chronic right iliac fossa pain with normal radiological and laboratory finding is common indication for diagnostic laparoscopy by general surgeon.[1] Patients with chronic abdominal pain are undergoing various radiological tests but their pain is remaining.

Most common cause of chronic right iliac fossa pain is appendicitis. Laparoscopic appendectomy is commonly done in diagnostic laparoscopy if other cause is not found.[1-4]

Other causes of right iliac fossa pain are adhesions, ileo-ceacal kochs, ileitis, right ovarian cyst, salphingitis, and mesenteric lymphadenitis. Some times with recurrent right iliac fossa pain remain despite normal radiological finding and with recurrent antibiotic treatment.[5-7] And in these cases, diagnostic laparoscopy is choice which provides diagnosis and treatment mostly in single sitting.[5-7] Diagnostic laparoscopy alleviates the pain in most of cases.[1,8] Laparoscopy is the primary invasive intervention in patients with chronic abdominal pain.[3]

Objectives of the study was to find cause for chronic refractory right iliac fossa pain longer than 3 months in patients of normal radiological finding and to know the outcome of laparoscopy procedure whether pain reduced or remain.

METHODS

Prospective observational cross sectional study was done of patients of all the age group and either gender, undergone diagnostic laparoscopy for chronic right iliac fossa pain of longer than 3 months with normal radiological finding from December 2015 to June 2016 at

Surgery department, GMERS Medical College, Gandhinagar, Gujarat, India.

Inclusion criteria

Patients of all the age group and either gender, undergone diagnostic laparoscopy for chronic right iliac fossa pain longer than 3 months with normal radiological finding in the surgical department was included.

Exclusion criteria

Previously operated for appendectomy.

Study was started after institutional ethical committee approval. All the patients were explained about the nature of the study and written informed consent was obtained prior to inclusion in the study. Patients had given option to take treatment without participants in study. Patients of all the age group and either gender with chronic right iliac fossa pain longer than 3 months with normal radiological finding were undergone diagnostic laparoscopy in the surgical department. Operative diagnosis was done and histopathology of biopsy done. Post-operative pain was evaluated. Follow up every week till 1 month was done.

RESULTS

In present study of 30 patients, male patients were 7 (23%) and female patient were 23 (77%). Patients of age group of 1 to 10 years have total 1 (3.33%) patient and out of this, 1 (3.33%) was male and no female. Patients of age group of 11 to 20 years have total 1 (3.33%) patients and out of these, 1 (3.33%) was female and no male. Patients of age group of 21 to 30 years have total 11 (36.66%) patients and out of these, 1 (3.33%) was male and 10 (33.33%) were female. Patients of age group of 31 to 40 years have total 15 (50%) patients and out of these, 5 (16.66%) were male and 10 (33.33%) were female. Patients of age group of 41 to 50 years have total 2 (6.66%) patients and out of these, 2 (6.66%) were female and no male. There was no patient in the age group of more than 50 years (Table 2).

Table 1: Sex distribution.

Total patients	N=30	Percentage
Male	7	23%
Female	23	77%

Out of 30 patients of diagnostic laparoscopy, 20 (67%) patients were diagnosed as chronic appendicitis, 5 (17%) patients were diagnosed as no visible gross abnormality, 2 (7%) patients were diagnosed as mesenteric lymphadenopathy, 1 (3%) patient was diagnosed as pelvic inflammatory disease, 1 (3%) was diagnosed as Koch's abdomen, 1 (3%) was diagnosed as adhesion (Table 3).

Table 2: Patients according to the age.

Age group (years)	Male	Female	Total
1 to 10	1 (3.33%)	0	1 (3.33%)
11 to 20	0	1 (3.33%)	1 (3.33%)
21 to 30	1 (3.33%)	10 (33.33%)	11 (36.66%)
31 to 40	5 (16.66%)	10 (33.33%)	15 (50%)
41 to 50	0	2 (6.66%)	2 (6.66%)
> 50	0	0	0
Total	**7 (23%)**	**23 (77%)**	**30**

Table 3: Patients according to laparoscopic diagnosis.

Laparoscopic diagnosis	No. of patients n=30	Outcome of diagnostic laparoscopy
Chronic appendicitis	20 (67%)	Laparoscopic appendectomy
No visible gross abnormality found	5 (17%)	Laparoscopic appendectomy
Mesenteric lymphadenopathy	2 (7%)	Laparoscopic appendectomy with lymph node biopsy
Pelvic inflammatory disease	1 (3%)	Diagnostic
Koch's abdomen	1 (3%)	Diagnostic and biopsy
Adhesion	1 (3%)	Laparoscopic adhesionolysis

All patients of chronic appendicitis were undergone laparoscopic appendectomy. All biopsy reports were found of chronic appendicitis. Out of 20, all (100%) have pain relieved at follow up of 1 month. All 5 patients of diagnosed as no visible gross abnormality were undergone laparoscopic appendectomy. Out of 5 patients, 4 (80%) have pain relieved and 1 (20%) have pain remain. Biopsy reports of all 5 patients were suggestive of chronic appendicitis. Each 2 patients of mesenteric lymphadenopathy have undergone laparoscopic appendectomy with lymph node biopsy. Patients of mesenteric lymphadenopathy biopsy report suggestive of nonspecific inflammation. Out of 2 patients, 1 (50%) have pain relieved and 1 (50%) have pain remain at follow up of 1 month. One patient of diagnosed by laparoscopy as pelvic inflammatory disease have undergone only diagnostic laparoscopy, started antibiotic but appendectomy was not done and pain remain at

follow up of 1 month. One patient of diagnosed by laparoscopy as adhesion, laparoscopic adhesiolysis was done and appendectomy was not done. Pain is relieved at follow up of 1 month. One patient of diagnosed by laparoscopy as Koch's abdomen, undergone biopsy of omentum and lymph node with no appendectomy, started anti-tuberculosis treatment but pain remain at follow up of 1 month.

Table 4: Patients according to laparoscopic positive finding.

Total patients	N = 30
Positive laparoscopic finding	25 (83%)
No visible abnormality found	5 (17%)

Out of 30 patients, 25 (83%) patients were showing visible positive finding on diagnostic laparoscopy and 5 (17%) patients were showing no gross visible abnormality (Table 4). On follow up after 1 month, 27 (90%) patients show reliving of pain and 3 (10%) patients show pain remain.

Table 5: Right iliac fossa pain outcome after 1 month of diagnostic laparoscopy.

Laparoscopic diagnosis (N=30)	Pain relieved=27 (90%)	Pain remain=3 (10%)
Chronic appendicitis (20)	20 (100%)	0
No visible gross abnorma found (5)	4 (80%)	1 (20%)
Mesenteric lymphadenopathy (2)	1 (50%)	1 (50%)
Koch's abdomen (1)	0	1 (100%)
Pelvic inflammatory disease (1)	0	1 (100%)
Adhesions (1)	1 (100%)	0

DISCUSSION

In present study out of 30 patients, 23 (77%) patients were female. Study done by Onders RP, Mittendorf EA of laparoscopy for chronic abdominal pain had 87% female patients.[8] Similar study done by Siriwardana RC, et al had 100% female patients.[10] This finding suggest that female patients were more with right iliac fossa pain. In present study, most of patients (50%) were in age group of 31 to 40 years. Study done by Siriwardana RC, et al had common age group from 32 to 52 years.[10] Study done by Onders RP, et al had median age of 42 years.

These all results show that chronic right iliac fossa pain is more common in age above 30 years. In present study most common cause find out by diagnostic scopy of chronic right iliac fossa pain was appendicitis. Study done by Ahmad MM, et al show most common cause of nonspecific abdominal pain was appendicitis.[7] In present study, 5 patients with no visible gross abnormality had undergone laparoscopic appendectomy and 4 (80%) patients were relieved of pain on follow up. Study done by Fayez JA, et al show finding of abnormality in appendix was 92% in appendectomy patients of chronic lower abdominal pain.[4] This shows that appendectomy in chronic right iliac fossa pain without any visible and radiological finding relived the pain.

In present study 27 (90%) patients of diagnostic laparoscopic for chronic right iliac fossa pain show reliving of pain at 1 month of follow up. Study done by Siriwardana RC, et al shows similar finding of reliving of pain after diagnostic laparoscopic for chronic right iliac fossa pain.[10] Study done by Onders RP, et al also show that laparoscopy can improve the chronic abdominal pain by providing diagnostic and therapeutic role.[8] Study done by Miller K, et al also show that pain significantly reduced by laparoscopy with providing diagnosis in 89.8% of patients. This finding is similar to present study.

CONCLUSION

Diagnostic laparoscopy is minimal invasive surgical procedure. It is useful when other pathological and radiological investigations are inclusive.

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