



Efficacy of Diagnostic Laparoscopy in Chronic Abdominal Pain: An Indian Perspective

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Abstract

Aims & Objectives: To evaluate the diagnostic efficacy and therapeutic value of diagnostic Laparoscopy in cases with chronic abdominal pain.

Materials and Methods: This study included 60 patients presenting with history of abdominal pain for 3 or more months who were admitted in surgical wards between May 2011 to January 2013 with inconclusive diagnostic work up. Patients were subjected to diagnostic laparoscopy with biopsy, appendectomy or cholecystectomy if findings suggestive of pathology. Postoperatively, patients were evaluated for resolution of abdominal pain.

Results: Abdominal tuberculosis was most common cause for chronic abdominal pain (38.33%). In 51 patients with chronic abdominal pain pathological findings on laparoscopy were present, giving a diagnostic accuracy of 85%.

Conclusion: Diagnostic laparoscopy is an effective approach in the management of patients with chronic abdominal pain. It is the most specific diagnostic test for abdominal tuberculosis with its advantage of histological confirmation.

Keywords: Diagnostic laparoscopy, abdominal pain.

Introduction

Chronic abdominal pain is defined as “intermittent or constant abdominal pain of at least 3 months’ duration”. 20%-40% of the patients presenting with chronic abdominal pain have no specific etiology at the end of their diagnostic workup⁽¹⁾. Chronic abdominal pain poses as a diagnostic challenge for Surgeons. It is associated with poor quality of life, depressive symptoms⁽²⁾, social burden and suffering⁽²⁾. Laparoscopy has a

significant diagnostic and therapeutic role in patients with chronic abdominal pain besides an advantage of providing a final histologic diagnosis through target biopsies⁽³⁾

Aims & Objectives

To evaluate the diagnostic efficacy and therapeutic value of diagnostic Laparoscopy in cases with chronic abdominal pain

Materials and Methods

This study included 60 patients presenting with history of abdominal pain for 3 or more months who were admitted in surgical wards between May 2011 to January 2013 with inconclusive diagnostic work up.

All patients (both genders) above 18 years with, chronic abdominal pain continuous or intermittent with duration of at least three months were included. Patients with above criteria with normal findings on ultrasonography of abdomen+pelvis (USG A+P), contrast enhanced computed tomography of abdomen+pelvis (CECT A+P), oesophago-gastro-duodenoscopy (OGDscopy), colonoscopy and patients with previous history of abdominal operation were included.

Patients with age less than 18 years or with known malignancy or pregnant females were excluded. Patients with coagulation defects, with critical illness or medically unfit for surgery or being treated by psychiatrists or with acute abdominal pain were also excluded. Patients not consenting for the study were not included in present study.

All patients were subjected to USG (A+P), OGDscopy, colonoscopy & CECT (A+P) scan before enrollment. All patients enrolled underwent psychiatric evaluation before diagnostic Laparoscopy. Preoperative consent taken for sos adhesiolysis, appendectomy, biopsy and cholecystectomy if required.

All surgeries were done under general anaesthesia. After creating pneumoperitoneum diagnostic laparoscopy by consultant surgeon was started by a diagnostic inspection of liver, gallbladder, and anterior surface of stomach, large bowel, small bowel, appendix, gynecological organs and peritoneal surfaces.

Patients with lymph nodes underwent biopsy. Tuberculous nodules found were taken for histopathology. Adhesions found were released. Appendix if found adhered, curved or rigid was removed. Gall bladder if adhered or thickened was removed.

Patients found to have tuberculosis were started on category 1 anti-tubercular treatment (ATT). During the time of follow up, all patients were re-

evaluated for pain (severity, duration & analgesic use) at interval of two months, six months, one year. Assessment was done by evaluating pain. Positive outcome was recorded as less pain or disappearance of pain. Negative outcome was recorded as worse pain or unchanged pain.

Results

Most common findings were abdominal tuberculosis (38.33%) which was found in 23 cases. All patients proven with omental biopsy or lymph node biopsy as tuberculosis were treated with CAT 1 anti-tubercular drugs for 9 months.

The second common cause was appendicitis which was found in 16(26.67%) cases. At laparoscopy no abdominal and pelvic abnormality was noted except that appendix appeared abnormal. These appendicular abnormalities included thickened, turgid and adherent to adjacent structure. Some were curved and felt rigid. Histopathological examination was suggestive of chronic appendicitis.

Next cause was found to be intestinal adhesions for which laparoscopic adhesiolysis was done. Three patients had thickened and adherent gall bladder wall, hence laparoscopic cholecystectomy done. Two patients had ovarian cyst, so laparoscopic aspiration was done with gynaecological standby. One patient had cirrhosis of liver, managed conservatively and was referred to Medicine.

In 9 patients no abnormality was found and kept on observation. In 51 patients with chronic abdominal pain pathological findings on laparoscopy were present, giving a diagnostic accuracy of 85%.

Operative findings	Number of cases	Percentage (%)	treatment
Tuberculosis	23	38.33%	Cat 1 ATT
Appendicitis	16	26.67%	Appendicectomy
Intestinal adhesions	06	10%	Adhesiolysis
Acalculus cholecystitis	03	5%	Cholecystectomy
Ovarian cyst	02	3.33%	Aspiration
Cirrhosis of liver	01	1.67%	Symptomatic
Total	51	85%	
No abnormality	09	15%	None

2) Follow up - Post operative pain relief was assessed as shown in table.

Duration	Positive outcome (%)	Negative outcome (%)
2 months	93.33	6.67
6 months	90	10
1 year	86.67	13.33

Out of 60 cases who came for regular follow up, 52 patient had resolution of pain (86.67%), 8 patients (13.33%) had no change in pain.

The subjective benefit of laparoscopy for both the operating surgeons and for the patients is the definitive answers that no serious pathology is found intra abdominally. Therefore the placebo effect of laparoscopy may explain at least partly the patient`s pain relief. In our study 9 (15%) patients did not have any pathological findings on laparoscopy. Three of these patients had resolution of pain after procedure which was suggestive of placebo effect.

Diagnostic laparoscopy makes it possible for the surgeon to visualize surface anatomy of intra-abdominal organs with greater details better than any other imaging modality. It also provides a safe and effective means of obtaining biopsy when the nodes are small or present in locations unsuitable for image-guided biopsy. It is also helpful when adequate tissue cannot be obtained by image-guided biopsy or previously undiagnosed lymphadenopathy is encountered during diagnostic laparoscopy.

Diagnostic laparoscopy allows a surgeon experienced in laparoscopic technique to obtain adequate-sized biopsy specimen under visual control from lymph nodes in almost any intra-abdominal location.

With its easy availability, early and judicious use of laparoscopic biopsy should be considered in patients with chronic abdominal pain where other diagnostic modalities are inconclusive. In a country like India where tuberculosis is endemic, and presents with non-specific abdominal complaints and weight loss over a long period⁽⁴⁾, diagnostic laparoscopy is an excellent tool⁽⁵⁾ in the armamentarium of a surgeon to establish tissue diagnosis.

In this modern era, therapeutic trial with empirical antitubercular chemotherapy is not justified. It is fraught with the danger of missing out or delay in the diagnosis of a more sinister pathology. Diagnostic laparoscopy is the most specific diagnostic test for abdominal TB, with its advantage of histological confirmation.

There were certain limitations of our study like small sample size of 60 patients. Moreover laparoscopy is unable to assess retroperitoneal structures and intraluminal pathologies. We did endoscopies rule out these pathologies in preoperative workup. Hence more studies with large sample size are needed in Indian setting.

Conclusion

Present study showed that diagnostic laparoscopy is an effective approach in the management of patients with chronic abdominal pain. Abdominal tuberculosis is common disease in India. Diagnostic laparoscopy is the most specific diagnostic test for abdominal tuberculosis with its advantage of histological confirmation.

Nevertheless, patient selection and appropriate operative technique are essential for rewarding outcome.

References

1. Camilleri M. Management of patients with chronic abdominal pain in clinical practice. *Neurogastroenterol Motil.* 2006; 18: 499–506.
2. Ferrell BR. The impact of pain on quality of life: A decade of research. *Nurs Clin North Am.* 1995 ; 30: 609–24
3. Udwardia T.E. Diagnostic laparoscopy. *Surg Endoscopy.* 2004 ; 18: 6-10
4. Wells AD, Northover JM, Howard ER. Abdominal tuberculosis: still a problem today. *J R Soc Med* 1986 ;79: 149-53.
5. Semenovski AV, Barinov VS, Kochorova MN. Laparoscopy in the complex diagnosis of abdominal and genital tuberculosis. *Problemy Tuberkuleza* 1999; 3: 36-9.