

Emerging role of Laparoscopy in females presenting with lower abdominal pain in our setup

FAROOQ BUTT¹, IMRAN IDREES BUTT², M NADEEM ASLAM²

ABSTRACT

Background: Lower abdominal pain in females carries a long list of differentials and at times it becomes very difficult to reach a definitive diagnosis even after all investigation. In such cases, Laparoscopy becomes an important tool as it serves as diagnostic as well as therapeutic strategy.

Aim: To evaluate the role of laparoscopy for the diagnostic management in females, presenting with lower abdominal pain in our department.

Methods: This retrospective study was done at the Department of Surgery. In this study, all the female patients of age > 12 years, presenting with lower abdominal pain were included. Complete record of these patients was obtained and findings of Laparoscopic surgery were noted in a preformed proforma. All the data were analyzed using SPSS version 20 in this study.

Results: A total of 83 cases were included in the study. Most of the patients in this study were in the age group of 18-30 years 51 (61.4%). The mean age of patients in his study was found as 33.47 years (Range being 13-59 years). Most common diagnosis found per-operatively was acute appendicitis, followed by ovarian cyst and pelvic inflammatory disease. Fifteen patients had no specific pre-operative diagnosis and in them Laparoscopy was performed as a diagnostic procedure. In 5 of these patient, diagnosis made was PID, acute appendicitis (n=5) and adhesion formation (n=1). When compared to the pre-operative and per-operative diagnoses, it was found that pre-operative diagnosis was not established in 7 cases, where definitive diagnosis was changed and patients were managed as per-operative findings.

Conclusion: Laparoscopy is a good and nice tool for the diagnosis among female patients having lower abdominal pain, particularly for those cases where diagnosis is in doubt. It is easy to perform and may be used as routine procedure even developing countries like us as a diagnostic tool.

Keywords: Laparoscopy; Minimal Invasive Surgery; Abdominal Pain; Pelvic Pain

INTRODUCTION

Since its introduction, Minimal Invasive Surgery (MIS) or Laparoscopy has turned over the table from a controversial or disputed diagnosis to a definitive diagnosis. Earlier, in the case of abdominal pain, particularly in females, the exact diagnosis had been a dilemma and almost always had created a chaos. However, now it is a standard practice in developed countries to go for diagnostic Laparoscopy, if diagnosis is in doubt^{1,2}. MIS helps in such cases in two ways, both diagnostic and therapeutic. It carries an important place in the management of patients and prevents the patients from a lot of unnecessary investigations. The estimated prevalence of lower abdominal or pelvic pain in females is not exactly known but estimated to be the reason of almost 10% of visits to a gynecology clinic³. In surgical practice, it accounts for 13-40% of admissions presenting in emergency⁴.

MIS also helps in the diagnostic management of non-specific abdominal pain which is defined as acute abdominal pain of less than 7 days duration, for which there is no diagnosis after examination and baseline investigations. There may be many reasons for this pelvic pain including acute appendicitis, Pelvic inflammatory disease (PID), ectopic pregnancy and many others^{5,6,7}. As Laparoscopy has many advantages, it obviously has reduced the role of Ultrasound and Computed Sonography (CT) and whole burden of these investigations is obviated. Also previous standard practice of waiting for its self-settlement of such symptoms is now no more practiced and laparoscopy is performed to look for diagnoses^{8,9}. The objective of this study was to evaluate the role of laparoscopy for the diagnostic management of patients presenting with lower abdominal pain in our department.

MATERIALS AND METHODS

This retrospective study was done at the Department of Surgery. We included all the female patients of age > 12 years, presenting with lower abdominal pain

^{1,2}Assistant professor of Surgery, Sialkot Medical College, Sialkot

³Professor of Surgery, SIMS, Lahore

Correspondence to Dr. Farooq Butt,
Email: hafizfarooqbutt@gmail.com

and who had undergone laparoscopy. All those patients whose full record was not available and those who had undergone open surgical procedures were excluded from this study. For this study purpose, we defined the lower abdominal pain as pain below umbilicus with duration >7 days and with any associated symptoms. All such case files were included and complete biodata including age, residence, marital status and contact numbers were extracted. Also, other important clinical details including duration of symptoms, laboratory investigations and findings of Laparoscopic surgery were noted in a preformed proforma. All the data were analyzed using SPSS version 20 in this study.

RESULTS

A total of 83 cases were included in the study. Most of the patients in this study were in the age group of 18-30 years 51(61.4%). The mean age of patients in his study was found as 33.47 years (Range being 13-59 years). Regarding the diagnosis, most common diagnosis found per-operatively was acute appendicitis, followed by ovarian cyst and PID. Fifteen patients had no specific pre-operative diagnosis and in them Laparoscopy was performed as a diagnostic procedure. In 5 of these patient, diagnosis made was PID, acute appendicitis (n=5) and adhesion formation (n=1). In one of the patients undergoing diagnostic Laparoscopy, no definitive cause was found and patient was managed conservatively with broad spectrum antibiotics in post-operative period which responded well. When compared to the pre-operative and per-operative diagnoses, it was found that pre-operative diagnosis was not confirmed per-operatively in 7 cases. In these patients, definitive diagnosis was changed and patients were managed as per-operative findings.

Table 1: Final diagnosis following Laparoscopy

Final Diagnosis	n	%age
Appendicitis	43	51.8
Ovarian Cyst	16	19.2
Pelvic Inflammatory Disease	12	14.45
Adhesion formation	1	1.2
Endometriosis	3	3.6
Meckle Diverticulitis	5	6.1
Cyst of fallopian tube	2	2.4
No positive finding	1	1.2

DISCUSSION

In the case of acute abdomen, Laparoscopy is considered as invasive procedure of choice and has bypassed many invasive and difficult investigations¹⁰. Also in patients with vague and non-specific abdominal pain, definitive diagnosis is difficult to be

established and usually patients had been needing exploratory laparotomy which definitely increases morbidity, hospital stay as well as mortality¹¹. Although Laparoscopy is an invasive procedure having its own pros and cons, yet it is helpful in diagnosing many pathologies. In our study, the most common diagnosis found was acute appendicitis. Also, it is helpful for establishing a diagnosis in patients with non-specific abdominal pain. In our study, 15 patients had non-specific abdominal pain and no definitive diagnosis could have been established. It helped us to find acute appendicitis in 1/3rd of these patients. In another study, authors included all patients presenting with right lower abdominal pain, and they found Laparoscopy as a real helpful tool particularly in those patients having equivocal diagnosis. Also they found that it was helpful most to the pre-menopausal women¹¹.

There are previous studies in literature which have included all patients with vague abdominal pain⁽¹²⁻¹⁵⁾. However, in this study we had a selection bias as we included only female patients, and also those only who had lower abdominal pain. This may be a limitation of our study but in other context, we included only those patients having lower abdominal pain which is a first study of its kind from our part of world. Also, previous studies have endorsed the fact that laparoscopy is more commonly performed in females than males and mostly males having same symptoms undergo open surgery^{11,16}.

We conclude on the basis of this study, that Laparoscopy is a good and nice tool for the diagnosis and detection of disease in female patients having lower abdominal pain, particularly for those cases where diagnosis is in doubt. It is easy to perform and may be used as routine procedure even in developing countries like us as a diagnostic tool.

REFERENCES

1. Favero G, Santana B, Dogan NU, Pfiffer T, Köhler C. Laparoscopy for Differential Diagnosis and Treatment of a Rarely Remembered Cause of Acute Inflammatory Abdomen in Women: Urachal Cyst Abscess. *Journal of Obstetrics and Gynaecology Canada.* 2017;39:113
2. Bhangu A, Begaj I, Ray D. Population level analysis of diagnostic laparoscopy versus normal appendectomy for acute lower abdominal pain. *International Journal of Surgery.* 2014;12:1374-79
3. Slocumb JC. Operative management of chronic abdominal pelvic pain. *Clinical obstetrics and gynecology.* 1990;33:196-204
4. Morino M, Pellegrino L, Castagna E, Farinella E, Mao P. Acute nonspecific abdominal pain: a randomized, controlled trial comparing early laparoscopy versus clinical observation. *Annals of surgery.* 2006;244:881

5. ADIL MI, ZEB A. The Role of Diagnostic Laparoscopy for Acute Abdominal Conditions: An Evidence-Based Review. *Cell*. 2015;347:4125674
6. Thawait A, Dwivedi S, Bhatt M, Bakhshish K, Mittal A. Role of Early Laparoscopy in Diagnosis of Acute Abdominal Pain. *Journal of Contemporary Medical Research*. 2017;4:1568-74
7. Navez B, Navez J. Laparoscopy in the acute abdomen. *Best Practice & Research Clinical Gastroenterology*. 2014;28:3-17
8. Bean JF, Rowell E. Evaluation of the Adolescent Female With Acute Lower Abdominal Pain. *Clinical Pediatric Emergency Medicine*. 2014;15:243-47
9. Lockwood S, Zafar A, Dromey B, Hartley J. Diagnostic laparoscopy in the management of lower abdominal pain in female patients presenting on an acute surgical take. *International Journal of Surgery*. 2013;11:708
10. Salky B, Edey M. The role of laparoscopy in the diagnosis and treatment of abdominal pain syndromes. *Surg Endosc*. 1998;12:911-14
11. Lim G, Shabbir A, So J. Diagnostic laparoscopy in the evaluation of right lower abdominal pain: a one year audit. *Singapore medical journal*. 2008;49:451
12. Cuesta M, Eijssbouts Q, Gordijn R, Borgstein P, De Jong D. Diagnostic laparoscopy in patients with an acute abdomen of uncertain etiology. *Surg Endosc*. 1998;12:915-17
13. Taylor EW, Kennedy CA, Dunham RH, Bloch JH. Diagnostic laparoscopy in women with acute abdominal pain. *Surgical Laparoscopy Endoscopy & Percutaneous Techniques*. 1995;5:125-28
14. Stefanidis D, Richardson WS, Chang L, Earle DB, Fanelli RD. The role of diagnostic laparoscopy for acute abdominal conditions: an evidence-based review. *Surg Endosc*. 2009;23:16
15. Kumar R, Saxena N, Chaudhary P, Ahirwar N, Gautam S, Munjewar C, et al. Role of diagnostic laparoscopy in patients with non-specific abdominal pain and its correlation with clinical and radiographic findings. *Hellenic Journal of Surgery*. 2016;88:268-75
16. Horstmann R, Tiwisina C, Classen C, Palmes D, Gillissen A. Laparoscopic versus open appendectomy: which factors influence the decision between the surgical techniques? *Zentralblatt für Chirurgie*. 2005;130:48-54.