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A Study on Assessment of Diagnostic Laparoscopy in Right Iliac Fossa Pain

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ABSTRACT
Diagnostic laparoscopy reduces the number of negative laparotomies in acute abdomen and prevents severe peritonitis which may occur as a result of delay in diagnosis. The study aim was to assess the Diagnostic laparoscopy in right iliac fossa pain. Total 80 Patients in the age group of 10-70 years and both male and female with acute or chronic right iliac fossa pain and suspected appendicitis were subjected to diagnostic laparoscopy, after proper consent and proper preoperative work-up. All lesions which were diagnosed were managed as per the standard protocol. For all patients, Post-operative pain, Reintroduction of diet, hospital stay, pre-operative and post-operative complications were properly evaluated. All patients were followed up for up to 3 months. Eighty patients underwent diagnostic laparoscopy. Thirty seven patients were male and 43 patients were female. Most of the patients were in age group 20-40 years. Conversion to laparotomy was done in two cases. Diagnostic laparoscopy followed by appendisectomy should be the standard approach for appendicitis, irrespective of its anatomical and pathological types.

INTRODUCTION

Acute appendicitis is a common abdominal emergency which requires immediate surgery. Diagnostic laparoscopy gives many advantages in the management of many intra-abdominal conditions where the correct diagnosis could not be established clinically or even with the help of imaging studies[1]. In most of the patients, the clinical signs and symptoms are masked by the treatments given by the different physicians at different hospitals at different points of time. Different radiologists give different reports of imaging studies and advising to correlate clinically. In these circumstances, there is an absolute need to search for an alternate diagnostic tool. Here we thought of diagnostic laparoscopy to solve the issue. Diagnostic laparoscopy reduces the number of negative laparotomies in acute abdomen and prevents severe peritonitis which may occur as a result of delay in diagnosis[2,3].

The most common diagnostic interventions after clinical assessment include ultrasonography (USG) of the pelvis, abdominopelvic computed tomography (CT) with intravenous contrast and diagnostic laparoscopy (DL). The USG is a non-invasive method without the risk of radiation but is operator-dependent with variable success rates in diagnosing acute appendicitis. Most studies looking at its efficacy have failed to establish consistent diagnostic specificity and sensitivity[4]. On the other hand, CT scan has shown approximately 98% sensitivity, but radiation exposure and nephrotoxicity limit its use in certain individual groups. DL is a reasonably safe approach in dealing with RIF pain provided appropriately trained surgeons are available. In the India, DL has a negative appendectomy rate of around 20%.

MATERIALS AND METHODS

Total 80 Patients in the age group of 10-70 years and both male and female with acute or chronic right iliac fossa pain and suspected appendicitis were subjected to diagnostic laparoscopy, after proper consent and proper preoperative work-up.

Exclusion Criteria: Patients with suspicion of malignancy, severe co morbid illness, pulmonary and cardiac disorders, were excluded from the study. Patients with age <10 and >70 are were also excluded from the study.

All lesions which were diagnosed were managed as per the standard protocol. For all patients, Post-operative pain, Reintroduction of diet, hospital stay, pre-operative and post-operative complications were properly evaluated. All patients were followed up for up to 3 months.

Procedure: Diagnostic laparoscopy was performed with proper care. Ryle's tube used to decompress the stomach and Foleys catheter to empty the urinary bladder. Antibiotics were started pre operatively and continued according to the findings. Pneumo peritoneum was created by using direct access method. Intra-abdominal pressure was kept initially 12-14 mmHg which was reduced to 10mm Hg after insertion of all trocars.

Normal looking appendix with no obvious any other pathology was found in 3 cases. In these cases also, appendix was removed for histopathological examination. Other pathologies were dealt accordingly. Conversion to midline laparotomy was done in two cases. Open appendisectomy was done in 3 cases. In case of spillage of pus, blood or purulent fluid, suction irrigation with normal saline was done. Drains were kept in selected cases and the Drain was removed after 48-72 hours. Orals were allowed after 12-48 hours depending on pathology. Patients were discharged after 3-7 days. All specimens were sent for histopathological examination.

RESULTS AND DISCUSSIONS

Eighty patients underwent diagnostic laparoscopy. Thirty Seven patients were male and 43 patients were female. Most of the patients were in age group 20 to 40 yrs. Conversion to laparotomy was done in two cases. There are many numbers of diseases and issues including psychosomatic disorders, which can cause abdominal pain. Many patients take self-remedies and the pain scenario changes a lot. Sometimes, it becomes very difficult to elicit proper history. Intensity of pain and pain threshold also varies considerably from individual to individual. Increasing incidence of medico legal cases threaten the treating doctor to come to clear cut diagnosis for the sick person. If not diagnosed correctly, the patient will be suffering a lot. Even imaging studies cannot help in diagnosing conditions like bowel ischemia. Thus, the surgeon may be at a great difficulty. The standard teaching is whenever in doubt, always do a laprotomy and open the abdomen and see the things. But now, with laparoscopy, things are changing laparoscopy is an excellent tool, whenever the diagnosis is in doubt, It is far better than open laparotomy.

Use of laparoscopy in the management of acute as well as chronic abdominal pain is well established in literature[1,5,6]. Correct diagnosis and best treatment are possible by laparoscopy in most of the abdominal emergencies. It is the best option in children and young female due to multiple differential diagnoses[7]. Furthermore, a USG scan in the RIF pain is the preferred imaging modality in patients with suspected appendicitis due to several factors, including lack of ionizing radiation, accessibility and acceptable accuracy of diagnosis reported in the literature. However, many limitations to its use exist such as being operator-dependent, patient population (adult vs.

Table 1: Per operative findings

Diagnosis	Total no. of males	Total no. of Females	Total no. of Patients
Acute appendicitis	13	25	38(47.5%)
Appendicular abscess	6	4	10 (12.5%)
Appendicular perforation	4	2	6(7.5%)
Appendicular lump	4	4	8(10%)
Normal lookingappendix	4	2	6(7.5%)
Ectopic pregnancy	0	2	2(2.5%)
Iliocaecal tuberculosis	2	0	2 (2.5%)
Ovarian cyst	0	4	4(5%)
Small bowel intussusception	2	0	2(2.5%)
Perforated ileum	2	0	2 (2.5%)
Total no of patients	37	43	80

paediatrics) and the body habitus of an individual patient. There has been a large variation in the reported sensitivity and specificity of ultrasound in appendicitis. There is also a factor of availability of USG scans outside of normal working hours. Similar to the CT group, the patients who underwent DL had a shorter hospital stay in comparison to the group who underwent preoperative USG.

In another study[8], the use of the CT or the USG did not improve the diagnostic accuracy or decreased the negative appendectomy rate and suggests that in the atypical cases, DL should be considered which also supports our study findings. Laparoscopic appendicectomy is increasingly being performed. Laparoscopy is often used as a diagnostic tool in general surgical patients, particularly in women, with lower abdominal pain. Most of the women patients are undergoing diagnostic laparoscopy, with or without appendectomy. This has resulted in a lower positive appendectomy rate, but a higher yield of a diagnoses other than appendicitis, in the laparoscopic group, overall appendectomy rates, however, have remained unchanged[9].

CONCLUSION

Diagnostic laparoscopy followed by appendisectomy should be the standard approach for appendicitis, irrespective of its anatomical and pathological types. It is the method of choice for children and young women and obese patients. It reduces rate of negative laparotomies. Thorough exploration of peritoneal cavity is possible with laprosocpy. Non appendiceal lesions can also be diagnosed and treated properly. Smallincision, Small scar, Minimal complications like wound infection, postoperative adhesions, incisional hernia, loss of fertility are some of the real benefits of laparoscopy. Above all, Diagnostic laparoscopy has a sensitivity and specificity of 100%.

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