



DIAGNOSTIC AND THERAPEUTIC LAPAROSCOPY ON PATIENTS PRESENTING WITH AN ACUTE ABDOMEN AT NMC, SASARAM, BIHAR

Surgery

Dr. Subhash Kumar*	M.B.B.S., M.S. (Surgery), FMAS, FIAGS, Associate Professor, Departments Of Surgery, Narayan Medical College, Jamuhar, Sasaram, Bihar. *Corresponding Author
Dr. N. K. Jha	M.B.B.S., M.S. (Surg.), Professor and Head of Department, Departments of Surgery, Narayan Medical College, Jamuhar, Sasaram, Bihar.
Dr. Debarshi Jana	Young Scientist (DST) Department of Gynecology and Obstetrics Institute Of Post-Graduate Medical Education And Research, A.J.C. Bose Road, Kolkata-700020, West Bengal, India

ABSTRACT

The role of laparoscopy in the management of patients presenting to one surgical firm with an acute abdomen is discussed. Sixty-seven laparoscopies have been performed over an 18 month period and it has altered the diagnosis in 19.4% of cases and the management in 13.4% of cases. At laparoscopy the diagnosis of appendicitis was made in 37 patients (81% had attempted laparoscopic appendicectomies); pelvic inflammatory disease in 15 patients; tortedfimbrial cyst in two patients; and free pus in the right lower peritoneum as a results of a perforated appendix was seen in two patients. Normal laparoscopy was performed in five patients and four patients who presented with a perforated duodenal ulcer had the diagnosis confirmed at laparoscopy, in three cases the perforation was overseen laparoscopically. Two laparoscopies were performed on trauma patients; one stabbing and one blunt trauma to the right hypochondrium. It has been demonstrated that diagnostic laparoscopy is a useful adjunct to the general surgeon's armamentarium. It is suggested that the skill of laparoscopy is passed on to junior trainee surgeons who can use this technique to help attain a diagnosis in patients presenting with an acute abdomen.

KEYWORDS

Laparoscopy; Acute Abdomen.

INTRODUCTION

The initial management of the acute abdomen is principally performed by the junior staff of the admitting team. Both computer aided diagnosis (Adams ID et al, 1986) and fine catheter aspiration cytology of the peritoneum (Vipond MN et al, 1990) have been shown to improve decision making and reduce management errors. However, the equipment and technical expertise are not widely available for these methods. Laparoscopy has also been shown to help in the management of the acute abdomen (Paterson-Brown S et al, 1986). The recent expansion of interest in laparoscopic procedures is resulting in the relative availability of a laparoscope, camera and basic operating equipment in theatre which are accessible to trainee surgeons.

METHODS

Over an 18-month period all patients admitted in NMC, Jamuhar, Sasaram, Bihar with a diagnosis of acute abdominal pain of unknown origin were prepared for laparoscopy. Children under the age of 16 were excluded because of the unavailability of a 5 mm paediatric laparoscope.

All cases presenting with abdominal trauma (except the two discussed below) and inflammatory bowel disease were excluded as they present with distinctive features and require specific evaluation and work-up. Serum amylase and urine microscopy readily identified the non-specific presentation of cases with acute pancreatitis and renal tract disease, respectively.

All diagnostic laparoscopies were performed through a subumbilical incision using a 10 mm laparoscope.

At NMC, Sasaram, Bihar all laparoscopies were purely diagnostic as there was no camera or facilities for operative laparoscopic procedures. Once a diagnosis was obtained, if necessary, additional 5 and 10 mm ports were inserted and operative procedures were performed.

RESULTS

Sixty-seven patients (47 women : 20 men) with a mean age of 27 years (range 17-60 years) underwent emergency laparoscopy. Sixty-one patients presented with lower abdominal or right iliac fossa pain; four presented with upper abdominal pain, generalized peritonitis and free gas under the diaphragm; one presented having been stabbed in the left iliac fossa and another presented to the same hospital having suffered blunt abdominal trauma to the right hypochondrium.

It demonstrates the operative management of the 37 patients who were laparoscopically diagnosed as having appendicitis. The seven open appendicectomies were performed where, at the time, there were no facilities for laparoscopic surgery. The five conversions were for adherent retrocaecal appendices.

In five (4 women : 1 man) cases no intra-abdominal pathology could be identified. These cases underwent laparoscopic appendicectomy. One histology one appendix showed intraluminal pus and inflammation with a normal serosal surface. The other four cases were normal. All patients made an uncomplicated recovery.

Four cases presented as classical perforated duodenal ulcers. The diagnosis was confirmed laparoscopically and closure was attempted in all four cases. However, one ulcer was situated superiorly and was adherent to the undersurface of the liver and gallbladder. After dissection of these structures the ulcer was unable to be visualized satisfactorily and it was not felt safe to proceed laparoscopically. The other three cases underwent successful laparoscopic omentoplasties.

DISCUSSION

This study supports the cases for women suspected of having acute appendicitis to undergo a preliminary laparoscopy before deciding on appendicectomy. Preoperatively seven patients with a final diagnosis attempted laparoscopic, 2 cases where the diagnosis was altered at laparoscopy. Diagnosis No.3 cases Preoperative Postoperative 7 Appendicitis Pelvic inflammatory diseases Appendicitis Tortedfimbrial cyst (Hoffmann J et al, 1989). Appendicitis Non-specific abdominal pain of pelvic inflammatory disease (PID) had an initial diagnosis of appendicitis. The diagnosis was changed at laparoscopy (Berci G, et al, 1991). The other eight women had their initial diagnosis of PID confirmed at laparoscopy. The two women with a laparoscopic diagnosis of tortedfimbrial cysts were thought to have appendicitis preoperatively. They had the cysts excised laparoscopically and the normal looking appendices were not excised.

Four cases (3 women : 1 man) had a laparoscopic diagnosis of non-specific abdominal pain (NSAP) in whom a preoperative diagnosis of appendicitis had been made. These patients underwent laparoscopic appendicectomies as there was no other intraabdominal pathology visible. It is the unit's policy to perform appendicectomy in cases of a laparoscopic diagnosis of NSAP as it is felt that the operation confirms the diagnosis and may forestall a further operation.

In one woman with a preoperative diagnosis of appendicitis, a

laparoscopic diagnosis of NSAP was made and the normal looking appendix was removed.

Histological examination of the specimen revealed a normal serosal surface and intraluminal pus. Therefore the final diagnosis had to be revised to the initial one of acute appendicitis. It is interesting that this case supports our policy of removing 'normal' looking appendices when no other intraperitoneal pathology can be seen. We have shown that laparoscopy altered the diagnosis in 13 (19.4%) of cases. The preoperative management was changed in nine (13.4%) cases; those seven cases who had a diagnosis changed from appendicitis to pelvic inflammatory disease and the two cases who had the diagnosis changed from appendicitis to that of tortedfimbrial cysts (Jones PF, 1990). In all these cases the appendix was not removed. If open appendicectomy had been performed on all these cases pre-operatively diagnosed as appendicitis, 25 successful laparoscopic appendicectomies, 5 laparoscopically diagnosed appendicitis converted to open appendicectomy, 7 open appendicectomies to facilities for laparoscopic surgery.

Our results show five conversions to open appendicectomies. These were performed in the early part of the study through an appropriately placed small incision made with the aid of the laparoscope. Conversions are not so readily performed as we elect to insert additional ports or move the laparoscope between 10 mm ports in order to circumnavigate intraabdominal problems. The two trauma cases have demonstrated how laparoscopy can allow the surgeon to obtain the same amount of information as at open laparotomy. It also allows diagnostic manoeuvres to be performed, which may indicate the requirement for further surgery. Both patients had a considerably shorter and less stressful admission than if they had been treated conventionally with a formal laparotomy. However, discretion must be maintained and each trauma case should be treated on its urgency and priorities.

We feel general surgeons are 'rapidly' rather than 'gradually' becoming experienced in laparoscopy. Its usage should not be confined to elective procedures as diagnostic laparoscopy has a useful role in the acute abdomen. It is in this area that many junior staff, under supervision, will learn the basic insufflations techniques, become used to handling the laparoscope and camera as well as becoming orientated in the peritoneum and performing simple operative techniques. Laparoscopy in the acute abdomen will not only benefit the patient, it will also benefit many trainee surgeons who will be introduced to this general surgical adjunct this way. The results of this study indicate that the use of laparoscopy in the acute abdomen can lead to accurate recognition of surgical pathology, alter surgical management and lead to appropriate treatment.

REFERENCES

1. Adams ID, Chan M, Clifford PC, Cooke WM, Dallos V, De Dombal FT, et al. Computer aided diagnosis of acute abdominal pain : a multicentre study. *BMJ* 1986;293: 800-4.
2. Berci G, Sackier JM, Paz-Partlow M. Emergency Laparoscopy. *Am J Surg* 1991;161:332-5.
3. Hoffmann J, Rasmussen OQ. Aids in the diagnosis of acute appendicitis. *Br J Surg* 1989;76:1011-13.
4. Jones PF. Practicalities in the management of the acute abdomen. *Br J Surg* 1990;77:365-7.
5. Paterson-Brown S, Eckersley JRT, Sim AJW, Dudley HAF. Laparoscopy as an adjunct to decision making in the 'acute abdomen'. *Br J Surg* 1986;73:1022-4.
6. Vipond MN, Paterson-Brown S, Tyrrell MR, Coleman D, Thompson JN, Dudley HAF. Evaluation of fine catheter aspiration cytology of the peritoneum as an adjunct to decision making in the acute abdomen. *Br J Surg*. 1990; 77:86-7.