

Therapeutic Efficacy of Diagnostic Laparoscopy in Chronic Abdominal Pain of Undiagnosed Etiology



Medical Science

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ABSTRACT

Chronic abdominal pain is a common condition which we encounter quite often. As a treating doctor we need a single master modality of treatment having both diagnostic and therapeutic advantage which should be efficient enough to provide relief in patient's suffering. Diagnostic Laparoscopy has emerged as a very efficient tool in managing these patients. The aim of this study was to detect the therapeutic efficacy of diagnostic laparoscopy in chronic abdominal pain of undiagnosed etiology. Study was conducted on 100 patients of chronic abdominal pain (of more then 3 months and undiagnosed by routine available investigations) of both sex and above 14 years of age from jan 2012 to june 2014. Diagnostic laparoscopy was performed. If any specific etiology was found, then appropriate therapeutic intervention was taken in the same sitting. If nothing abnormal was found, then procedure completed by doing laparoscopic appendectomy. Patient was then reviewed in follow up at 1,3,6 and 12 month and enquired about status of their symptoms. Most common finding was chronic appendicitis (24%) followed by Adhesions (14%), Tuberculosis (12%), Ovarian cyst (8%), Mesenteric adenitis (12%), Meckel's diverticulum (2%), intussusceptions (1%), Endometriosis (5%), Normal study (22%). In follow up 91 % of the patient claimed that they have got relief from their symptoms at the end of one year. Also 63% of those patients who had normal finding in diagnostic laparoscopy and subjected to complementary appendectomy also shown improvement in their symptoms. Diagnostic laparoscopy has a descent therapeutic efficacy of 91 %. It should be considered as treatment of choice for the patients of Chronic abdominal pain of undiagnosed etiology.

Introduction- Chronic abdominal pain of undiagnosed etiology is a symptom which hassle the clinicians most in day to day practice. These patients are very difficult to manage as they have already taken opinions from many physicians, undergone a bunch of investigations and taken variety of treatment without getting any fruitful result.^[1,2] As the patient has already suffered a lot physically, mentally and economically, at this point of time we need a single master modality of treatment which has both diagnostic and therapeutic value to provide a significant relief in patient's suffering. Since last decade diagnostic laparoscopy has emerged as a useful procedure in diagnosing intraabdominal conditions in case of diagnostic uncertainty. There are some previous studies in which diagnostic laparoscopy has been used successfully in diagnosing and managing chronic abdominal pain.^[3,4] The aim of the study is to determine the therapeutic efficacy of diagnostic laparoscopy in management of chronic abdominal pain of undiagnosed etiology.

Materials and methods- A total of 100 patients suffering from chronic abdominal pain of undiagnosed etiology were enrolled in the study from jan 2012 to june 2014. It was a prospective cross sectional study done in AMC MET medical college Ahmedabad. Study design was approved by hospital ethical committee. We defined chronic abdominal pain of undiagnosed etiology as a pain with duration of more than 3 months not relieved by conventional treatment and remained undiagnosed by conventional investigations. Detailed history of these patients were taken using well defined Performa which includes age, sex, characters of pain, duration, history and records of prior treatment and investigations, any records of previous surgery if done, history of any psychosomatic illness or treatment, Family condition and mental status. Then patients were subjected to clinical examination and routine investigations. CT scan, Barium studies, upper and lower GI endoscopy were performed when clinically indicated.

Inclusion Criteria – Patients with age above 14 yrs of both sex suffering from abdominal pain acute or intermittent for more then 3 months, not responding to conventional treatment, un-

diagnosed by conventional investigations (detailed history, clinical examinations, blood counts, serum enzymes, urine examinations, stool examinations, abdominal ultrasound, X ray abdomen, KUB and chest).

Exclusion Criteria – Patients with age below 14 yrs, not fit for surgery, pregnant women, coagulopathy, any symptoms correlating with any gynecological problem, any well diagnosed acute or chronic disease.

Those patients who fit in inclusion criteria were then planned for diagnostic laparoscopy.

Operative technique – All the patients were operated under general anesthesia with standard preoperative preparation. Standard three port technique was used. One 10mm optical port in sub umbilical position and one 5mm port in suprapubic position. Second 5 mm port was placed in appropriate quadrant after visualizing abdominal cavity. All the abdominal and pelvic organs inspected, sample of peritoneal fluids were taken if present and Biopsies of suspicious areas were taken if needed. If any specific pathology was found amenable to laparoscopic management, they were treated in the same sitting laparoscopically. Where nothing suspicious fact found, Laparoscopic appendectomy was done and procedure completed. All the pathologies were confirmed by histopathological examinations postoperatively.

Postoperative hospital stay was recorded. Patients then reexamined in follow up at 1month, 3 month, 6 month and 1 year. Detail history was recorded regarding their experience with the procedure and current status of their symptoms.

Results- Most of the patients were in the age group of 25 to 35 (average 29 yrs) and 68% were females. Most common presenting symptom was diffuse continuous abdominal pain of mild to moderate intensity (52%), followed by lower abdominal pain radiating to back (38 %), followed by upper abdominal pain (10%).

Table no. 1-Intraoperative finding and therapeutic procedure performed

| Operative findings | No. of cases | Procedure done | Percentage |
|-----------------------|--------------|--|------------|
| Chronic Appendicitis | 24 | Appendectomy | 24% |
| Adhesions | 14 | Adhesiolysis | 14% |
| Tuberculosis | 12 | Biopsy and ATT | 12% |
| Ovarian cyst | 8 | Aspiration | 8% |
| Mesenteric adenitis | 12 | Biopsy and conservative | 12% |
| Meckel's diverticulum | 2 | Division of band/ stapler Diverticulectomy | 2% |
| Intussusception | 1 | Laprosopic Reduction | 1% |
| Endometriasis | 5 | Biopsy/Excision/ Cauterisation | 5% |
| Normal study | 22 | Appendectomy | 22% |

Most common finding was chronic appendicitis (24%).^[5] These were the cases where USG didn't shown the changes of acute appendicitis preoperatively. During Laparoscopy appendix was found either thickened, enlarged, curved, wrapped with omentum or adherent to other tissues. HP examination confirmed the same in almost all cases. In 14% of cases there was a small band adhesion causing kinking of the small intestine, which was removed. This finding was common in the patients who have undergone some surgical procedure in past. In 12% of cases there was whitish millary tubercles over distal small intestines, omentum and peritoneum.^[6] In these cases just a biopsy was taken and patients were put on ATT after HPE confirmation of the same. 8% patients had ovarian cysts (Hemorrhagic or simple). These cyst were aspirated and fluid was sent for analysis. These patients then advised to take gynecologists opinion. 12 % had enlarged nodes in the mesentry of distal small intestine. Rest other organs were normal. Biopsy of these nodes were taken which comes out as nonspecific lymphadenitis. Mesenteric lymphadenitis was mostly present in young patients who had history of frequent upper respiratory tract infections. These patients were then managed conservatively with I.V antibiotics and analgesics. Two patients had Meckel's diverticulum. One of them had a band attached to the umbilicus which was excised. Other one has a narrow base so laparoscopic stapler diverticulectomy was done. One patient had distal ileoileal intussusceptions. Reduction was tried Laparoscopically using nontraumatic graspers. Though it was technically difficult, but ultimately it reduced due to absence of thick adhesions. 5% had chocolate colored patches suggestive of endometriasis involving pelvic peritoneum , ovaries and uterus.^[9] We tried to excise all the patches . Those not amenable to excised were coagulated by electrocautery. These patients then sent to gynecologist for medical management after HPE examination. In rest 22 % of patients nothing abnormal was found. In all these cases complementary appendectomy was performed to give a placebo effect and to prevent any future episode of appendicitis. Post-operative period was without any significant complication in almost all case. All these patients were then re-evaluated at 1 month, 3 month, 6 month and 12 month and enquired about their symptoms. Those who dosen't came for follow up were excluded from the study. Disappearance or less pain was taken as successful outcome. The outcome was shown in Table no. 2

Table no. 2 – Therapeutic efficacy of diagnostic laparoscopy on chronic abdominal pain of unidentified etiology

| Successful outcome | At 1 month | 3 month | 6month | 12 month |
|--------------------|------------|---------|--------|----------|
| No.of patients | 88 | 92 | 90 | 91 |
| Percentage | 88% | 92% | 90% | 91% |

Discussion – The data we got from our study clearly showed that diagnostic laparoscopy is an invaluable tool in managing the patients of chronic abdominal pain. In our study we were able to diagnose the pathology in 78 % of the patients similar to some other studies. After therapeutic intervention in the same sitting we were able to provide 91% of the patients relief from their disabling pain at the end of one year (Therapeutic efficacy 91%).^[7] Those patients who didn't get any benefit are then interrogated for any functional component by psychiatrist. In our study 14 out of 22 (63%) patients who had normal finding on diagnostic laparoscopy, got relief of their symptoms by complementary appendectomy.^[8] See table no. 3

Table no. 3 – Effect of complimentary appendectomy on chronic abdominal pain of unidentified etiology

| complementary appendectomy | No.of patients | Percentage |
|----------------------------|----------------|------------|
| Done in | 22 | |
| Relief in pain | 16 | 63% |

There may be two things which can explain the placebo effect of diagnostic laparoscopy and appendectomy in these patients. First, as now the surgeon and patients both are aware from the fact that all the necessary investigation as well as direct visualization of abdomen has been done, and nothing serious pathology came out. Second, most of these patients particularly of younger age group may be suffering from some psychosomatic problem related to their personal life. During the whole process of preoperative workup, operative procedure and post operative follow-up questionnaire they got some psychological support from their relatives and some form of psychotherapy from the treating doctor, which helps in relieving their symptoms.

Conclusion- So it is clear from the study that diagnostic laparoscopy is the single most effective procedure in managing the patients of chronic abdominal pain of unknown etiology with therapeutic efficacy of over 90%. It helps the surgeon to identify and treat the problem in same sitting reducing the morbidity of patient in term of time and cost, which is of very much significance in Indian scenario where most of the patients comes from lower socioeconomic background. Its also a good tool to rule out any organic cause of patient's symptoms before labeling him as functional. Also it's a safe and quick procedure with minimum postoperative discomfort and early return to work.

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