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Evaluating Diagnostic Laparoscopy as a Tool for Investigating Chronic Abdominal Pain

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Abstract

Background and Aim: *Chronic idiopathic pain syndromes are amongst the most challenging and demanding conditions to treat across the whole age spectrum. Laparoscopy for diagnostic purposes will be performed on each and every patient who is experiencing persistent abdominal pain for which there is no known cause. This is the overarching goal of the study.*

Material and Methods: *The present investigation is a prospective observational study that was carried out in the department of general surgery, which was carried out in both the medical college and the hospital. The study was carried out in both locations respectively. There was a total of one hundred patients. The patient's demographic information, the length of time that had passed before the pain was presented, the location of the pain, the patient's abdominal examination, and the diagnostic studies that were performed were all included in the data that was recorded.*

Results: *Twenty patients experienced abdominal pain for a period of eighteen to thirty-six months, ten patients for a period of twelve to eighteen months, and five patients for a period of three to twelve months. Following Koch's abdomen, adhesions, sub-acute intestinal obstruction (SAIO), chronic cholecystitis, and hernia were the most common findings that were discovered during laparoscopy. Koch's abdomen was the first to suffer from these conditions. The most frequently observed condition was appendicitis.*

Conclusion: *When it comes to the management of patients who have chronic abdomen conditions, diagnostic laparoscopy is a tool that is not only safe but also feasible and accurate.*

Key Words: *Chronic Abdominal Pain, Cholecystitis, Hernia, Laparoscopy*

Introduction

The condition known as "chronic abdominal pain" (CAP) is characterised by the presence of abdominal pain that has been there for a minimum of three days per month for the preceding three months. Chronic obstructive pulmonary disease (CAP) is characterised by a number of significant symptoms, including a loss of daily function and persistent distress in the abdominal region. It is a common complaint that is brought up by a variety of people when they pay a visit to surgeons and when they pay a visit to physicians. Approximately thirteen percent of all surgical admissions are attributed to this condition, in addition to being the fourth most common form of chronic pain syndrome in the general population. A gastroenterologist is typically referred to patients

for this reason more frequently than any other reason.[1,2]

The most common organic conditions include intestinal adhesions, especially in patients with a past history of abdominal operations, abdominal tuberculosis, appendicular pathology, biliary causes, mesenteric lymphadenopathy, and hernia; while functional conditions include irritable bowel disease, functional dyspepsia, and various motility disorders.[3,4]

Because biochemical, serological, and imaging techniques such as ultrasound sonography (USG), computed tomography (CT), and magnetic resonance imaging (MRI) only provide indirect evidence of the underlying disorder, a significant number of the cases continue to be inconclusive. This is because these techniques only provide indirect evidence. As a consequence of this, the surgeon is confronted with a significant challenge when it comes to making an accurate diagnosis and selecting an appropriate treatment modality.[5,6]

Diagnostic laparoscopy is an essential instrument that plays a significant role in the final minimally invasive examination of patients who suffer from chronic abdominal disorders. In spite of the fact that the necessary laboratory and noninvasive imaging investigations have been carried out, the diagnosis of these disorders is still difficult to ascertain. The diagnostic laparoscopy technique can be utilised to assess a wide range of liver diseases, including but not limited to discrete masses, diffuse diseases, unexplained portal hypertension, abdominal tuberculosis, congenital anomalies, non-palpable testis, and various types of malignancies, amongst other conditions.[7-9]

Laparoscopy for diagnostic purposes should never be performed on patients who have coagulation defects, bleeding disorders, major cardiac and respiratory disorders, or any other significant bleeding disorder. Laparoscopy for diagnostic purposes will be performed on each and every patient who is experiencing persistent abdominal pain for which there is no known cause. This is the overarching goal of the study.

Material and Methods

The present investigation is a prospective observational study that was carried out in the department of general surgery, which was carried out in both the medical college and the hospital. The study was carried out in both locations respectively. Every single day of the year was devoted to carrying out the research for the study. Patients who presented themselves to the outpatient department of the medical college with the primary complaint of experiencing persistent abdominal pain were included in the research. This was done in order to ensure that the findings were accurate and reliable. Before the patients were allowed to take part in the research, they were given a thorough explanation of the study, and their informed consent was obtained so that they could participate in the study. There were a total of one hundred patients. The following are the criteria that were utilised in order to determine who was participating in the study and who was not participating in the study:

Inclusion Criteria

The participants in the study were patients who suffered from persistent abdominal pain. Diagnostic laparoscopy was evaluated as a tool for diagnosing chronic abdominal pain, chronic abdominal pain that lasted for six months or longer, patients with normal or inconclusive investigations who presented to the surgical outpatient department, and patients who were between the ages of 18 and 65 years old. The study's objectives were to evaluate the diagnostic laparoscopy as a diagnostic tool.

Exclusion Criteria

Patients under the age of 12 who were taking anti-psychiatric drugs, patients who were immunocompromised,

patients who were experiencing acute abdominal pain, patients who had cardiorespiratory disease, patients who had abdominal wall sepsis, patients who were pregnant, and patients who were known to have abdominal cancer were not permitted to take part in the study.

Documentation of the patients' medical histories was carried out with great care, and a thorough clinical examination was successfully carried out. For the purpose of documenting the findings that were obtained, a proforma was utilised. The patient's demographic information, the length of time that had passed before the pain was presented, the location of the pain, the patient's abdominal examination, and the diagnostic studies that were performed were all included in the data that was recorded. It was also possible to identify the intraoperative findings as well as the interventions that were carried out during the operation.

In addition to the large bowel, the small bowel, the appendix, the gynaecological organs, and the peritoneal surfaces, a diagnostic examination was performed on the liver, the gallbladder, and the anterior surface of the stomach. This was done before the laparoscopy was performed. Following the completion of the laparoscopic procedure, trocars measuring 5 millimetres were removed under visual control. After this, air was expelled from the intra-abdominal space, and a trocar measuring 10 millimetres was removed from the patient's abdomen. Every single one of the wounds that measured 5 millimetres was closed with absorbable sutures, whereas the umbilical wound that measured 10 millimetres was closed with non-absorbable sutures.

Statistical analysis

Both the mean and the standard deviation were calculated for each of the parametric variables being considered. Calculations of proportions were performed at each and every one of the qualitative variables simultaneously. For the purpose of determining whether or not there was a significant difference between the two qualitative variables, the Chi-square test was utilised.

Results

Participants in the study numbered one hundred in total. There were a total of one hundred patients. Patients who were between the ages of 21 and 30 made up the largest proportion of the total, followed by patients who were between the ages of 31 and 40 of the same age range. There was a standard deviation of 11.10 years in the patients' ages, with the average age of the patients being 33.25 years. Female patients made up the majority of the patients, in contrast to the number of male patients who were present. Researchers found that there was a difference between the two groups that was statistically significant.

Pain was the most common symptom that patients experienced, followed by nausea, vomiting, fever, abdominal distension, and bowel symptoms. Patients also also experienced bowel symptoms. Twenty patients experienced abdominal pain for a period of eighteen to thirty-six months, ten patients for a period of twelve to eighteen months, and five patients for a period of three to twelve months. In total, there were five patients who experienced abdominal pain for as long as twelve months. A total of thirty patients had been suffering from abdominal pain for a period of time exceeding three years.

Following Koch's abdomen, adhesions, sub-acute intestinal obstruction (SAIO), chronic cholecystitis, and hernia were the most common findings that were discovered during laparoscopy. Koch's abdomen was the first to suffer from these conditions. The most frequently observed condition was appendicitis. Every single one of the 32 patients who were diagnosed with appendicitis underwent the appendectomy through the use of laparoscopic surgery. Each and every one of the twenty-four patients who were diagnosed with Koch's abdomen underwent a laparoscopic biopsy, and those patients who tested positive for the presence of tuberculosis were

administered antitubercular medication in accordance with the protocols that had been established. As a treatment, adhesiolysis was administered to each and every patient who was diagnosed with adhesions. Patients who were experiencing subacute intestinal obstruction were treated with both band release and adhesiolysis. Both of these techniques were utilised. Laparoscopic cystectomy was performed on a patient who had been diagnosed with chronic cholecystitis in order to treat their condition. A trans-abdominal pre-peritoneal hernia repair was carried out on the patient who was experiencing symptoms of a hernia requiring medical attention.

The score on the visual analogue scale (VAS) was utilised in order to assess the degree of pain relief that was experienced following the operational procedure. Following one month and three months, the VAS score showed a significant decline in both of those time periods. When the follow-up was carried out, there was a discernible increase in the Virtual Attitude Scale score.

Table 1: Laparoscopic finding of the patients

Laparoscopy findings	No. of patients
Appendicitis	32
Koch's abdomen	24
Adhesions	24
Sub acute intestinal obstruction	8
Chronic cholecystitis	4
Hernia	2
Normal	6

Discussion

When it comes to patients who suffer from chronic obstructive pulmonary disease (CAP), diagnosis and treatment planning are typically difficult and frustrating processes. This is particularly true in situations where conventional diagnostic tools that do not involve invasive procedures are unable to determine the underlying pathological cause of the condition. In addition to being one of the most typical symptoms that occur during surgical procedures, it is also one of the most challenging issues that the clinician is required to address. Prior to the development of diagnostic laparoscopy, these patients were required to undergo a series of expensive laboratory and imaging examinations. Despite this, they continued to be dissatisfied with the outcomes of these procedures on a consistent basis.[10,11]

A number of authors are still debating whether or not laparoscopy should be used in the treatment of chronic abdominal pain. The authors in question dismiss its usefulness in adhesiolysis, consider it to be controversial, and are of the opinion that it is not supported by evidence. As a consequence of this, they do not recommend laparoscopy as a treatment for adhesions in patients who experience persistent abdominal pain.[12,13]

Chronic abdominal pain is defined as pain that is either intermittent or continuous and lasts for more than twelve weeks. This definition is based on the conventional medical practice that is considered to be the standard. There are a significant number of patients who suffer from persistent abdominal pain who either do not have a diagnosis or do not have a diagnosis that can be considered conclusive. This is the case despite the fact that there is a wide variety of investigations that can be performed. In many instances, it is a significant clinical problem that is not only frustrating for the patient but also for the physician. Patients and physicians alike find it frustrating.[1,14]

The incidence of chronic pain in the abdomen reached its highest point in the third decade, according to the findings of a study conducted by Lingala and colleagues on diagnostic laparoscopy in chronic abdominal pain. The study found that there were 84 patients who suffered from chronic pain in the abdomen. According to the findings of the research that Baria and his colleagues carried out in order to evaluate the application of the laparoscope in the diagnosis and treatment of patients who suffered from chronic abdominal pain, the age range of the participants in the study was found to be between 13 and 55 years old. There were eighty-four percent of female patients who participated in the research study.

According to the findings of the study, a laparoscopic appendectomy was carried out on each of the 32 patients who had been diagnosed with appendicitis. In each of the twenty-four patients who were diagnosed with Koch's abdomen, a laparoscopic biopsy was carried out, and patients who tested positive for the presence of tuberculosis were given anti-tubercular medication in accordance with the established protocols. As a treatment, adhesiolysis was administered to each and every patient who was diagnosed with adhesions. In order to treat the patient who had been diagnosed with a hernia, the procedure known as trans-abdominal pre-peritoneal hernia repair was carried out. The levels of pain relief experienced after surgery were evaluated with the assistance of the VAS score.

Conclusion

When it comes to the management of patients who have chronic abdomen conditions, diagnostic laparoscopy is a tool that is not only safe but also feasible and accurate. In other words, it is a tool that is safe. It is possible for the doctor to take a direct look at the organs that are situated in the abdomen in order to arrive at a diagnosis of the problem.

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