



ORIGINAL RESEARCH PAPER

General Surgery

ROLE OF DIAGNOSTIC LAPAROSCOPY IN NONSPECIFIC CHRONIC ABDOMINAL PAIN: STUDY OF 60 CASES

KEY WORDS: Chronic abdominal pain, Chronic appendicitis, Diagnostic laparoscopy.

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ABSTRACT

Background and Objective: Diagnostic laparoscopy is an emerging tool in diagnosis of chronic non-specific abdominal pain, the diagnosis of which remains uncertain despite employing the requisite laboratory and non-invasive imaging investigations. The aim of our study was to evaluate the role of diagnostic laparoscopy in chronic abdominal pain.

Methods: The study is a retrospective study conducted in Dr panjabrao deshmukh Medical College and Hospital, Amravati during the period of 1st January 2018 to 1st January 2019. Patients of age above 10 years with history of abdominal pain for 6 months or more were included in the study. Basic investigations were also done for the patient. Based on the clinical examinations, patients were subjected to diagnostic laparoscopy. All cases were done as elective surgeries.

Results: A total of 60 patients were found in the record, in which the diagnosis remained uncertain despite of all important investigations. The majority of the patients 24 (40%) were in the age group of 10-30 years followed by 19 (31%) in 31-50 years. The duration of pain ranged between 6 months to 1 year. On laparoscopic examination, majority of patients (36%) were diagnosed with chronic appendicitis.

Conclusions: Laparoscopy is not only safe, but also quick and effective investigation tool for chronic abdominal pain.

INTRODUCTION

Abdominal pain was the third most common complaint of individuals often recurrent and needs immediate care (1). Chronic abdominal pain is defined as recurrent abdominal pain on and off for more than three months duration (2). Numerous diagnostics studies are done for the patients with chronic abdominal pain (3). However, most of the cases the pain remains undiagnosed (4).

Chronic Abdominal pain (CAP) is a common complaint of patients seeking a primary care physician, it is a leading reason for referral to a gastroenterologist and the 4th frequent chronic pain syndrome in the general population, it represent about 13% of all surgical admissions (5). Chronic pelvic pain (CPP) is estimated to have a prevalence of 3.8% in Women of reproductive age and it is the reason for 10% of all out patients visits to gynecologist as well as being responsible for approximately 40% of laparoscopy by gynecologists (6). In chronic abdominal pain more than 40% of the patients have no specific etiological diagnosis made at the end of diagnostic workup and called as unexplained chronic abdominal pain (UCAP) (7).

Laparoscopy has been found to have significant diagnostic and therapeutic role in patients with chronic abdominal pain. In case of diagnostic uncertainty, laparoscopy may help to avoid unnecessary laparotomy, provide accurate diagnosis and help to plan surgical treatment.

MATERIALS AND METHODS

The study is a retrospective study conducted in Dr. Panjabrao deshmukh Medical College and Hospital, Amravati during the period of 1st January 2018 to 1st January 2019. Patients of age above 10 years with history of abdominal pain for 6 months or more were included in the study. Patients of recurrent abdominal pain with previous history of abdominal operation done were not included. Patient with acute abdomen pain and emergencies, age below 10 years and above 65 years, patients with immune compromised status, on immunosuppressive therapy and steroids were excluded from the study.

PROCEDURE

A detailed history of patients was obtained and was followed

by thorough clinical examination. The findings were recorded in the proforma. Basic investigations were also done for the patient. Based on the clinical examinations, patients were subjected to diagnostic laparoscopy.

All cases were done as elective surgeries. All procedures were done under general anaesthesia. All patients had a bladder catheterized prior to anaesthesia. Pneumoperitoneum with Veress needle at the rate of 1-2 L/min was created so that end point of intra-abdominal pressure did not exceed 14mmHg, 10mm umbilical trocar and two 5mm lateral trocars were inserted. The laparoscopy was started by a diagnostic inspection of liver, gallbladder, and anterior surface of stomach, large bowel, small bowel, appendix, gynaecological organs and peritoneal surfaces. After laparoscopy, 5mm trocars were removed under visual control, the air was released from intra-abdominal space and 10mm trocar was removed. The 10mm umbilical wounds were closed in one layer with absorbable sutures and skin closure done with nonabsorbable suture.

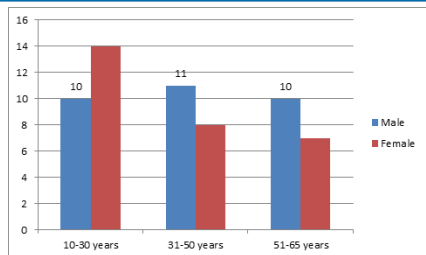
Wounds were checked for infection on 3rd day in all patients and dressings were done. Patients were discharged based on the response to the procedure with suture removed on 7th day. Patients were followed up after one month and three months and detail history and thorough clinical examination were done for assessment of any abdominal pain. The radiological investigation was done if needed.

RESULTS

A total of 60 patients were found in the record, in which the diagnosis remained uncertain despite of all important basic radiological and blood investigations. The majority of the patients 24 (40%) were in the age group of 10-30 years followed by 19 (36%) in 31-50 years (Table 1). There were 31 males and 29 female patients in the study.

Table 1: Distribution according to age group.

Age group	Male	Female
10-30 years	10	14
31-50 years	11	8
51-65 years	10	7

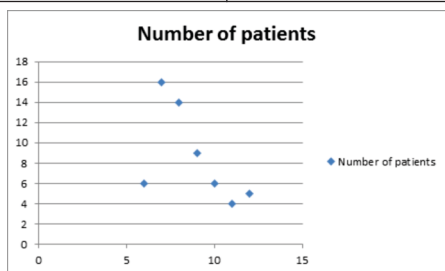


Graph 1: Distribution according to age group.

The duration of pain ranged between 6 months to 1 year. The duration of pain of 7 months was common (26.66%).

Table 2: Distribution according to duration of pain.

Duration of pain in months	Number of patients
6	6
7	16
8	14
9	9
10	6
11	4
12	5

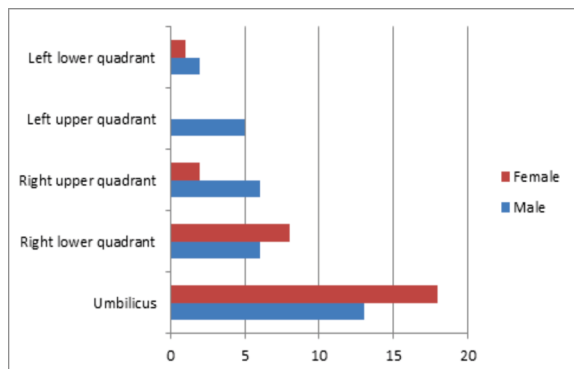


Graph 2: Distribution according to duration of pain.

Majority of patients had the complaint of umbilicus pain (51%) followed by the pain in right lower quadrant (23%). (Table 3)

Table 3: Distribution according to area of abdominal pain in the patients

Area of pain	Male	Female
Umbilicus	13	18
Right lower quadrant	6	8
Right upper quadrant	6	2
Left upper quadrant	5	0
Left lower quadrant	2	1

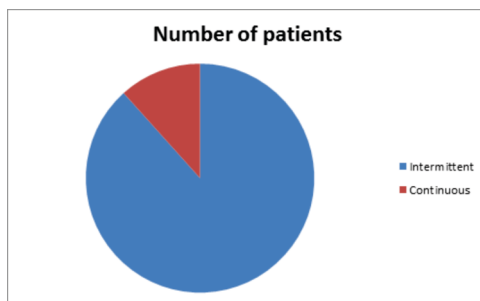


Graph 3: Distribution according to area of abdominal pain in the patients

Further majority of patients suffered from intermittent pain 53 (88.33%) and only 7 (11.66%) patients complained continuous pain. (Table 4)

Table 4: Distribution of patients according to type of pain.

Type of pain	Number of patients
Intermittent	53
Continuous	7

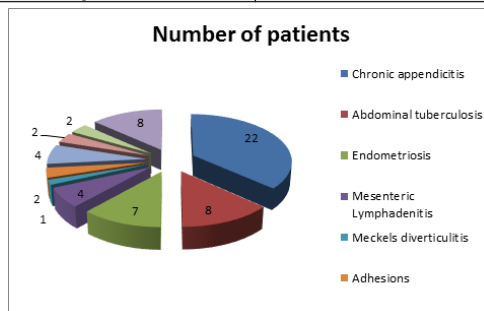


Graph 4: Distribution of patients according to type of pain.

On laparoscopic examination, majority of patients 22 (36%) were diagnosed with chronic appendicitis followed by abdominal tuberculosis 8 (13%) and 8 (13%) patients had normal study with no findings.

Table 5: Distribution according to Laparoscopic Diagnosis.

Laparoscopic diagnosis	Number of patients
Chronic appendicitis	22
Abdominal tuberculosis	8
Endometriosis	7
Mesenteric Lymphadenitis	4
Meckels diverticulitis	1
Adhesions	2
Chronic cholecystitis	4
Colonic malignancy	2
Ovarian cyst	2
Normal study	8



Graph 5: Distribution according to Laparoscopic Diagnosis.

DISCUSSION

Chronic abdominal pain is not only a common problem of the general surgeon but for all practicing physicians (8). Even after thorough investigations of such patients, the exact cause of pain abdomen is seldom known (9). Thus, in the present study, an attempt has been done to study the efficacy of diagnostic laparoscopy as an investigative tool in the diagnosis and management of patients with chronic pain abdomen.

The diagnostic laparoscopy gives the surgeon to visualize the contents of abdominal cavity, thus can identify the abnormality that has led to the abdominal pain (10). The study confirmed that the laparoscopy could safely identify abnormal and undiagnosed findings. In the present study, the male patients are more than the female patients which contrast the findings of many other studies (11). One of the main objectives of the study is to evaluate the role of

laparoscopy as a major diagnostic tool in patients presenting a chronic abdominal condition, with uncertain diagnosis. The diagnosis rate was 86% with 8 patients showed normal findings. Majority of the patients were diagnosed for chronic appendicitis 22 (36%) which is in accordance with many such studies(12).

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