

Our experience of diagnostic laparoscopy in chronic abdominal pain

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Abstract: *Background:* In patients with chronic abdominal pain, laparoscopy can identify abnormal findings and improve the outcome in a majority of patients with chronic abdominal pain, as it allows surgeon to see and treat many abdominal conditions that cannot be diagnosed otherwise. However, the role of laparoscopy in chronic abdominal pain is still debated by some authors who deny its value in adhesiolysis. We are presenting our experience regarding diagnostic laparoscopy in chronic abdominal pain. *Methods:* All patients undergoing laparoscopy for chronic abdominal pain were included in the study from Jan 2013 to Sept 2014. The pain in all patients was of unknown etiology despite all the investigative procedures. Outcome measured included the overall efficacy of diagnostic laparoscopy in finding a cause of chronic abdominal pain, diagnosis made and response to pain. *Results:* A total of 100 patients (68 women and 32 men) with an average age of 31.6yrs underwent diagnostic laparoscopy for the evaluation and treatment of chronic abdominal pain. Findings included chronic appendicitis in 68, adhesions in 12, abdominal koch's in 10, cholecystitis in 4, cirrhosis in 4, ovarian cyst in 4, fimbrial cyst in 4 and 14 patients had no obvious pathology. 90% of patients had pain relief at the time of follow up. *Conclusion:* Laparoscopy is a safe, quick and effective modality of investigation, therapeutic intervention can be done at the same sitting. Diagnostic laparoscopy has a high diagnostic and therapeutic efficiency.

Keywords: Chronic Abdominal Pain, Diagnostic Laparoscopy.

Introduction

Chronic abdominal pain is defined as recurrent abdominal pain on and off for more than 3 months duration it leads to evident, suffering, and disability in patient both physically and psychologically chronic abdominal pain is associated with poor quality of life[1]. Abdominal pain was the 3rd most common complaints of individuals enrolled in large health maintain organization in chronic abdominal pain more than 40% of patients have no specific etiological diagnosis made at the end of diagnostic work up called as unexplained chronic abdominal pain (UCAP) many organic and functional diseases can cause abdominal pain. the most common organic condition includes intestinal adhesions, biliary causes, appendicular causes, while functional causes includes irritable bowel syndrome, functional dyspepsia and various motility disorders [2].

Despite investigations such as ultrasonography, computed tomography scan etc. it is difficult to

reach to an accurate diagnosis and represent a major diagnostic challenge to the surgeon [3]. Prior to the era of diagnostic laparoscopy these patients used to undergo a battery of expensive investigations while remaining dissatisfied since the days of Hippocrates medical science is constantly thriving to peep into dark places of body and to achieve such techniques that would bring perfection to diagnosis laparoscopy one such achievement developed in the twentieth century, offers a simple, rapid and safe method to evaluate and diagnose intraabdominal diseases [4].

The role of laparoscopy in chronic abdominal pain is still debated by some authors who deny its value in adhesiolysis and consider it controversial and not evidence based and therefore do not recommend it as a treatment for adhesions in patients with chronic abdominal pain diagnostic laparoscopy makes it possible for surgeon to visualize surface anatomy of intra abdominal organs with greater details better than any other imaging

modality, however laparoscopy has got its own limitations such as non visualization of deep parenchymal organs, processes of retroperitoneal space and inner surface of hollow organs and not allowing the surgeon to palpate the organs [5].

In some studies more than 90% accuracy has been reported, some studies could not achieve this high ease of authenticity and minimal local data is available and is not proved exactly if at all it is helpful [6]. So this study was conducted to evaluate the role of laparoscopy in chronic abdominal pain.

Material and Methods

This caseseries was carried out in department of general surgery from Jan 2013 to Sept. 2014.100 patients with history of chronic abdominal pain were included in this study. Detailed history, clinical examination and relevant blood investigations, X ray abdomen, USG abdomen are performed and then diagnosis report was done. Clinical and investigation and laparoscopic findings were recorded, outcome measures like diagnosis, diagnostic accuracy and complications were studied. Data was analyzed by spss version 15. Descriptive statistics like frequency, percentage, mean etc were calculated.

Results

This study of 100 cases of chronic abdominal pain show the peak incidence in the age group between 21-30 yrs 50 cases (50%), followed by age group 31-40 yrs 42 cases (42%) (table 1).

| Age Group | No of Cases | Percentage |
|-----------|-------------|------------|
| 10-20 | 2 | 2 |
| 21-30 | 50 | 50 |
| 31-40 | 42 | 42 |
| 41-50 | 4 | 4 |
| 51-60 | 2 | 2 |
| Total | 100 | 100 |

In our study majority of the patients are female with 68 cases (68%), men 32cases (32%) (table 2). Peak incidence of duration of pain was between 10 to 30 weeks in our study.

| | No of Cases | Percentage |
|--------|-------------|------------|
| Female | 68 | 68 |
| Male | 32 | 32 |
| Total | 100 | 100 |

The present study show the most of the patient presented with lower abdominal pain 62%, followed by diffuse abdominal pain in 26% and 12% with upper abdominal pain (table 3).

| Location of Pain | No of Cases | Percentage |
|------------------|-------------|------------|
| Upper abdomen | 12 | 12 |
| Low abdomen | 62 | 62 |
| Diffuse abdomen | 26 | 26 |
| Total | 100 | 100 |

This study showed 40% with chronic abdominal pain had previous history of abdominal operation. All of them are with history of tubectomy. During the laparoscopy, the most common findings were chronic appendicitis 68% treated appendicectomy. The second most common findings was adhesions 12%, which was treated with adhesiolysis. Followed that is the tuberculosis. all patients were proven with omentalsbiopsy, then treatment with CAT-1 anti tubercular drugs. 4 patients had acalculous cholecystitis, laparoscopic cholecystectomy done. 4 patients had ovarian cyst laparoscopic aspiration done. 4 patients had fimbrial cyst which was treated with excision. 4 patients had cirrhosis of liver, managed conservatively. In 14 patients no abnormality found and kept on observation (table 4).

| Operative findings | Treatment | No of cases | % |
|--------------------------|-----------------|-------------|----|
| Appendicitis | Appendicetomy | 68 | 68 |
| Adhesions | Adhesiolysis | 12 | 12 |
| Tuberculosis | CAT 1 ATT | 10 | 10 |
| Acalculous cholecystitis | Cholecystectomy | 4 | 4 |
| Ovarian cyst | Aspiration | 4 | 4 |
| Fimbrial cyst | Excision | 4 | 4 |
| Cirrhosis of liver | Symptomatic | 4 | 4 |
| Normal Study | Observation | 14 | 14 |

In 90 patients with chronic abdominal pain, pathological finding on laparoscopy were present, giving a diagnostic accuracy of 90%. In 10 patients, no abnormal findings were present (table 5).

| Diagnostic accuracy | No of cases | Percentage |
|---------------------|-------------|------------|
| Pathological | 90 | 90 |
| Non Pathological | 10 | 10 |
| Total | 100 | 100 |

Patients were followed up at regular intervals of one month. Out of 100 patients, in 80 patients had complete resolution of pain and in 10 patients had no change in pain (table 6).

| Out Come | No of cases | Percentage |
|-------------------|-------------|------------|
| Resolution pain | 80 | 80 |
| No change in pain | 20 | 20 |
| Total | 100 | 100 |

Discussion

Chronic abdominal pain is a common problem dealt with by a variety of medical specialists. Even after an expensive work up in some patients, no pathological condition is found by non invasive investigation and the pain is often attributed to unsubstantiated diagnosis. Diagnostic laparoscopy makes it possible for surgeon to visualize surface anatomy of intraabdominal organ with greater detail better than any other imaging modality.

This study of 100 cases of chronic abdominal pain showed peak incidence in 2nd decade. In our study the young patient was 18 years and older was 60 yrs. the mean age of presentation was 31.6 yrs. While study conducted by Karvande R et al show age range from 18 yrs to 65 yrs with mean age of presentation was 31.7 yr [7] and Baria et al shows age range from 13 to 55 yrs [5].

This study of 100 cases of chronic abdominal pain showed incidence in females 68% (68 cases) and 32% (32 cases) in males, most of the other

study show female preponderance. This study show most of the patient present with the lower abdominal pain in the 62%, followed by diffuse abdominal pain in 26% and upper abdominal pain in 12%.while study conducted by sayed et al. shows right lower quadrant pain in 34.5% (19 cases) followed by diffuse pain in25.5% (14 cases) [8] and Bhavin baria et al. showed that right lower quadrant and left lower quadrant of abdomen was 52%, right upper quadrant and left upper quadrant of abdomen showed 8% and periumbilical pain is about 40% [5].

This study showed 40 % of patients with chronic abdominal pain had previous history of abdominal operation. All of them are with history of tubectomy, while the study conducted by Bhavin baria et al. showed 22% [5] of patients had undergone previous surgical abdominal procedures.

In our study, appendicitis were the most common findings, while the study conducted by Karvande R et al. showed chronic appendicular pathology is the most common pathology 56% [7]. Our second common cause was adhesion 14%.This correlates with the Karavade R et al. chronic appendicular pathology is one of the most common cause for the abdominal pain.Laparoscopy has an useful to establish an histopathology diagnosis in those patients [7].

Our study reported improvement or resolution of symptoms in 80%.In 90 cases with the chronic abdominal pain, pathological findings on laparoscopy were present giving a diagnostic accuracy of 90%

Conclusion

This study showed that laparoscopy is an effective approach in the management of patients with chronic abdominal pain. The therapeutic value of diagnostic laparoscopy is also accepted, well appreciated, and it cannot be underestimated. Advantages of diagnostic laparoscopy are that it is safe, efficacious and therapeutic procedure can be performed at same time.

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