Original Article

Acute Abdomen Cases Presenting At Fauji Foundation Hospital, Rawalpindi

1. Tariq Saeed 2. Azmat Hasan 3. M. Taimur 4. M. Imran 5. KhalilurRehman

1. Surgical Specialist 2. Asstt. Prof. of Surgery 3. Registrar of Surgery 4. Senior Registrar of Surgery
5. Registrar of Surgery, Fauji Foundation University Medical College / Hospital, Rawalpindi

ABSTRACT

Objectives: To study the common causes of acute abdomen at Fauji Foundation Hospital, Rawalpindi.
Study Design: Descriptive study.
Place and Duration of Study: This Study was conducted at the Department of Surgery, Fauji Foundation Hospital, Rawalpindi from December 13, 2009 to February 22, 2011.
Patients & Methods: A total of 840 patients who presented with acute abdominal pain and were admitted from the emergency department of Fauji Foundation Hospital, Rawalpindi from December, 2009 to February, 2011 were included in the study. The data of the 840 male and female patients was collected on the Patient Performa and then transferred to the data sheet IV of SPSS 10. The results were analyzed by calculating the frequencies of acute abdomen causes.
Results: The most frequent cause was non specific abdominal pain (38.7%) followed by acute cholecystitis (7.7%) and acute appendicitis (6.8%). Total exploratory laparotomies done were 204 (24.3%) while 498 (59.3%) patients were managed conservatively with ultrasound abdomen and pain medication.
Conclusions: Non specific pain was found to be the most common cause of acute abdomen followed by acute cholecystitis and acute appendicitis. The diagnostic accuracy can be enhanced especially in females of child bearing age by the use of ultrasonography and selective diagnostic laparoscopy.
Key Words: Acute abdomen, Abdominal pain, Non specific pain.

INTRODUCTION

The term acute abdomen means a non traumatic abdominal disorder in which pain is the predominant symptom and it may or may not require surgical intervention[1]. This change can be due to some kind of infection or inflammation. This intra abdominal disorder is progressive in nature and early diagnosis and treatment is desired to have a satisfactory outcome[2]. The pain is usually a feature but not always the case. A pain free acute abdomen is more likely in the elderly, in children and in the third trimester of the pregnancy[3].

Acute abdomen is a common problem in surgical wards and one of the common symptoms of patients presenting in the accident & emergency department of any tertiary care hospital. From a surgical point of view, abdominal pain is the cardinal symptom of acute abdomen.

There are many causes of acute abdomen which not only can cause serious complications but even can lead to the death of the patient. Hence early diagnosis and proper management are imperative but that does not mean acute abdomen should be equated with the invariable need for surgical intervention. Co-relating the clinical findings with the differential diagnosis helps decide whether surgical intervention is required or the patient can be managed conservatively. Such cases are tools by virtue of which the junior members of the team can learn the basic principles of surgery.

It has been observed that the acute abdomen is a good test of clinical acumen of the clinician. The vital signs may be normal in the initial phase of the illness and later on the patient may deteriorate rapidly. An accurate and detailed history of the patient with the knowledge of the nature of the pain and its location are really important to make a differential diagnosis[3].

Purpose of Study

The rationale of this study is to find the frequency and patterns of different diseases presenting as acute abdomen at Fauji Foundation Hospital, Rawalpindi.

PATIENTS AND METHODS

This study was carried out in the emergency department of Fauji Foundation Hospital, Rawalpindi from December, 2009 to February, 2011. Almost all patients were ex-service men and their families. All patients who presented with non-traumatic acute abdomen were included in the study.

On arrival in the emergency room, each patient was evaluated by detailed history and thorough physical examination. Complete Blood Count (CBC), urine analysis, serum urea and creatinine, random blood sugar and serum electrolytes were done. Ultrasound abdomen and relevant X-rays were done in cases where

peritonitis or intestinal obstruction was suspected. A provisional diagnosis was made and initial supportive management instituted before shifting the patient to the surgical ward.

Study Design: Descriptive Study

Sampling Technique: Non probability convenient sampling 840 patients were included in this study

Inclusion Criteria

a Patients of all age group
b Both male and female patients were included

Exclusion Criteria

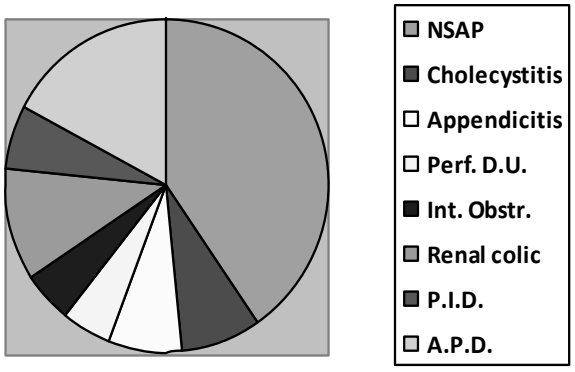
a All patient with blunt and penetrating trauma
b Patients with medical causes

The data of the 840 male and female patients was collected on the Patient Performa and then transferred to the data sheet IV of SPSS 10. The results were analyzed by calculating the frequencies of acute abdomen causes.

RESULTS

The age range was from 06 years to 78 years. The median age was 42 years. Our study was based on non-probability / convenient sampling. Only 24% patients of our study population were male.

In this study, the most frequent cause of acute abdomen was found to be non-specific abdominal pain (NSAP)(38.7%) followed by acute cholecystitis (7.7%), acute appendicitis (6.8%), perforated duodenal ulcer (PDU) (4.9%), intestinal obstruction (4.8%), renal colic (10.5%), pelvic inflammatory disease (5.8%), acute pancreatitis (2.8%) and meckel's diverticulum (0.3%) (Figure 1). Miscellaneous causes like acid peptic disease (16.6%), mesenteric lymphadenitis (0.76%), diverticulitis (0.17%) and ischemic colitis (0.17%) were the other causes of acute abdomen in our study.



Total exploratory laparotomies done were 204 (24.3%) while 498 (59.3%) patients were managed conservatively with ultrasound abdomen and pain medication. Patients with renal colic were 89 (10.6%) which were referred to urology and patients with pelvic inflammatory disease were 49 (5.8%) which were referred to gynaecology department respectively.

DISCUSSION

Evaluation of the patient with acute abdominal pain requires a careful history and physical examination by a skilled physician along with appropriate diagnostic testing. A thorough workup and broad differential diagnosis are essential elements to establishing a correct diagnosis[3]. Older adults may have delayed presentations of serious illnesses, and their signs and symptoms of disease may be atypical[3]. If a diagnosis is unclear, an early surgical consultation and hospital admission should always be considered.

It has been seen that the most common cause of acute abdominal pain is acute appendicitis anywhere in the world[4]. This is especially true in case of children. In a study by Akhtar Firdous et al, acute appendicitis, non-specific mesenteric lymphadenitis and urinary tract infection were equally common (20% each), worm infestation and constipation with anal fissure were observed in 10% and 8% respectively while in 14% of cases, abdominal pain was non-specific[5].

However, geographical differences can result in variable causes. A Series of 173 cases of acute abdominal surgical emergency in a rural hospital of Sierra Leone revealed that the most common cause of acute abdomen was strangulated hernia followed by acute appendicitis[6].

Our study revealed that the most common cause of acute abdomen was non- specific abdominal pain followed by acute cholecystitis and then acute appendicitis. This is most likely due to the fact that our hospital mainly treats the families of retired army personnel and not the general population as such. The majority of our patients are female, also for the same reason.

NSAP is a significant problem in general surgery and accounts for an estimated 13% to 40% of emergency surgical admissions for acute abdominal pain[7, 16]. Many suggestions have been made about improving diagnostic rates in acute NSAP. DeDombal et al[8] have suggested that the proportion of correct diagnoses can be greatly increased by the use of structured questionnaires and diagnostic programs on computers. Although computer-aided diagnosis can improve diagnostic rates by at least 20%, these programs are unpopular[9]. Other researchers have suggested ultrasonography[10], thermography, peritoneal cytology, CT, and more recently spiral computer tomography[11]. Nevertheless, none of these techniques seems to have been determinant in improving the clinical management of NSAP.

We referred 89 patients with renal colic to urology after getting a confirmatory ultrasound examination. Similarly, 49 patients with pelvic inflammatory disease were referred to gynaecology department after an ultrasound respectively. As a rule, we get an ultrasound examination in every female patient with a complaint of lower abdominal pain. Male patients with mild to moderate lower abdominal pain are also subjected to an ultrasound examination. Ultrasound has shown a sensitivity of 88.8% in the diagnosis of appendicitis while it has shown a specificity of 83.9%[12]. It is recommended to use ultrasonography in every female patient, especially in the child bearing age, to be certain of the diagnosis and to rule out gynaecological causes of acute abdomen.

In the management of acute abdomen, laparoscopy has both a diagnostic and a therapeutic role[13]. Many studies have demonstrated an improvement in surgical decision making associated with its use, particularly when the need for an operation is uncertain[14, 17]. We did not use diagnostic laparoscopy routinely in our patients as the facility is not available in the evening in the emergency. Instead, we relied mainly on ultrasonography to help with the diagnosis. In a study by Mario Morino et al, early laparoscopy as compared to ultrasonograpy did not show a clear benefit in women with NSAP[15]. We managed the NSAP patients conservatively with serial ultrasound abdomen and pain medication with satisfactory results.

CONCLUSION

The most common cause of acute abdomen in our study was non-specific pain abdominal pain (38.7%) followed by acute cholecystitis (7.7%), acute appendicitis (6.8%), perforated duodenal ulcer (4.9%) and intestinal obstruction in (4.8%) of the cases. We found that the NSAP patients responded to conservative management with serial ultrasound abdomen and pain medication with satisfactory results.

REFERENCES

1. Kauffman GL. Acute Abdomen. In: Corson JD, Williumsons RC, editors. Surgery. Philadelphia: Mosby International limited; 2001.p.1-14.
2. Vitello JM. Acute Abdominal Pain. In: manual of surgical Therapeutics;1993.p.153.
3. Tazkarji MB. Abdominal Pain among older adults. Geriatrics and aging 2008;11(7):410-415.
4. Bhopal FG, Khan JS, Iqbal M. Surgical Audit of acute appendicitis J of CPSP 1999;9(5):233-6.
5. Firdous A, Zia N, Akhtar I. Acute Abdomen in Children: An Audit of 50 Children Presenting with Acute Abdominal Pain. J Rawal Med Coll 1999; 3(1-2):47-9.
6. McConkey SJ. Case series of acute abdominal surgery in rural Sierra Leone. World J Surg 2002; 26(4): 509-13.
7. Sheridan WG, White AT, Havard T, et al. Non specific abdominal pain: the resource implications. Ann R Coll Surg Engl 1992; 74:181-185.
8. DeDombal FT, Leaper DJ, Horrocks JC, et al. Human and computer-aided diagnosis of abdominal pain: further report with emphasis on performance of clinicians. BMJ 1974;1:376-380.
9. Adams ID, Chan M, Clifford PC, et al. Computer aided diagnosis of acute abdominal pain: a multicentre study. BMJ 1986; 293:800-804.
10. Allemen F, Cassina P, Rothlin M, et al. Ultrasound scans done by surgeons for patient with acute abdominal pain: a prospective study. Eur J Surg 1999; 165:966-967.
11. Rao PM, Rhea JT, Novelline RA, et al. Effect of computed tomography of the appendix on treatment of patients and use of hospital resources. N Engl J Med 1998;338:141-146.
12. Qureshi IA, Tarin TA, Shafiq M. Role of Ultrasonography in clinically suspected cases of Acute Appendicitis. Pak Armed Forces Med J 2001; 51(2):90-3.
13. Baloch MA. Laproscopy in acute abdomen. J of surg Pak 1998; 3(2):6-8.
14. Paterson-Brown S. Emergency laparoscopy surgery. Br J Surg 1993; 80:279-283.
15. Morino M, Pellegrino L, Castagna E, Farinella E, Mao P. Acute Nonspecific Abdominal Pain: A Randomized, Controlled Trial Comparing Early Laparoscopy Versus Clinical Observation. Ann of Surg 2006; 244(6):881-888.
16. Irvin TT. Abdominal pain: a surgical audit of 1190 emergency admission. Br J Surg 1989; 76:1121-1125.
17. Gaitàn H, Angel E, Sànchez J, et al. Laparoscopic diagnosis of acute lower abdominal pain in women of reproductive age. Int J Gynecol Obstet 2002; 76:149-158.

Address for Corresponding Author:
Tariq Saeed,
Surgical Specialist,
Department of Surgery,
Fauji Foundation Hospital, Rawalpindi 46000
E-mail: azmathasan@gmail.com
Cell Number: 0333-5127691