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RESEARCH ARTICLE

A PROSPECTIVE STUDY OF 132 PATIENTS. CLINICAL PROFILE OF ADULT FEMALES WITH ACUTE PAIN IN LOWER ABDOMEN

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ABSTRACT

Acute abdominal pain is one of the most frequent complaints of patients presenting to the Emergency Department. It continues to pose diagnostic challenges for emergency clinicians and primary care doctors. Common causes include Adnexal torsion, ruptured ectopic pregnancy, Fibroids, Pelvic inflammatory disease, acute appendicitis and Mittelschmerz. Our study aims at studying the profile of acute abdominal pain in adult females [132 patients] presenting to the ED of a tertiary hospital in south India. Lower abdominal pain was reported by 45.8% of participants, while pain was generalized in 27.3% of patients. The majority of patients (64.8%) did not have any radiation of the pain. The final diagnosis at discharge was grouped as Pelvic inflammatory disease (10.6%), acute appendicitis (7.2%), Ruptured ectopic (5.3%), Adnexal torsion (4.2%) and fibroid uterus (3.8%) which were most common etiologies

Key words:

Acute Abdominal Pain,
Adnexal Torsion, Ectopic
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INTRODUCTION

Abdominal pain in women is one of the most common reasons for an emergency department (ED) visit, accounting to about 6% to 14% of all ED visits. It poses a diagnostic challenge for the surgeons and gynecologists, ranging from benign to life-threatening conditions. Common causes include Adnexal torsion, ruptured ectopic pregnancy, Fibroids, Pelvic inflammatory disease, acute appendicitis and Mittelschmerz [1]. Our study aims at studying the profile of acute abdominal pain in adult females presenting to the ED of a tertiary hospital in south India.

MATERIALS AND METHODS

This prospective observational study was conducted in a 500-bedded ED of Niloufer Hospital, India between January and August 2015. The cut-off age for patients presenting to our ED (adult ED) is 15 years. Therefore, all patients above the age of 15 years who presented with pain in lower abdomen were included in the study.

Patients with traumatic causes of abdominal pain were excluded. A detailed history on the onset, duration and type of pain including associated symptoms and results of a thorough physical examination were entered on a standard data collection sheet after obtaining a written informed consent. Basic blood investigations were done for all patients. Radiological investigations like ultrasonography, computed tomography scan and magnetic resonance imaging were done when indicated. Wong-Baker Faces Pain Rating Scale (WBF) was used to assess the severity of pain.

STATISTICAL METHODS

Statistical analysis was performed using SPSS software for Windows version 16.0. Descriptive data are given as a percentage.

RESULTS

A total of 132 patients were included in the study. More than half (55.6%) were in the age group of 15–40 years. Co-morbid conditions of diabetes mellitus, hypertension, ischemic heart

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disease and chronic pancreatitis were present in 15.2%, 14.8%, 2.3% and 1.9% of patients, respectively. About 15% of patients had a past history of abdominal surgery.

Patients Baseline Characteristics

The pain was sudden in onset in 54.9% of patients. WBF scale was used to grade the severity of pain. WBF scale score of 1-4, 5-7 and 8-10 was seen in 37.5%, 45.1% and 17.4% of patients, respectively. Common types of pain included dull aching (36%), colicky (18.2%), pricking (10.2%), crushing (9.8%), and throbbing (3.4%). Eighteen percent of patients were unable to characterize their pain. Lower abdominal pain was reported by 45.8% of participants, while pain was generalized in 27.3% of patients. The majority of patients (64.8%) did not have any radiation of the pain. The groin, back and shoulder were the common sites of radiating pain in 20.1%, 6.4% and 1.1%, respectively. Associated symptoms helped in identifying the cause and sometimes to the presence or absence of complications. Common associated symptoms included nausea (67.4%), vomiting (57.2%), urinary symptoms (38.3%), loss of appetite (21.2%), constipation (19.3%), diarrhea (10.6%), abdominal distension (5.7%) and per vaginal bleeding (3.4%).

Management Of Acute Pain Abdomen

About 47.3% of patients with acute pain abdomen required hospital admission. Surgical intervention was needed in 25.8% of patients and 6.1% required admission in medical or surgical intensive care units. Cases of acute appendicitis were managed by Laparoscopic appendectomy, Ovarian torsion and ectopic pregnancy needed oophorectomy or salpingo-oophorectomy accordingly. All other cases were including Pelvic inflammatory disease, Dysmenorrhea, ureteric coli and hyperemesis were managed conservatively with Analgesics, Antiemetics, Anti-spasmodics and IV fluids.

Outcome

Outcomes of acute abdominal pain were described in terms of mortality and duration of hospital stay. More than half the patients (51.9%) were discharged stable from the emergency department. About 70% of participants were discharged from hospital by the third day and half of these patients were discharged within 24 hours. Longer duration of hospital stay (>3 days) was needed in 30.7% of patients. The majority of patients (85.8%) were discharged alive from the hospital while the mortality rate was 2.3% (6/132). Discharged at request or left against medical advice accounted for 12.9% of the patients.

The final diagnosis at discharge was grouped as Pelvic inflammatory disease (10.6%), acute appendicitis (7.2%), Ruptured ectopic (5.3%), Adnexal torsion (4.2%) and fibroid uterus (3.8%) which were most common etiologies. Other uncommon causes include Ureteric colic (16.3%), urinary tract infection (12.5%), acute gastroenteritis (3.8%), hyperemesis gravidarum (0.4%) and endometrial cyst (0.4%). The cause of the abdominal pain could not be determined in 25/132 (19%) patients.

DISCUSSION

Acute abdominal pain is one of the most frequent complaints of patients presenting to the ED. It continues to pose diagnostic challenges for emergency clinicians and primary care doctors [2]. All patients with abdominal pain do not require extensive diagnostic tests. Sometimes, adequate history and physical evaluation alone is sufficient to accurately diagnose the condition and treat accordingly. Patients may present with vague complaints and varying associated symptoms making diagnosis difficult which ranges from benign to life-threatening conditions [3]. Abdominal pain can be the manifestation of a spectrum of disease processes including Pelvic inflammatory disease, Adnexal torsion, Ruptured ectopic pregnancy, Fibroids, Acute appendicitis, Ureteric coli etc.

Adnexal torsion

Adnexal torsion is the rotation of at least one turn of the ovaries, adnexa or the fallopian tube around the line of the tubo-ovarian ligament and the infundibulopelvic ligament. Risk factors for the development of adnexal torsion include ovarian tumours and ovarian cysts [4]. It is important that adnexal torsion is diagnosed early as delay can lead to complications such as loss of adnexa or the ovary with the associated fertility problems [5]. In rare cases, diagnostic delay can cause peritonitis or fatal thrombophlebitis. Initial misdiagnosis of adnexal torsion is common and studies have shown that only 23% to 66% of cases are given the correct presurgical diagnosis

Fibroids

Fibroids (leiomyoma) are the most common pelvic tumours affecting females in the fertile age group. They occur in 20-40% of females above 30 years of age. These benign smooth muscle tumours are sensitive to oestrogens, which are thought to be a main contributory factor to fibroid growth over time [6]. Symptoms usually manifest during the 4th decade. As fibroids may cause acute pain, patients may present at the emergency department. Acute pain may be caused by the degeneration of a fibroid when it outgrows its blood supply, torsion of a pedunculated fibroid or prolapse of a submucosal fibroid. Red (or haemorrhagic) degeneration is another type of acute fibroid degeneration seen in pregnancy and in patients on the oral contraceptive pill, caused by thrombosis of the venous outflow and resulting in a rapid increase in the size of the fibroid with acute haemorrhagic infarction [7]. Acute complications of fibroids are rarely seen but may be serious. Acute bleeding into fibroids can lead to hypovolaemic shock and cause the death of the patients.

Pelvic inflammatory disease

Pelvic inflammatory disease (PID) is described as a spread of inflammation from the endometrial cavity and fallopian tubes into the pelvis. It is an umbrella term, which encompasses endometritis, salpingitis and tubo-ovarian abscesses. It usually affects women in the reproductive age group and accounts for 25% of visits to the emergency departments with gynaecological pain [8]. The symptoms of pelvic inflammatory

disease are general aching pain in the pelvis that varies in severity. It is also common for sufferers to have vaginal discharge and cervical excitation on examination. Patients often have a leukocytosis, increased inflammatory markers and may be febrile. A long course of antibiotic treatment is the most common treatment of PID [9]. Complications of untreated PID can have serious implications for the patient and include infertility, ectopic pregnancy, chronic abdominal pain and the development of tubo-ovarian abscesses requiring surgical intervention. Organisms such as sexually transmitted Chlamydia trachomatis and Nisseragonorrhoea are causative agents in developing ascending cervicitis [10].

Ectopic pregnancy

Ectopic pregnancy is a condition of immense gynecological importance, particularly in the developing world, because of the high morbidity and mortality associated with it and the enormous threat to life [11]. When ruptured, ectopic pregnancy is a true medical emergency. It is the leading cause of maternal mortality in the first trimester and accounts for 10%–15% of all maternal deaths. Ectopic pregnancy is an important cause of maternal morbidity and mortality especially in developing countries, where the majority of patients present late with rupture and hemodynamic compromise [12]. It is also a cause of fetal wastage and has been associated with recurrence and impairment of subsequent fertility.

Acute Appendicitis

Acute appendicitis is the most common abdominal emergency requiring surgery with an estimated lifetime prevalence of 7%. Despite its high prevalence, the diagnosis of appendicitis remains challenging [13]. The clinical presentation is often atypical and the diagnosis is especially difficult because symptoms often overlap with other conditions. The fundamental clinical decision in the diagnosis of a patient with suspected appendicitis is whether to operate or not. Ideally, the goal is to expeditiously treat all cases of appendicitis without unnecessary surgical interventions [14]. A 2001 study reported negative appendectomy rates between 15% and 34% with approximately 15% being commonly accepted as appropriate to reduce the incidence of perforation [15].

CONCLUSION

Abdominal pain is a common presenting complaint in the ED and clinicians must consider multiple diagnoses, especially in those cases that require immediate intervention in order to limit morbidity and mortality. It is extremely important for emergency physicians to develop the skill of identifying patients with an “acute abdomen” requiring immediate surgical intervention [16].

In cases of suspected acute gynaecological disease, the findings on imaging must be interpreted in association with the clinical presentation. The pregnancy status of the patient must always be established, in order to exclude ectopic pregnancy and to avoid using imaging modalities, which pose a risk to the foetus. Clinical signs of sepsis can make the clinicians more suspicious of PID [17]. Haemorrhagic ovarian cysts give a characteristic

internal reticular pattern on ultrasound with high attenuation contents on non-contrast CT, an enhancing cystic wall and contrast-enhanced blood in the pelvis on delayed phases in cases of cyst rupture WQ. Where adnexal torsion is suspected, Doppler can demonstrate characteristic whirlpool or corkscrew signs of a twisted vascular pedicle [18]. Overlap in the presenting features of acute gynaecologic disease and gastrointestinal disease remains a significant challenge in the emergency department and imaging plays an important diagnostic role.

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