Acute Appendicitis
A Sudy Carried out in Zawia Teaching Hospital

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Abstract:

Background: Acute appendicitis is a common cause of acute abdomen and commonly affect young adults and children. Acute appendicitis diagnosed reliably by clinical symptomes and signs. Delay of diagnosis and treatment increase the morbidity of appendicitis.307 Patients with acute appendicitis studied prospectively from 1st January 2014 to 31st may 2015 in Zawia teaching Hosopital, The study evaluated demographics of the patients, clinical state and operation related findings.The commonist ages affected were in the 1st and 2nd decades. Abdominal pain was the

commonist symptom. The majority of patients were phlegmonous appendicitis. Perforated appendicitis reported in 20.8% of cases. Antibiotics reduce the morbidity of acue appendicitis .This study concluded that acute appendicitis remain a common clinical diagnosis and appendectomy still the standard treatment for appendicitis.

1.Introduction.

Acute appendicitis is an inflammation of the vermiform appendix [(1)], it is the most common cause of acute abdomen[(2, 3, 4)] and a common surgical emergency [(5, 6)], which needs admission [(7, 8)].

Acute appendicitis affects 1 in each 15 people [(9)] with a lifetime risk varies from 6 to 9 %[(10, 11, 12)], and perforation of acute appendicitis occurs in 15 to 30 % of patients [(13)].

Clinical symptoms are enough to initiate the diagnosis, of acute appendicitis which is a common cause of abdominal pain [(14)], and other accompanying symptoms may include nausea, vomiting, or fever [(15)].

In the elderly the usual signs and symptoms may be atypical or abscent which leads to a higher rate of perforation [(16)].

In patients with delayed diagnosis the risk of complications are increased [(17)].

To reduce morbidity associated with acute appendicitis it is necessary to decrease delays of the proper treatment [(18)] because there is a causal relationship between delayed treatment and poor outcome[(19)]. Aggressive approach is recommended when acute appendicitis is suspected[(20)].

Appendectomy since it was first reported by Mc Burney in 1889 [21] is the standard treatment of acute appendicitis [22] because appendicitis is a coomon surgical disease.appendictomy is a common emergency surgery[23].

Laparoscopy has a diagnostic and therapeutic roles especially in women [24] since the first report of laproscopic appendectomy by Semm 1983 [25].

Wound infection and intraabdominal abscess following appendectomy are still ongoing complications [26].

The aim of this study is analysis and evaluation of all patients admitted with acute appendicitis which had been operated.

METHODS:

The present study was a prospective study of 307 patients with acute appendicitis who were admitted to Zawia teaching Hospital, Zawia University, Libya, from the 1st of January 2014 to the 31st of may.

The variables in this research include demographic characteristics, clinical presentations, laboratory finding, operative findings, the type of operation and its complications, the use of antibiotics and the duration of hospital stay, Tables 1, 2, 3.

The diagnosis of appendicitis was made on a clinical basis mainly.

Table 1.Demographic distribution of the patients

Decade	Male	Female	Total	Percentage
0 to <10 year	44	22	66	21.4
10to < 20 year	84	49	133	43.3
20 to < 30 year	36	23	59	19.2
30 to < 40 year	14	15	29	9.4
40 to < 50 year	10	7	17	5.5
50 to < 60 year	2	0	2	0.65
60 to < 70 year	1	0	1	0.32
Total number	191	116	307	100
Pecentage	62.2	37, 7	100	

Table 2.Clinical data of the patients

Clinical state		Number of patients	percentage
Duration of complaints	One day	183	59.6
	Two days	49	15.9
	Three days	40	13
	>3days	35	11
Abdominal pain		302	98
Nausea and/or vomitting		240	78
Anorexia		31	10
Fever		102	33
Tachycardia		36	11.7
Tenderness		238	77.5
Rebound tenderness		270	87.9
Guarding		65	21
Rigidity		14	4.5
Leucocytosis		229	74.5

Table 3. Operative data, usage of antibiotics, and duration of hospital stay

Appendix related state		Number of patients	percentage
Types of appendicitis	catarrhal	31	10
	phlegmonous	187	60.9
	gangrenous	21	6.8
	perforated	64	20.8
	mass	9	2.9
Types of operations	Open appendictomy	300	97.7
	Laparoscopic appendictomy	2	0.65
	Laparotomy	5	1.6
Abdominal pain		104	33.8
Preoperative antibiotics		201	65.4
Postoperative antibiotics		307	100
Wound infection		2	0.65
Duration of hospital stay	One day	37	12
	Two days	116	37.7
	Three days	84	27.3
	>3days	70	22.8

RESULTS:

It is clear that the highest incidence of appendicitis was observed in people aged below 20 years (64.7%) and males were more affected (62.2%) than females (37.7%) Table 1.such findings were consistent with the finding in other studies.

About 60 % of patients present to the medical consultations witin one day and nearly a quarter of patients present at or after 3 days (24%).

The most common clinical presentations were abdominal pain (98%), nausea and/or vomiting (78%), tenderness (77, 5%), rebound tenderness (87.9%) and leucocytosis (74.5%) Table 2.

The majority of patients were had phlegmonous appendicitis (60.9%), and perforated appendicitis found in 20.8% of patients, such incidence of perforated appendicitis is comparable to other studies 23 table 4, among these patients with perforated appendicitis there were 2 pregnant women.The greater number of patients with perforate appendicitis had duration of complaints 3 days or more.

Table 4.Over all perforation rate in different studies

Author	Rate
Heller group et al	27.5%
Khalili T M et al 16 in Surg.1999Oct. 65(10).965.7	29%
Baruni et al	20.1%

Open appendectomy had been done for 99% of patients, laparoscopic appendectomy done for two patients only because lack of facilities during all times of the duty, and laparotomy done for 5 patients (1.6%). Abdominal drains were used for33.8% of patients who had pus collection and those with significant oozing

Preoperative antibiotics used in 65.4% of patients for whom appendicttomy were decided and continued posoperatively either as a prophylactic or therapeutic drugs.

Wound infections recorded in two patients during the same admission.

Nearly half of patients stayed for two days or less and nearly half of patients stayed three days or more

DISCUSSION:

Acute appendicitis remains a common clinical diagnosis [27] and can be reliably diagnosed clinically in most cases [28].The highest incidence of appendicitis is in the 1st and 2nd decades [29].

Acute appendicitis is an emergency condition that requires urgent intervention [30], and significant delay of diagnosis associated with morbidity and even mortality[31, 32].

Although clinical diagnosis is feasible scoring for diagnosing appendicitis is fast and easily available [33]. In pregnancy the diagnosis of appendicitis is difficult because of the anatomic and physiologic changes that occur during the pregnancy, for these reasons the incidence of perforated appendicitis in pregnancy (43%) is higher than in the general population (19%) [34]

Appendectomy remains the standard treatment for acute appendicitis.Laparoscopic appendectomy shown relevant advantages compared to open appendectomy [35] among these advantages are decreased incidence of wound infection, reduced analgesic requirements, and earlier return to oral intake [36].

Patients with acute appendicitis require preoperative broad spectrum antibiotics once the decision of treatment is taken, and continued for 3-5 days in cases of perforated appendicitis [37] preoperative antibiotics reduces the incidence of wound infection [38].

Although conservative antibiotic primary treatment has been investigated [39], and found to be safe and effective [40] for noncomplicated appendicitis, but still the current treatment is appendectomy [41].

CONCLUSION:

The commonist ages at which acute appendicitis presents are in the 1st and 2nd decades

Acute appendicitis is a common cause of acute abdomen that rquires urgent intervention

Antibiotics reduce the complications of complicated appendicitis

Appendectomy is still the treatment of choice.

Laparoscopic appendectomy should be the ideal operative treatment for which facilities and requirements in our hospital must be provided.

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