

Full Length Research Paper

Clinical presentation of Appendicitis in Nigeria Adults

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This study was carried out to determine the frequency of the classical signs and symptoms of acute appendicitis in Nigeria adult. Acute appendicitis is the most common cause of acute abdomen and is the most frequent indication for emergency surgery. The presentation varies from one individual to the other and may vary from one environment to the other. In Nigeria, where over the counter antibiotics are widely used and patients seek medical attention late, the presentation is likely to be more complex. This is a 3 years prospective study of patients with acute appendicitis seen in Motayo Hospital (a private hospital in Lagos) from January 2005 and December 2008. An evaluation of signs and symptoms of acute appendicitis was carried out in one hundred and thirty two patients with histological confirmed diagnosis. Majority of the patients were within the age of 20 to 40years. There was a slight male preponderance of 56.5%. The initial pains of acute appendicitis was located in the right lower quadrant in 62%, colicky abdominal pains was the most frequent reported character of abdominal pains. The most common symptoms accompanying abdominal pains were nausea, vomiting and anorexia. More than 60% of the patients had previous symptoms ranging from 1 month to 10years before presentations. The classical story of central abdominal pain situated in the umbilicus and later shifting to the right iliac fossa is not commonly seen in Nigeria. Most patients present after several weeks and even months after the initial attack. The correct terminology for most patients in Nigeria is recurrent acute appendicitis.

Keywords: Appendicitis, adults, Nigeria.

INTRODUCTION

Acute appendicitis is the most common cause of acute abdomen and is the most frequent indication for emergency surgery (Tranter and Schumpelick, 1997; Ohene-Yeboah, 2006; Brown, 1991).

The exact incidence of acute appendicitis in Nigeria is not known but clinical observation shows that it is the most common Emergency condition presenting to a surgeon.

Acute appendicitis can occur at any age but studies shows that about 70 – 80% of the cases occur in patients less than 30 years of age. (Chang, 1981)

The classical story of acute appendicitis is an onset of central colicky abdominal pain situated in the region of the umbilicus. The patient may be nauseated, or may vomit one or more times and several hours the pains shift to the right lower abdomen. Occasionally there is no history of this classical shift of pains. (Wagner et al., 1996)

The presentation of acute appendicitis varies from one

patient to other and may vary from one environment to the other. In developed countries where patients seek medical attention early, typical presentation may be frequently encountered but in developing countries such as Nigeria where over the counter antibiotic are widely used and patient's seek medical attention late atypical presentation may be frequently encountered.

This prospective study was undertaken to determine the clinical symptom and signs of appendicitis in Nigeria adult aged 16years and above.

Patients and Methods

One hundred and thirty two consecutive patients with clinical and histological diagnosis of acute appendicitis aged 16years and above over 3years period from January 2005 – December 2008 seen in a private Hospital (Motayo Hospital) were studied. Patient below the age of

Table 1. Characteristics of patients with histological confirmed acute appendicitis

Age (years)	Patients N (%)
10-20	29(22)
21-30	50(37.8)
31-40	39(29.5)
41-50	6(4.5)
51-60	5(3.7)
61-70	3(2.2)
Sex	Number (%)
Males	74(56.05)
Females	58(43.95)

Table 2. Duration of symptoms before presentation

Duration of symptoms	Patients (%)
Within 24hours	12(18.6)
48ours-1week	58(43.9)
>1 week-2weeks	8(6.06)
>2weeks-1month	11(8.3)
>2months-1year	20(15.1)
1year-10years	11(8,3)

16years were excluded as well those with negative histology

Each patients age, sex, duration of symptom, mode of onset of abdominal pain, character of pain, severity, aggravating and relieving factor, radiation, nausea, vomiting, anorexia, diarrhea, constipation and previous history of similar pain were entered into a semi structured questionnaire.

Also clinical examination of the patient for pointing sign, the site of tenderness, guarding, rigidity, rebound tenderness, cough/percussion tenderness were recorded.

Rectal examination was done on all the patients.

Histology of all the appendixes was carried out at Lagos University Teaching Hospital and National orthopedic Hospital Gobi.

Data was analyzed with EPI-F0

RESULTS

One hundred and thirty two patients with histological confirmation of acute appendicitis were studied. Acute appendicitis occurs more frequently in the age range 21 – 30years (37.8%) Table1. There was a slight made preponderance of 56.05% to female of 43.95% (ratio 1.2:1) Table 1.

About 60% of patient had previous symptoms of acute appendicitis before presentation. Also more than 80%

presented more than 24hours after the onset of symptoms Table 2

The site of the initial abdominal pain was in the right iliac fossa in 84 patient (63.6%) compared to 22 patients (16.6%) with peri umbilical pain.

The character of abdominal pain was colicky in nature in 79 (59.8%), it was aching in 11(8.3%) sharp in 24 (18.3%), Dull in 1(0.8%) and intermittent 2(1.5%). Symptoms associated with abdominal pains included nausea 90 (68%) vomiting in 78(59.0%) anorexia in 64 (48.41%), constipation in 21 (15.9%), and diarrhea in 14 (10.6%). Fever of greater than 37.5% was observed in 12 (9%). Clinical signs of acute appendicitis were cough/percussion tenderness (90.9%), guarding and rigidity in (82.5%), rebound tenderness in (81%), right lower quadrant (RLQ) pains in 80%, RLQ pointing test in 65.7% and rectal tenderness in 30.3%.

About 60% of patient was observed to have previous symptoms of acute appendicitis before presentation.

DISCUSSION

Acute appendicitis is one of the most frequent indications for abdominal surgery. This study shows that appendicitis occurs mostly in the second and third decades of life. The incidence is highest in the age group 10-30years of life accounting for 59.8%. It was also found to highest among

Table 3. Clinical features of patients with histological confirmed appendicitis

Clinical Characteristic	Patients N (%)
nausea	90(68)
vomiting	78(59)
anorexia	64(48.4)
constipation	29(15.9)
diarrhea	14(10.6)
fever	12(9)
others	14(10.6)
Arching pains	11(8.3)
Colicking pains	79(59.56)
Sharp pains	24(18.2)
Diffuse/intermittent	2(1.5)
Cough tenderness	120(90.9)
RLQ tenderness	106(80.3)
Rebound tenderness	107(81)
guarding rigidity	109(82)
Pointing sign	87(65.5)

Rectal tenderness 40(30.3)

Others – cough, dysuria. Headache and waist pain

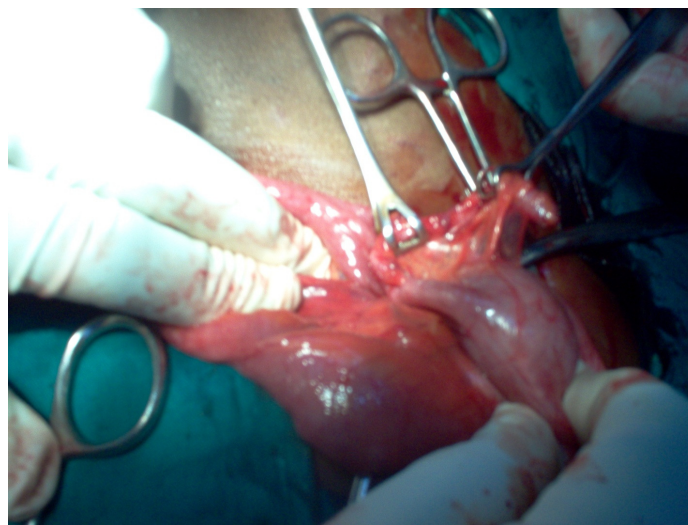


Figure 1. Showing extensive adhesions from recurrent inflammation

men (male to female ratio 1.2:1.)

The goal of therapy is early diagnosis and treatment. However our patients present late leading to complications. It was observed that almost 50% of the cases were seen between 48hours to one week after the onset of symptoms.

The clinical manifestation of appendicitis showed that most patients presented with nausea (68%), vomiting

(59%) and anorexia 48.5%). Pain was the cardinal symptom in all the patients and it was colicking in nature (59.5%) and started at right lower quadrant. Fever was not a common symptom as it was seen in only (9%) of the cases.

In both developed and developing countries, acute appendicitis is reported to be the commonest surgical abdominal emergencies (Otu, 1989; Mungadi et al., 2004;

Adekunle and Funmilayo, 1986). Due to delay in presentation and surgical intervention the morbidity and mortality is higher in developing countries like Nigeria as a result of complications (Farthouat et al., 2005; Daniel and Marsha, 1991).

The incidence of acute appendicitis in Nigeria is not known, However, studies have shown acute appendicitis is now the commonest abdominal surgical emergency in Nigeria (Ihezue et al., 1988; Idogah, 1988).

In the United State approximately 250,000 cases of appendicitis occur each year with 70-80% of cases occurring in patients less than 30years of age (Addisa et al., 1990; Maxwell and Ragland, 1991; Grafted and Counselman, 1996).

In this study acute appendicitis occurred in 59.8% of patients aged 16years to 30 years. This will well compared with the above finding if ages below 16years were included in the study.

Elderly patients (> 60years) account for 10% of the cases in USA, but in this study only 2.2% of acute appendicitis occur in the elderly.

There was a slight male preponderance of 1:2:1. This is almost similar to previous studies where equal sex ratios were found (Varsheu et al., 1996; Jamiu et al., 2006) and (Birnbaum and Wilson, 2006). However this differs from other series (Ogbonna et al., 1992; Onuigbo, 1981) one of which observes acute appendicitis is predominantly male disease (Ogbonna et al., 1992).

Ajao in Ibadan found a male to female ration of 2:1 compared to 3:2 found by Omodare and Thomas from the same centre.

Appendicitis can be acute, recurrent or chronic (Hollerman et al., 1988) previous self limited symptom have been reported in 4- 30% of patients with acute appendicitis (Doherty and Lewis, 1989; Grossman, 1978; Ferrier, 1972). In this study, about 60% of the patients were observed to have previous history of similar episode of abdominal symptoms.

Our patient could properly been termed acute on recurrent appendicitis.

In acute, recurrent appendicitis previous episode of right lower quadrant pain of acute self – limited nature are seen. Patients with chronic appendicitis have chronic or multiple, interrupted episode of right lower quadrant pains with chronic inflammatory changes in the appendicitis. Some patients in this study have symptoms ranging from months to years and few cases had histological features of chronic appendicitis.

About eighty percent of patients in this study presented after 24hours of symptoms. This may explain the higher incidence of complication and also negative appendicitis in our environment.

Pain was localized in the right iliac quadrant in 84 (63.6%) of patient with acute appendicitis. This agrees with Herbert et al in their myths of migrating pain. (Herbert et al., 1997) Here 100% of their patients

presented with localized right lower quadrant pain.

The character of pain in this study was predominantly colicky in nature 59.8% and was similar to other studies. (Harold, 1988)

Migrating pain from the periumbilical to the right iliac quadrant occurs only in 22 (16.6%) of the patient suggesting that the classical migrating pains in appendicitis is not common in our environment. However previous series confirm its value in acute appendicitis. (Harold, 1988)

The common symptoms associated with acute appendicitis are nausea, vomiting and anorexia. This occurs in more than 50% of the patient presenting with acute appendicitis.

The highest frequency occurring sign in acute appendicitis was cough and percussion tenderness with value of 120 (90.9%). It was the single most sensitive sign.

The second highest frequency of clinical feature of acute appendicitis was guarding and rigidity. This was follow by rebound tenderness, Right iliac quadrant tenderness and pointing test.

Rectal tenderness was not very sensitive in the diagnosis of acute appendicitis. It was positive in only 30.31%

In conclusion, acute appendicitis is a common surgical emergency, the presentation in our environment is late due to self medication and hence the complications are more common.

The fact that most of our patients presented after several episode of abdominal pain acute on recurrent appendicitis is more common. However the clinical symptom and signs are similar to presentation elsewhere but with some variations.

REFERENCES

- Tranter KH, Schumpelick V (1997). Epidemiology of appendicitis. Chi. Rug. 68: 1-5 (German)
- Ohene –Yeboah M (2006). acute surgical admissions for abdominal pain in adults in Kumasi Ghana. ANZ J. Surgical 76: 898-903
- Brown JJ (1991). Acute appendectomy the radiologist's role, radiol. 180: 13-14
- Chang AR (1981). An analysis of the pathology of 3003 appendices, Aust. N Z J. Surg. 51:16-178
- Wagner JM, McKinney P, Carpenter T (1996). L. Does this patient have appendicitis JAMA 276: 1589 – 1594
- Otu AA (1989). Tropical Surgical abdominal emergencies – acute appendicitis. Trop. Geog. Med.41:118-22
- Mungadi AI, Jabo BA, Agwu NP(2004). A review of appendectomy in Sokoto North western Nigeria Niger J. Med 13: 240 – 3
- Adekunle OO, Funmilayo A (1986). acute appendicitis in Nigeria. J.R Coll Surg. Edinburgh 21: 162 – 105
- Farthouat P, Fall O, Ogougbemy M, Sow A, Millon A, Dieng D, Diouf MB (2005). Appendectomy in the tropics prospective study, at Hospital principal Dakar Med. Trip. (Mars) 65: 549 – 53
- Daniel E, Marsha D (1991). Childhood appendicitis factors associated with its incidence and perforations in Ethiopian children. Ethiop. Med. J. 29: 15 – 9
- Ihezue CH, Nwabuike T, Mbonu O, Ojukwu JO (1988). acute abdomen

- in the accident and Emergency Department Asian J. G Sc. 63 – 8
- Idogah JI (1988). The surgical Epidemiology etiology and bacteriology and leukocyte pattern in appendicitis in Zaria. Part II FMC. Dissertation May 1988 P I. (Accepted).
- Addisa DG, Shafar N, Fowler BS, Tauxe RV (1990). The epidemiology of appendicitis and appendectomy in the United State. Am.J. Epidemiol. 132: 910 – 925.
- Maxwell JM, Ragland JJ (1991). Appendicitis Improvement in diagnosis and treatment Am. J. Surg 57; 282 – 285
- Grafted CS, Counselman FL. (1996). Appendicitis Emerg. Med. Clin. North Am 14:653-671
- Varsheu S, Johnson CD, Rangnekar GV. (1996). The retrocaecal appendicitis appears to be less prone to infection Br. J. Surgery 83:223 – 4.
- Jamiu RK, Jain M, Rajak CL, Mukherjees Bhattachayya PP, Shah MR (2006). Imaging in acute appendicitis. A Review. Ind. J. radiol. 16: 523 – 532
- Birnbaum BA, Wilson SR (2006). Appendicitis at the Millennium. Radiol. 215: 337 – 348
- Ogbonna BC, Obekpa PO, Nwarah J, Obafunwa JO, Nwanna EJ (1992). Laparoscopy in developing countries in the Management of patients with an acute abdomen Br. J. Surg. 79: 964 – 66
- Onuigbo WI (1981). acute appendicitis in Nigeria Igbos Review of 182 cases. J. Proctol. Gastrol. Colon and Rectum .Surg. 32:6 – 7
- Hollerman JJ, Bernstein MA, Kohamusu SR, Sir SA (1988). Acute recurrent appendicitis with appendicolith Am. J. Emerg. Med. 6: 614 – 617
- Doherty GM, Lewis FR (1989). Appendicitis continuing diagnostic challenge. Emerg. Med. Clin. N. Am. 7: 537 – 553.
- Grossman EB (1978). Chronic appendicitis Surg. Gynecol. Obstet 146:596 – 590
- Ferrier PK (1972). Acute appendicitis in the University student. A twenty year study of 1028 cases Am Coll. Health Assoc. J. 20: 287 – 290
- Hawes AS, Whalen GT (1994). Recurrent and chronic appendicitis. The other inflammatory condition of the appendix. Am. surg. 60:217.
- Savin RA, Clausen K, Martin EW (1979). Cooperman M. Chronic and recurrent appendicitis Am. J. Surg. 137: 355 – 357.
- Herbert N, Kris N, Munoj R, Park R (1997). Acute appendicitis the myth of migratory pain and gradual onset of symptoms – Am. J. Emergency Med. 15:111-112.
- Harold E (1988). Appendicitis postgrad. Doc. 10: 122 – 125.