ORIGINAL RESEARCH PAPER
Volume-6 | Issue-12 | December-2017 | ISSN No 2277 - 8179 | IF : 4.176 | IC Value : 93.98
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

TO STUDY THE RELATION BETWEEN CLINCAL ,RADIOLOGICAL ,OPERATIVE AND HISTOPATHOLOGICAL FINDINGS IN ACUTE APPENDICITIS.

General Surgery

Dr Balaga Venkata Rao Assosciate Professor , Dept Of General Surgery , King George Hospital , Andhra Medical College ,visakhapatnam ,andhra Pradesh ,india.

Dr Seelam Subramanyam* Assosciate Professor , Dept Of General Surgery , King George Hospital , Andhra Medical College , Visakhapatnam , Andhra Pradesh, India *Corresponding Author

KEYWORDS

Introduction

Acute appendicitis is the most common surgically correctable cause of abdominal pain, the diagnosis of which remains difficult in many instances. Some of the signs and symptoms can be subtle to both the clinician and the patient and may not be present in all instances. Arriving at the correct diagnosis is essential; however, a delay may allow progression to perforation and significantly increased morbidity and mortality. Incorrectly diagnosing a patient with appendicitis although not catastrophic often subjects the patient to an unnecessary operation. The diagnosis of acute appendicitis is essentially clinical; however a decision to operate based on clinical suspicion alone can lead to removal of a normal appendix in 15–30 % cases. A number of clinical and laboratory based scoring system have been devised to assist diagnosis. The most commonly used is the Alvarado score and equally its modification,ultrasound abdomen, intraoperative and histopathological confirmation. Modified Alvarado score: This consist of three symptoms, three signs and two laboratory findings as described by Alvarado et al.

Score:

1 – 4 Appendicitis unlikely
5 – 6 Appendicitis possible
7 – 9 Appendicitis probable
9 – Appendicitis definitive.

Objectives

1.To study the relation between clinical, radiological, operative and histopathological findings in acute appendicitis

Materials And Methods

50 patients were taken into study was admitted to the surgery wards in dept of general surgery , king George hospital , Andhra medical college , Visakhapatnam with signs and symptoms of appendicitis. The period of study was from October 2015 to November 2017

Inclusion criteria: Only patients undergoing surgery were included
Exclusion criteria: Patients admitted for interval appendicectomy following recurrent appendicitis, appendicular abscess, appendicular mass previously treated conservatively.

Patients were subjected to detailed history and thorough physical Examination, Alvarado s scoring ,Patients underwent necessary investigations. like Blood counts, biochemical analysis and urine analysis, USG abdomen/ pelvis, CT-Abdomen (As and when required), all diagnosed patients will be subjected to surgery. In all cases, operative findings and post-operative diagnosis by histopat hological examination were recorded.

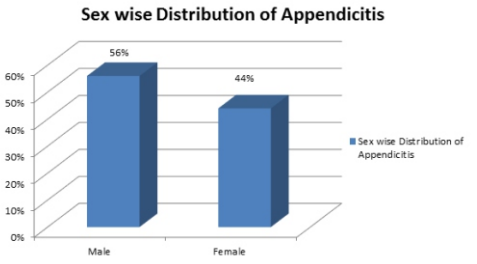
Final outcome was evaluated on the basis of clinical, operative radiological and histopathological findings.

Observations: Sex distribution;

Out of total patients, majority of the patients (54%) are male while, 44% patients are female.

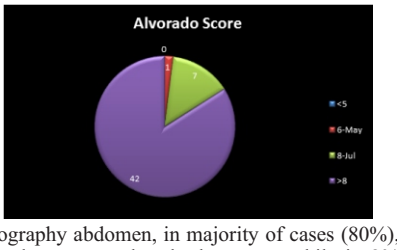
Sex	No. of cases	Percentage
Male	28	56.00
Female	22	44.00
Total	**50**	**100.00**

Sex wise Distribution of Appendicitis



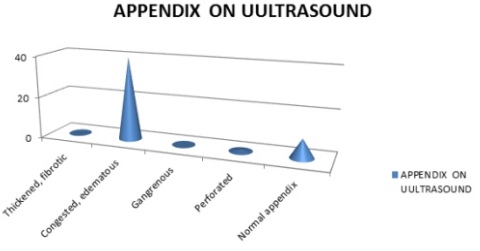
Among 50 patients, 84% cases have Alvorado score of more than 8/10,while 14% of patients have alvorado score between 7 and 8. Only 2% of patients have alvorado score between 5and 6 as shown in

Alvorado Score	No. of cases	Percentage
<5	-	-
5-6	1	2.00
7-8	7	14.00
>8	42	84.00
Total	**50**	**100.00**



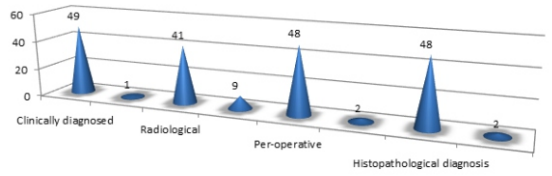
On ultrasonography abdomen, in majority of cases (80%), appendix was found to be congested and edematous, while in 2% of cases, appendix was found to be perforated. In 18% of cases no abnormality was detected in appendix, as shown in table.

ULTRASONOGRAPHIC FEATURES OFAPPENDIX	NUMBER OF CASES
Thickened, fibrotic	-
Congested, edematous	40 (80%)
Gangrenous	-
Perforated	1 (2%)
Normal appendix	9 (18%)



In 98% cases of acute appendicitis, we are able to diagnose it clinically, while considering the radiological diagnosis, a significant number of cases (18%) were missed by radiological investigations. During operation and histopathological examination, 96% cases were diagnosed having disease and 4% cases were normal, as shown in table.

Clinically diagnosed		Radiological		Per-operative		Histopathological diagnosis	
Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative
49(98%	1 (2%)	41(82%	9 (18%)	48(96%)	2 (4%)	48(96%)	2 (4%)



Acute appendicitis is the most common cause of an „acute abdomen in young adults and thus appendicectomy is the most frequently performed urgent abdominal operation.

Comparison of male: female ratio in different studies:

In the present study, number of male patients were more (56%) as compared to female patients (44%). Various diagnostic modalities (clinical, radiological, operative, histopathology) are used for the diagnosis of acute appendicitis. Initially the diagnosis of acute appendicitis was solely based on clinical and operative features but after the advent of radiological investigations in acute appendicitis, the preoperative diagnosis of acute appendicitis has been improved but overall clinical diagnosis of acute appendicitis is always appreciated.

Clinical examination; In present study, Pain was the most predominant (90%) symptom presented by all cases of acute appendicitis. Vomiting was present in 82% of total cases in the present study. 46 cases (92%) out of 50 cases in the present study had fever at the time of admission. hyperaesthesia and tenderness in right iliac fossa in 98% of all cases was reported and rebound tenderness was observed in 41 out of 50 cases (82%).. There was leucocytosis in 41 (82%) cases along with increase in neutrophil polymorphs in 44 (88%) cases in present study.

Radiological Examination Plain X-ray of abdomen is not helpful in the diagnosis of acute appendicitis, but by this investigation we can rule out the possibility of ureteric stones on the right side. In present study ultrasonography of abdomen showed positive results in 41cases (82%) out of 50 cases. In majority of cases (80%), appendix was found to be congested and edematous, while in 2% of cases, appendix was found to be perforated. In 18% of cases no abnormality was detected in appendix, Operative Findings On operation by muscle splitting, transverse skin incision, the appendix was seen in different positions. In present series most of appendix (62%), were retrocaecal in position and In 14% of cases it was pelvic in position On gross examination of the appendix it was congested and edematous in 92% of cases. In 4% cases it was perforated and in 2 cases (4%) appendix was normal. No case of gangrene was reported in the present study.

Histopathological Findings On removing the appendix it was inflamed in 86% of cases on histopathological examination. In 4% of cases it was normal.

Summary and conclusion: In the present study,majority of cases were in the age group of 20-40 years. The ratio of male to female was 28:22. Abdominal pain was present in 90% of cases. Fever was present in 92% of cases while nausea and vomiting were present in 82% of cases. Tenderness in right iliac fossa was present in 98% of cases. 98% of patients showed alvorado score of >7 (s/o clinically positive). In majority of cases position of appendix was retrocaecal (62%), while pelvic position was present in 14% of cases, and preileal in 10% of cases. Ultrasound abdomen diagnosed 82% cases of acute appendicitis and it showed negative results in 18% of cases which were clinically positive. Per operatively, in 96% of cases appendix was diseased (either inflamed or perforated), while only in 4% of cases it was normal(non diseased). Histopathological examination revealed that in 96% of cases, appendix was diseased, while in 4% of cases it was completely normal. 96% of cases were discharged from the hospital uneventfully. In almost all cases (98%) diagnosis is accurately made only on the basis of clinical examination, while in a significant number of cases (18%), radiological investigations, used for diagnosis, failed to diagnose the positive cases. Acute appendicitis is a clinical diagnosis, although the radiological, biochemical and pathological evaluation in acute appendicitis is important. The history and clinical examination and alvorado score is more significant to treat and manage the cases of acute appendicitis which has been proved from our study and the literature.The diagnostic accuracy of clinical features is far more better than radiological investigations in the diagnosis of acute appendicitis. Therefore it is concluded that acute appendicitis is more a clinical diagnosis rather than radiological and it is better to use radiological investigations only to confirm the diagnosis of acute appendicitis rather to diagnose it.

REFERENCES

[1]. Bailey and Love. Short practice of surgery 1985; 19th ed: 1008-1092.
[2]. Claudius Amyand. Appendicitis.Quoted by Bochus in Gastroenterology Book, 1736.WB Saunders Co, Philadelphia, 1966; 1091.
[3]. Meiler. Quoted by Maingot's abdominal operations, 1827. 9th Ed, Appleton and Lange, p. 953.
[4]. Fitz RH. Perforating inflammation of the vermiform appendix with specific reference to its diagnosis and treatment.Quoted by Maingot's abdominal operations. 9th Ed. Appleton and Lange, p. 953. Am J Med Sci 1886; 92: 321-46.
[5]. McBurney C. Experience of early operative intereference in cases of disease of vermiform appendix, 1889. New York. Med J 1889; 50: 676.
[6]. 6.Senn N. The technique of pleural effusion.Quoted by Ochsner A and Lilly G, 1889.The technique of appendicectomy.Surg 1937; 2: 532-53.
[7]. 7.Bhattacharjee PK, Chowdhary T, Roy D. "Prospective evaluation of Modified Alvarado score for diagnosis of acute appendicitis" J Indian Med Assoc, May,2002; 100(5): 310-1,314. 8. Malik AA &WaniNA "Continuing diagnostic challenge of acuteappendicitis, evaluations through modified Alvarado score" Aust NZ J Surg: July 1998; 68(7): 504-5.
[8]. 9. Momin.Int J of Surgery, Month : August 2015; 4 (65): 11308-15.
[9]. Dhawan R. Appendicitis in rural practice. Observation in 100 cases. J Ind Med Assoc 1962, 39: 514.
[10]. Piper R, Kager L. Acute appendicitis: A clinical study of 1018 cases of emergency appendicectomy. ActaChirScand 1982; 148-51.
[11]. Maingot's abdominal operations. 10th ed. By Michael J Zinier, 1997, Vol. II: 1205-07.
[12]. Bhatnagar R, Sharma VP, Gupta AA, Choudhary S and Andley R. Acute appendicitis: A clinicopathological study of 100 cases. Ind J Surg 1978; 40: 13.
[13]. Marchildon and Dudgeon. Perforated appendicitis: Current experience in a children's hospital. Ann Surg 1977; 185: 84-6. 1995; 8th Ed: 451-52.
[14]. Tait. Quoted by Maingot's abdominal operations, 1990. 9th ed. Appleton and Lange, p. 953.
[15]. Roy G, Roy SC, Dass MM and Ghosh AK. Acute appendicitis: A clinical appraisal of 500 cases. J Ind Med Assoc 1969; 52: 509.