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General Surgery

A CLINICO ULTRASONOLOGICAL STUDY IN PREOPERATIVE EVAULATION OF RIGHT ILIAC FOSSA MASS

Dr. Mundlapati Santhi — Final Year Post Graduate, Department Of General Surgery, Santhiram Medical College And Hospital.

Dr. P. Dinesh Chaitanya Raju — M.S Assistant Professor, Department Of General Surgery, Santhiram Medical College And General Hospital

ABSTRACT The surgeon interprets each abdomen's complex appearance of multiple masses, as "Pandora's box," the Temple of wonder" , etc. The RIF is proud of its status. In the "Temple of surprises," amid the other abdominal quadrants." It's a frequent ailment that presents a clinical diagnostic conundrum, presents misleadingly, and presents a treatment conundrum to the surgeon. In most cases, the diagnosis is straight forward but can be challenging, given the improvements in Diagnostic modalities include interventional radiology. An ultrasonic examination has been developed to bridge the distance between direct visualisation and palpation. Surgeons can utilize an ultrasound examination to make a preoperative diagnostic because to its non invasiveness, speed, portability, and affordability. Because clinical, Ultrasonographic, and a pathologic diagnoses differ from one another, this study was conducted. Hence, the need for this investigation, since it is a surgical challenge in to covering an interesting topic for optimum success, manage individuals with a precise preoperative ultrasound examination.

KEYWORDS : ILIAC FOSSA MASS , APPENDICULAR MASS , ULTRASOUND

INTRODUCTION

- RIF masses can trigger Ileo-Caecal Tuberculosis, Caecal Carcinoma, Appendicular Mass ,and other conditions.
- It must distinguish them, as some call for fast action, while others benefit from conservative care and avoid surgery.
- A physician finds it fascinating and fulfilling to examine patients with RIF lumps because, It takes a solid clinical diagnosis backed by ultrasonography to handle these situations.
- An ultrasonic examination has been developed to bridge the distance between direct visualisation and palpation.
- Surgeons can utilize an ultrasound examination to make a preoperative diagnostic because to its non invasiveness, speed, portability, and affordability.
- Because clinical, Ultrasonographic, and a pathologic diagnoses differ from one another, this study was conducted.
- Hence, the need for this investigation, since it is a surgical challenge in to covering an interesting topic for optimum success, manage individuals with a precise preoperative ultrasound examination.

OBJECTIVES:

1. Clinical examination of right iliac tumour
2. How ultrasonography treats and diagnoses right iliac fossa masses.
3. Comparing ultrasonography and clinical diagnosis.

METHADOLOGY:

This study was authorised by the ethical committee of SANTHIRAM MEDICAL COLLEGE AND GENERAL HOSPITAL. After receiving written consent, explaining the nature of the procedure, the type of anaesthesia, and the purpose of the study to the patient, the case was accepted for investigation.

Ethical Consideration:

This study was authorised by the ethical committee of SANTHIRAM MEDICAL COLLEGE AND GENERAL HOSPITAL. This prospective study conducted from year JANUARY 2024 to JUNE 2024.

After receiving written agreement, explaining the nature of the procedure, the type of anaesthesia, and the purpose of the study to the patient, the case was accepted for investigation.

Inclusion Criteria:

1. There are patients who are beyond 14 years old.
2. Included are patients who had a mass in the Right Iliac region when they were Admitted.
3. It also includes cases that are unintentionally discovered during examination and investigation.
4. There are 75 cases in it.

Exclusion Criteria:

1. It doesn't include any gynaecological illnesses.
2. It eliminates patients who are under 15 years old.
3. It prevents a mass from another region from creeping into the RIF
4. Swellings of the RIF parietal wall are excluded.

Method Of Collection Of Data:

The instances that were included underwent

1. Detailed clinical history.
2. Physical examination.
3. Investigations

a. Blood and Urine routine.
b. Stool for occult blood, ova and cyst.
c. Pain X-ray of chest
d. Ultrasonography right iliac region.
e. Colonoscopy

INVESTIGATIONS

Investigations And Interventions:

1. 1. Regular blood urine tests: Hb%, RBS, CBC, ESR, blood urea, and serum creatinine
2. Stool for ova, cysts, and occult blood.
3. Sputum for AFB if ileocaecal tuberculosis is suspected.
4. Chest X-ray or pain (To rule out tuberculosis and secondaries)
5. Right iliac area ultrasound in all circumstances.
6. Colonoscopies are performed in cases when ileocaecal TB and caecal cancer are suspected.
7. Surgical operations performed as needed for the situation.

Statistical Methods

1. Chi-square and Fisher Exact tests
2. Diagnostic statistics

a) Sensitivity
b) Specificity
c) Positive predictive value(PPV)
d) Negative predictive value (NPV)

RESULTS

DISTRIBUTION OF THE DISEASES:

S. No	Disease	Number of cases	%
1.	Appendicular mass	39	51
2.	Appendicular abscess	15	20
3.	Ileocaecal Koch's	14	19
4.	Carcinoma caecum	3	4
5.	Psoas abscess	2	3
6.	Iliac lymphadenopathy	2	3
	Total	75	100%

Appendicilar Mass	Sensitivity	Specificity	PPV	NPV
Clinical assessment v/s ultrasound	76.09%	96.55%	97.22%	71.795

Final diagnosis v/s ultrasound	82.05%	88.89%	88.89%	82.05%
APPENDICULAR ABSCESS				
Clinical assessment v/s ultrasound	100%	88.23%	87.5%	100%
Final diagnosis v/s ultrasound	93.33%	98.33%	93.33%	98.33%
ILEOCAECAL TUBERCULOSIS				
Clinical assessment v/s ultrasound	61.52%	93.55%	66.67%	92.06%
Final diagnosis v/s ultrasound	64.29%	95.05%	75.00%	92.06%
CARCINOMA CAECUM				
Clinical assessment v/s ultrasound	50%	94.2%	42.86%	95.59%
Final diagnosis v/s ultrasound	100%	94.44%	42.85%	100%

Clinical And Ultrasound Comparision Table

	The present study	Milard et al study
Correct pathological diagnosis	89.3%	82%
Clinical assessment	77.3%	76%

The largest incidence of appendicular mass was seen in the younger age group (21–30 years) (38.46%) and the older age group (21–40 years) (64.15%).

The oldest and youngest patients were 70 and 15 years old, respectively.

Patients between the ages of 41 and 50 are most likely to have the occurrence, with 23% of cases.

Analysis Of The Final Diagnosis In Comparison To Clinical And Ultrasound Diagnosis

- Due to its ability to detect 8 appendicular abscess instances in this facility, ultrasonography was more beneficial when the appendicular mass was clinically recognised.
- This made it easier to distinguish between the appendicular mass and appendicular abscess.
- When an appendicular abscess was identified, the recommended course of therapy switched from medical line of mangement to surgical intervention.
- In situations of ileocaecal TB and caecal cancer, it acted as an addition to the medical diagnosis.
- Even though ultrasound was able to identify each case's intestinal wall thickening, the distinction could only be determined with a modest amount of accuracy.
- One patient in this facility had an ultrasound that showed they had iliac lymphadinitis, which was later clinically determined to be ileocaecal TB.
- Ultrasound results have demonstrated cases of psoas abscess.
- Ultrasound was able to identify the iliac lymph nodes in case scenarios of iliaclymphadenitis and also performed FNAC while being guided by an ultrasound.
- In those circumstances, pointless laparotomiesand the absence of additional imaging techniques was avoided.
- In those situations, patients started out on a scientific line of control.

Overall, ultrasonography was useful when cases of appropriate iliac fossa tumour was there because
1. Sensitivity in calculating mass: 100%
2. 94% accuracy in determining the origin
3. 89.33% of correct diagnoses
4. Whereas the scientific assessment rose to 77.33%

DISCUSSION

- 75 patients made up the study group, and among them were
- 39 patients with appendicular masses,
- 15 with appendicular abscesses,
- 14 with ileocaecal Koch's,
- 3 with carcinoma caecum,
- two with Psoas abscesses, and
- two with iliac lymph nodes.
- Right iliac fossa masses are caused by appendicular pathology in 72% of instances, with ileocaecal Koch's, carcinoma caecum, psoas abscess, and iliac lymph nodes following.
- Appendicular mass and appendicular abscess were the most common occurrences in this study, with Ileocaecal Koch's being the second most common.
- The primary contribution of our study is the analysis of appendicular pathology.

The Findings From The Observations Suggest That

1. The most effective investigation for patients with RIF masses is ultrasound.
2. In comparison to other studies, the observation is nearly identical, with the exception of an improvement in accuracy, suggesting that a correct diagnosis was made perhaps by experienced hands.
3. It acts as an adjuvant to many illnesses, including ileo-caecal tuberculosis and caecum cancer.

- This preoperative examination is crucial because the therapeutic strategy shifts from a conservative to a surgical one.
- In order to distinguish between ileo-caecal tuberculosis and Carcinoma caecum, it serves as an adjuvant investigative technique to the clinical diagnosis.
- Although the ultrasound can detect the thickening of the intestinal wall, the specificity is quite moderate.
- In iliac lymphadenitis, where clinical diagnosis is 50%, ultrasound provides 100% sensitivity and 100% specificity.
- Ultrasound can be used to confirm the Psoas abscess diagnosis.
- Ultrasound can be used to determine the cause, nature, and extent of masses in situations when the presentation is hazy and frequently misleading (Joshi, 1976).

This is a crucial tool for the diagnostic and pre-operative assessment. When comparing our study it showed pathological diagnosis with 89.3%, where as in Millard et al as 82%.our study has 77.3% of accuracy in clinical assessment.

CONCLUSION

- 75 patients made up this study group, and 39 had appendicular masses, 15 had appendicular abscesses, 14 had ileocaecal Koch's, 3 had carcinoma caecum, two had Psoas abscesses, and two had iliac lymph nodes.
- A mass in the RIF is most frequently caused by appendicular pathology (72% of cases), followed by ileocaecal Koch's disease, caecal cancer, psoas abscesses, and iliac lymph nodes.
- According to this study, appendicular mass is the most prevalent mass in the right iliac area and should be treated conservatively for a favourable outcome without morbidity.
- Extra peritoneal drainage for the treatment of appendicular abscess produced positive results.
- Ileo-caecal TB cases those who underwent surgical management all had positive outcomes.
- Psoas abscess instances that underwent surgical treatment and iliac lymphadentis treated on medical line showed good prognosis.
- The right iliac fossa mass was identified by ultrasound with 100% sensitivity and 94.6% accuracy in cases of abdominal masses.
- Correct diagnoses were established in 89.3% of cases, which is higher than the clinical evaluation rate of 77.3%.
- After making the final diagnosis, it was discovered that ultrasound was 93% sensitive and 98% specific for appendicular abscess and 89% sensitive and 82% specific for appendicular mass.
- It has been discovered to be useful in separating appendicular abscess from appendicular mass. As the management strategy shifts from a conservative line to a surgical line, this preoperative evaluation is crucial.88
- It helps distinguish between ileo-caecal TB and carcinoma caecum in addition to the clinical diagnosis.
- Though the gut wall thickening can be seen by ultrasonography, the specificity is rather moderate.
- Whereas clinical diagnosis is only 50% accurate for iliac lymphadenitis, ultrasound offers 100% sensitivity and 100% specificity.
- With ultrasound, a Psoas abscess diagnosis can be verified. Ultrasound can be used to determine the origin, nature, and extent of a mass in situations with hazy presentations that are frequently deceiving.
- This is a crucial tool for the mass's pre-operative assessment and diagnosis. In the diagnosis of the right iliac fossa mass, in the preoperative evaluation, and in the management of this condition in elderly patients who are unable to tolerate procedures like colonoscopy, patients who do not wish to be exposed to radiation (barium studies), patients who are unable to pay for CT scanning, and patients in rural areas where CT scanning is not available,

ultrasound is essential.

- When necessary, ultrasound aided in early surgical intervention, effective therapy in terms of decreasing morbidity, and early patient assessment and reduces the hospital stay and also financially.
- An ideal first line of investigation modality in preoperative examination of right iliac fossa mass is ultrasound, it may be done in an outpatient setting without any preparation or radiation exposure, is affordable, non-invasive, and patient-friendly, and produces good results compared to Millard et al study with 76%.

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