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AN EVALUATION OF COMPREHENSION ABOUT PERIOPERATIVE MANAGEMENT OF APPENDICITS AMONG INTERNS IN A TERTIARY CARE CENTRE

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ABSTRACT

Appendicitis is most, commonest disease encountered by any physician in spite of their specialty. Due to increased trend of complicated appendicitis disease an ongoing comprehensive evaluation done among interns regarding diagnostic and management efficiency about appendicitis done to improve management strategies.

The aim of this study is to evaluate interns ongoing/completed their general surgery rotational posting during training period about clinical exposure on the disease acute appendicitis in karpaga vinayaga institute of medical sciences and research centre.

Primary objective - To evaluate interns about knowledge regarding management of acute appendicitis

Secondary objective - To identify the grey area on their knowledge to improve the proficiency of clinical knowledge among interns.

Method: A Cross, sectional study conducted among interns from the period may 2025 to may2026 in karpaga vinayaga institute of medical sciences and research centre. Using structured mcq on google form including a total number of 10 mcq's on perioperative management of appendicitis.

Results: A total of 66 interns completed and ongoing rotational posting in department of general surgery evaluated by providing a total of 10 question through google form online survey. Among these total 66 interns 42 female and 24 male mean age group 23±1 years of age. All were exposed previously or ongoing in estimation, evaluation of patients presented to outpatient department, general surgery in karpaga vinayaga institute of medical sciences and research centre with clinical presentation of acute uncomplicated and complicated appendicitis patients.

fig 1: interpretation suggests that majority 40 interns (59.7%) have knowledge about the earliest clinical presentation of acute appendicitis. 8 interns suggested earliest relative signs that can be presented in other disease also, Rest 19 interns needs more training on the clinical examination of appendicitis patient.

fig 2: Among a total of 66 interns a total of 38 interns (56.7%) answered correctly and rest of needs, more training on radiological diagnosis of appendicitis.

fig 3: 73% answered correctly in relation to pathophysiology of pain in acute appendicitis suggests interns are having more theoretical knowledge in the pertaining to appendicitis.

Fig 4: Among total interns exposed to surgery department in seeing complicated appendicitis patients, Majority (60%) answered correctly in relation to complicated appendicitis.

fig 5: All interns have management or seen complications related to appendicitis concluded by analysing the post complication in this question. more than fifty percent answered it correctly.

fig 6: Among all participants exposed to acute appendicitis surgery or having ongoing exposure to the surgery knows the right answer to this question approximately 60% answered it correctly.

fig 7: In total participants more than 60% knows correct answer to the surgical knotting in acute appendicitis in laparoscopic approach

fig 8: majority of the interns have knowledge in assessing CT image of complicated appendicitis. This questions assessment provides us 56.1% interns knows about diagnosing complicated appendicitis in CT image.

fig 9: pictographic view of eliciting critical sign for diagnosing appendicitis suggests only 37.8% knows to elicit the sign to confirm appendicitis.

Fig: it suggests 32.8% knows about ergonomics and monitor placement in laparoscopic appendicitis procedure.

Conclusion: This study decisively demonstrates that all medical interns participated in this study conducted in department of general surgery in karpaga vinayaga institute of medical sciences and research centre near chengalpattu have profound knowledge on the theoretical concepts, such as the neurological basis of migrating abdominal pain and standard surgical knots used in laparoscopic surgery, they exhibit drastic knowledge gap in practical application both visual and technical skill in the clinical application for evaluating acute appendicitis. The critical gaps identified in identifying physical examination signs (Obturator Sign) and understanding laparoscopic port triangulation schemas (32.8% accuracy) reveal that the current training depends more on theoretical knowledge than skill, oriented training for the interns.

To bridge the gaps, the intern training curriculum must be revised with more lateral thinking and action oriented. We recommend implementing mandatory, case-based bedside training workshops to expertise interns on physical examination techniques, along with the introduction of interactive, simulation-based video modules focusing more on laparoscopic ergonomics and port triangulation during surgery posting in internship rotation in department of general surgery. Addressing these specific educational, deficiency provide more empower, self, aware interns in diagnosing acute appendicitis, thereby ensuring they will be a good, clinicians in preventing complications related to acute appendicitis by early detection and early treatment measures.

From our study we conclude that intern need more training on practical skill on theoretical application in management of acute appendicitis, we recognize the blind spot and planning to implement the revised protocol on training an intern in the upcoming academic year.

DISCUSSION: In this evaluation enlight on the evaluation of knowledge and skill on perioperative management of acute appendicitis among interns at department of general surgery in karpaga vinayaga institute of medical sciences and research centre near chengalpattu.

Acute appendicitis disease is the most common surgical disease encountered by interns during their rotational internships. therefore, a vigorous understanding of its clinical presentation, investigations, physical signs, and surgical management plays vital for minimizing diagnostic delay and reducing patient morbidity and mortality in the long run.

Clinical Presentation and patho physiology: The evaluation revealed a profound understanding of appendicitis symptoms among interns. 73.1% of interns correctly identified that periumbilical pain migrating to the right iliac fossa signifies a transition from referred visceral pain to somatic pain, only 59.7% could isolate "periumbilical pain" as the absolute first chronological presentation. This evaluation suggests that interns possess more theoretical knowledge regarding the neuro-pathophysiology of pain migration, they struggle to apply theory knowledge into practical skill needs more training in a chronological clinical history when assessing a patient at the bedside. significantly 28.4% answered to "Right iliac fossa pain" as the initial symptom which denotes interns need more practical experience to prevent delay in the treatment of acute appendicitis.

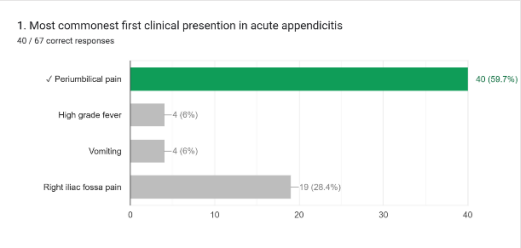
Diagnostics and Imaging: In diagnosing acute complicated and uncomplicated appendicitis among interns. Regarding ultrasound evaluation is the first choice for any abdomen pain in term of imaging modality in young or female patients —56.7% accurately identified 6 mm is significant findings for appendiceal diameter predict inflammation. Similarly, 56.7% correctly identified "extraluminal air" as a definitive computed tomography (CT) marker for a perforated appendix. However, majority of interns incorrect answers for both questions indicates interns rely more on non-specific inflammatory markers. A combined 40.3% of interns selected wall thickening or the target sign on CT, both of which are indicative of acute, uncomplicated appendicitis rather than free perforation. This proves the need more training for interns to differentiate uncomplicated appendicitis and complicated appendicitis.

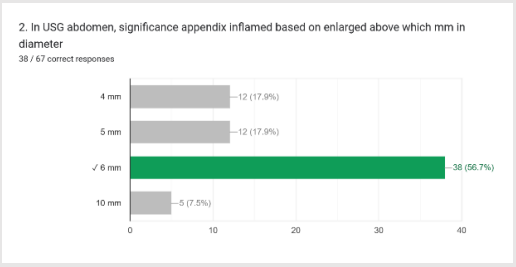
The Clinical Examination Deficit: More prominent knowledge gap identified in this study lies within the clinical examination. Only 38.8% of interns could correctly identify the Obturator Sign from the provided clinical picture. Strikingly, majority of the interns (41.8%) mistook it as the Psoas Sign. This denote a deficiency in basic clinical skill. The Obturator sign (internal rotation of the flexed right hip) and the Psoas sign (extension of the right hip) are essentially used to identify anatomically location of appendix—specifically pelvic and retrocecal positions, deficit in identifying these signs can lead to delay in treatment, hence intern should be trained to elicit various clinical signs to confirm the diagnosis.

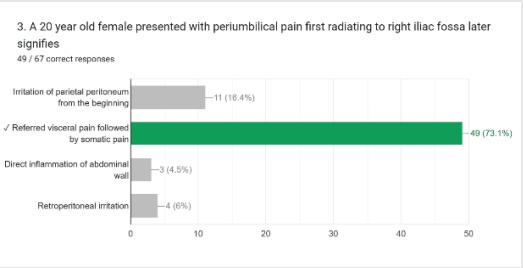
Appendix surgery: The assessment of intraoperative decisions and technical surgical knowledge provided mixed results. Interns performed reasonably well regarding "stump appendicitis," with 61.2% knows treatment requires a completion appendectomy, and 59.7% knowing that the remaining appendiceal stump should be kept under 5 mm to prevent complications. Furthermore,

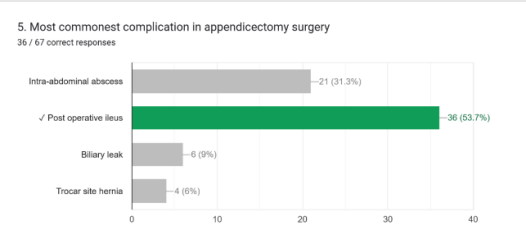
Interns alignment was decent, with 62.7% correctly identifying the Modified Roeder's knot as the preferred intracorporeal choice at our facility.

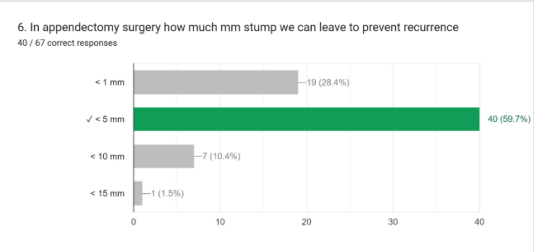
However, schematic diagram of a laparoscopic appendectomy to identify correct port placement and triangulation (fig 10), the accuracy rate plunged to 32.8%—the lowest on the assessment. This drastic drop confirms a significant misalignment between theoretical knowledge and practical skill in understanding operation room dynamics. While interns are frequently assigned to assist or observe in the operating theater, they often function as passive observers rather than active learners who understand the ergonomics and anatomical principles of port placement. Hence by conclusion interns need more training on active skill learning along with correlation of theoretical knowledge.

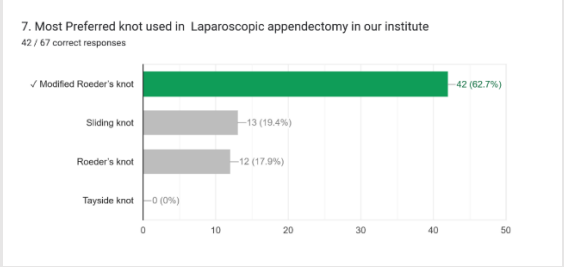


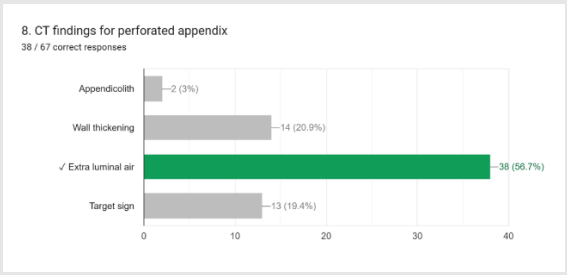


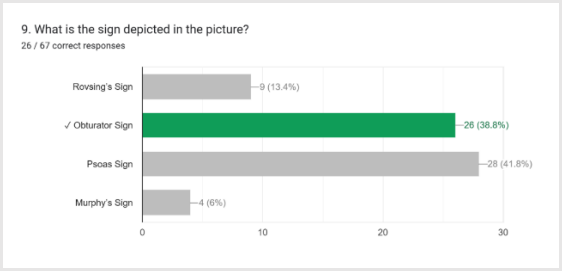


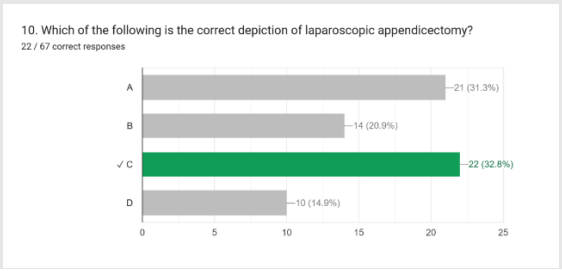












Keywords: Appendicitis, Diagnosis, Knowledge, Interns

1. INTRODUCTION

Acute appendicitis is the most common and persistent disease causing illness among all age group of population in spite of gender variation. Even though it is one of the commonest disease encountered in clinical practice there is still a diagnostic dilemma among medical graduate practicing in both urban and rural areas due to variable clinical features among patients which may adds up to numerous other intraabdominal conditions mimicking appendicitis. Various others intraabdominal diseases mimicking appendicitis are Hydroureteronephrosis - accumulation of fluid in the kidney especially on the right side, Hemorrhagic ovarian cyst in female occurs due to accumulation of blood in the cyst cavity of the ovarian cyst leading to misdiagnosis. most common endemic disease like enteric fever causing ileitis. In accurate or delay in diagnosis of appendicitis may cause various complications like perforation, abscess formation and mass formation which is more serious conditions may increase mortality and morbidity.

however clinical examination is primary role for evaluation of acute appendicitis and there is chance of 24% a physician may miss acute appendicitis3. These mistake increases the trend for development of complicated appendicitis,

Thereby increasing morbidity and mortality for the patient, Also increases the medico legal issues may to mislead to malpractice claims related to acute appendicitis for younger physician in practice. such mistake happens due to over reliability on clinical laboratory findings and radiological findings to pertain the diagnosis of acute appendicitis1.

Even more due to variation in knowledge, clinical understand and exposure related to presentation of appendicitis there is a prominent gap in the knowledge in peri operative management of appendicitis among interns2. Also in a study conducted by Jaber et all (2024) among final year students theory about knowledge on acute appendicitis is more among study than practical knowledge in managing acute appendicitis patients.

Interns are able to pick up typical clinical presentation of acute appendicitis patients but unable to differentiate complicated case of acute appendicitis also relying solely on laboratory finding and radiological imaging for diagnosing appendicitis. This salvages the window period of opportunity for the patient in early treatment for acute appendicitis (3,4).

misdiagnosis or delay treatment for acute appendicitis occurs in about 6-7% of patients leading to prolonged hospital stay and increases morbidity and mortality especially in emergency scenarios 1.

Since interns are the first assessor for any patient presented with illness in a medical college. we must improve their about management of acute appendicitis Murshid et al. (2026)

The main aim of this study is to enhance knowledge and clincal skills among interns in karpaga vinayaga institute of medical sciences and research centre. Thereby preventing the mis diagnosis and mis management of acute appendicitis in their future practice and create an unique learning protocol for upcoming interns to minimise the diagnostic errors in practice.

2. MATERIAL AND METHOD

A cross sectional study conducted among interns ongoing / completed rotational posting in department of general surgery between period of may 2025 to may 2026 in karpaga vinayaga institute of medical sciences and research centre.

3. INCLUSION AND EXCLUSION CRITERIA

Interns who are ongoing/ completed department of general surgery rotational postings are included in this study.

4. EXCLUSION CRITERIA

Interns not completed postings in department of general surgery between period of may2025 to may2026

The study conduct by assessing students with 10 mcq's on acute appendicitis through google form. three mcq's on clinical diagosis of acute appendicitis, Three mcq's on imaging studies on diagnosis of appendicitis, Three mcq's on intraoperative surgery for appendicitis. One mcq's on postoperative management of acute appendicitis. These complies evaluation of knowledge about perioperative management of acute appendicitis among interns.

All the questions and analysis were done through online mode using google form and specification entries including gender, age and response and unresponsiveness to the pertained questions were included and interpreted using bar chart after completion of the study. Thereby enabling a new refined methods on teaching and development of skill for upcoming interns to minimize the diagnostic dilemmas thereby minimising the future complication due to disease for the patients.

CONFLICT OF INTERESTS

None.

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