

Comparison Between RIPASA And Modified Alvarado Scoring System For Diagnosis of Acute Appendicitis

¹Suhas Devanathan, ²Md Jawed Akther,

Abstract--- *Background: Amongst the surgical emergencies, acute appendicitis is most common. Present study will compare RIPASA and Modified Alvarado Scoring System to find out more relevant and better applicable system of scoring in order to aid prior diagnosing of acute appendicitis. Objectives; To assess the RIPASA scoring system and Modified Alvarado Scoring System for the diagnosis of acute appendicitis, and compare them with various parameters. Methodology Study will be conducted in the department of general surgery in Acharya Vinoba Bhave Rural Hospital Sawangi, Wardha. Results There is high specificity and sensitivity amongst the scoring systems and also a high diagnostic accuracy in diagnosing acute appendicitis. Conclusion: These systems of scoring help improve the accuracy of diagnosis and sequential reduction of unnecessary removal of appendix and thus the negative impacts of surgery. Keywords: appendicitis, RIPASA scoring system, modified ALVARADO scoring system,*

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I INTRODUCTION:

Amongst the surgical emergencies, acute appendicitis is most common. Appendicitis has a variable incidence which differs by a considerable factors such as the country, topographical region, race, social and economic status, food habits, maintenance of hygiene, gender, climate and other factors^{1,19}. In the absence of its prompt diagnosis and treatment, incidence of mortality and morbidity may range from 13% to 77% with an average of 50% ^{2,14,20}. Despite being a common problem, preoperative diagnosis is difficult. The best tool for affirmation of diagnosis is by tissue diagnosis. Ultrasonography aids in pinpointing the disease but depends on the sonologist and most of the times is either missed or exaggerated ^{3,15,18}. The Computed Tomography with the injectible and oral contrasts scan has sensitivity and specificity which is high and is expensive and thus not done routinely ^{4,5,11}. The inexpensive, quick, and non-invasive tool in pin-pointing appendicitis in its acute stage is a scheme of scoring which has clinical relevance. Alvarado system of score and modified ALVARADO system of score have sensitivity and specificity

1, Junior Resident, Department of General Surgery, Jawaharlal Nehru Medical College, Datta Meghe Institute of Medical Sciences, dr.suhas1990@gmail.com, 9591124187; <https://orcid.org/0000-0002-5877-3853>

2, Professor, Department of General Surgery, Jawaharlal Nehru Medical College, Datta Meghe Institute of Medical Sciences, dr.mdjawedakther1973@gmail.com ,7387275120; <https://orcid.org/0000-0003-1901-0180>

Corresponding author: Dr. Suhas Devanathan, G18, Raghobaji boys hostel, Acharya Vinobha Bhave Rural Hospital campus, Sawangi(Meghe), Wardha, Maharashtra- 442017.

email id: dr.suhas1990@gmail.com

Contact number: 9591124187

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which is very acceptable when applied to the population of the west^{6,7,13}. But to Middle Eastern and Asian population, they show relatively less specificity and sensitivity^{8,9,12}. **RIPASA** (Raja Isteri Penigiran Anak Saleha Appendicitis) scoring system is unique to Asian population^{10,16,17}.

II BACKGROUND/RATIONALE:

Present study will compare **RIPASA** and Modified Alvarado scoring system to find out the more relevant and better applicable scoring scheme to help early diagnosis of appendicitis in its acute stage.

The study's objective to appraise the **RIPASA** and modified **ALVARADO** scheme of tallying to diagnose appendicitis in its acute stage, and to observe the correlations between the two schemes of tallying, thus correlate with respect to negative predictive value (NPV), sensitivity, diagnostic accuracy, positive predictive value (PPV), specificity.

III METHODS:

Study design: Cross-sectional, comparative study

Setting: this study will be conducted in the department of general surgery in Acharya Vinoba Bhave Rural Hospital Sawangi, Wardha and the Study Duration being from July 2018 to October 2020

Participants: Cases in the group of ages of ≥ 13 yrs presenting with right iliac fossa (right iliac fossa) pain and willing to take part in the study and pain starting at right iliac fossa and later on becoming generalized. The Method of Collection of Data being: Patients presenting either to the Surgery OPD or to the Emergency Department with following criterias will be screened for study.

Variables: movement of pain to the right iliac fossa (RIF), fever, raised TLC count, attenuation, tenderness in the RIF, sense of distaste, emesis, rebound observation of tenderness

Data sources/ measurement : With the final confirmed diagnosis from HPE report, appraisal of **RIPASA** and modified **ALVARADO** scheme of tallying will be done to diagnose appendicitis in its acute stage will be done by defining various parameters.

Bias: various other causes of right sided iliac fossa pain.

Study size: 50 patients

Quantitative variables: raised total leucocyte count, age, urinalysis.

Statistical methods: With the final confirmed diagnosis from HPE report, appraisal of **RIPASA** and modified **ALVARADO** scheme of tallying will be done by defining different parameters.

IV EXPECTED OUTCOMES/RESULTS:

Participants: patients, thirteen years and more who present with pain in RIF, who wish to participate in this study.

Descriptive data: The Method of Collection of Data being those patients who present either to the Surgery OPD or to the Emergency Department with following criteria's will be screened for study.

Outcome data: it is expected that there will be a high specificity and sensitivity amongst the scoring systems and also a high diagnostic accuracy in diagnosing acute appendicitis.

Main results: These systems of scoring help improve the accuracy of diagnosis and sequential reduction of unnecessary removal of appendix and thus the negative impacts of surgery.

V DISCUSSION:

There is expected to be high specificity and sensitivity amongst the scoring systems and also a high accuracy of diagnosing the acute stage of appendicitis. A number of different types of studies directly or indirectly related to this study were reviewed ²¹⁻⁸⁰.

Limitations: Patients who present with non-RIF pain and with different complaints but who subsequently developed right iliac fossa pain.

Interpretation: with the increased diagnostic accuracy, there is reduction in the negative appendectomy thus improving the outcome.

Generalisability: These schemes of scoring help improve the accuracy of diagnosis and sequential reduction of unnecessary removal of appendix and thus the negative impacts of unnecessary surgery.

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