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RESEARCH ARTICLE

COMPARISON OF RIPASA AND ALVARADO SCORING SYSTEM IN DIAGNOSIS OF ACUTE APPENDICITIS IN TERTIARY CARE

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Abstract

Introduction: Acute appendicitis is one of the most common surgical emergencies, with a lifetime prevalence rate of approximately one in seven. Different techniques have been devised to assist in equivocal cases in attempts to decrease negative appendectomy rates. RIPASA and ALVARADO scores are new diagnostic scoring systems for diagnosis of acute appendicitis. RIPASA scoring system has more sensitivity, specificity and diagnostic accuracy than ALVARADO score in diagnosis of acute appendicitis in Asian population. Hence this study conducted to compare RIPASA AND ALVARADO score in diagnosis of acute appendicitis in tertiary care hospital. RIPASA score includes more parameters than ALVARADO score such as age, gender, duration of symptoms prior to presentation

Aims and objectives: To compare RIPASA and Alvarado score in diagnosing acute appendicitis using histopathology as gold standard

Materials and Methods:

Source of Data: Basaveshwar teaching and general hospital from august 1st to 30th september 2022

Study Design: Prospective observational study.

Study Population: 74 patients Inclusion criteria All patients who presented with right lower quadrant abdomen pain and diagnosed as acute appendicitis.

Exclusion Criteria: Patients under 18 years of age. Patients with right iliac fossa mass. Patients with features of peritonitis All these patients were scored as per RIPASA and Alvarado scoring system after taking history, clinical examination and laboratory investigations. RIPASA includes 18 parameters and Alvarado 8 parameters. A score of 7.5 taken as high probability of acute appendicitis as per RIPASA and score of 7 for Alvarado scoring system. The decision of appendectomy solely based on surgeon's own clinical judgement After the surgery, histopathological reports of operated cases correlated with scoring systems.

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Different techniques have been devised to assist in equivocal cases in attempts to decrease negative appendectomy rates.

RIPASA and ALVARADO scores are new diagnostic scoring systems for diagnosis of acute appendicitis .

RIPASA scoring system has more sensitivity , specificity and diagnostic accuracy than ALVARADO score in diagnosis of acute appendicitis in Asian population.

Hence this study conducted to compare RIPASA AND ALVARADO score in diagnosis of acute appendicitis in tertiary care hospital.

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RIPASA includes 18 parameters and Alvarado 8 parameters.

A score of 7.5 taken as high probability of acute appendicitis as per RIPASA and score of 7 for Alvarado scoring system.

The decision of appendicectomy solely based on surgeon's own clinical judgement After the surgery, histopathological reports of operated cases correlated with scoring systems.

Scores were tabulated and compared by applying chi- square test using SPSS

Ripasa Score

SL NO	PARAMETER	SCORE
1	Female	0.5
2	Male	1.0

3	Age<39.9	1.0
4	Age>40	0.5
5	RIF pain	0.5
6	Pain migration to RIF	0.5
7	Anorexia	1.0
8	Nausea and vomiting	1.0
9	duration of symptoms< 48hrs	1.0
10	Duration of symptoms>48 hrs	0.5

Conti

SL NO	PARAMETER	SCORE
11	RIF tenderness	1.0
12	Guarding	2.0
13	Rebound tenderness	1.0
14	Rovsing sign	2.0
15	Fever>37°c or < 39°c	1.0
16	Raised WBC	1.0
17	Negative urine analysis	1.0
18	Foreign NRIC	1.0
	TOTAL	17.5

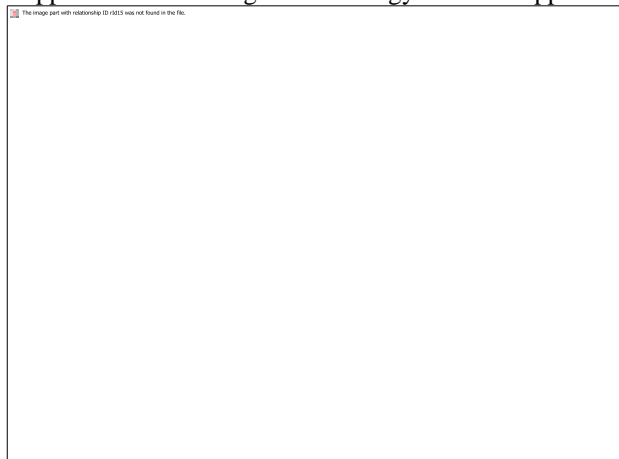
Alvarado Score

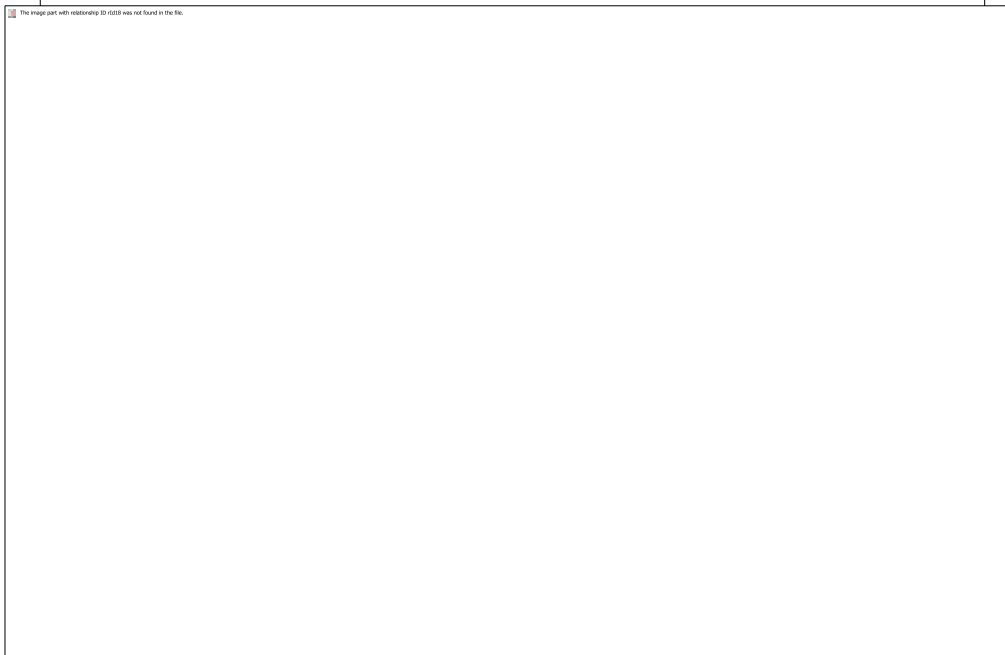
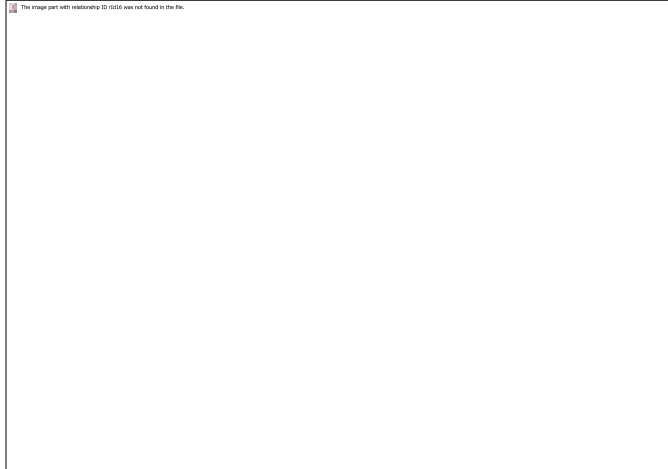
SL NO	PARAMETER	SCORE
1	Pain migration to RIF	1
2	Anorexia	1
3	Nausea -vomiting	1
4	RIF tenderness	2
5	Rebound tenderness	1
6	Fever	1
7	Raised WBC	2
8	Shift of WBC to Left	1
	TOTAL SCORE	10

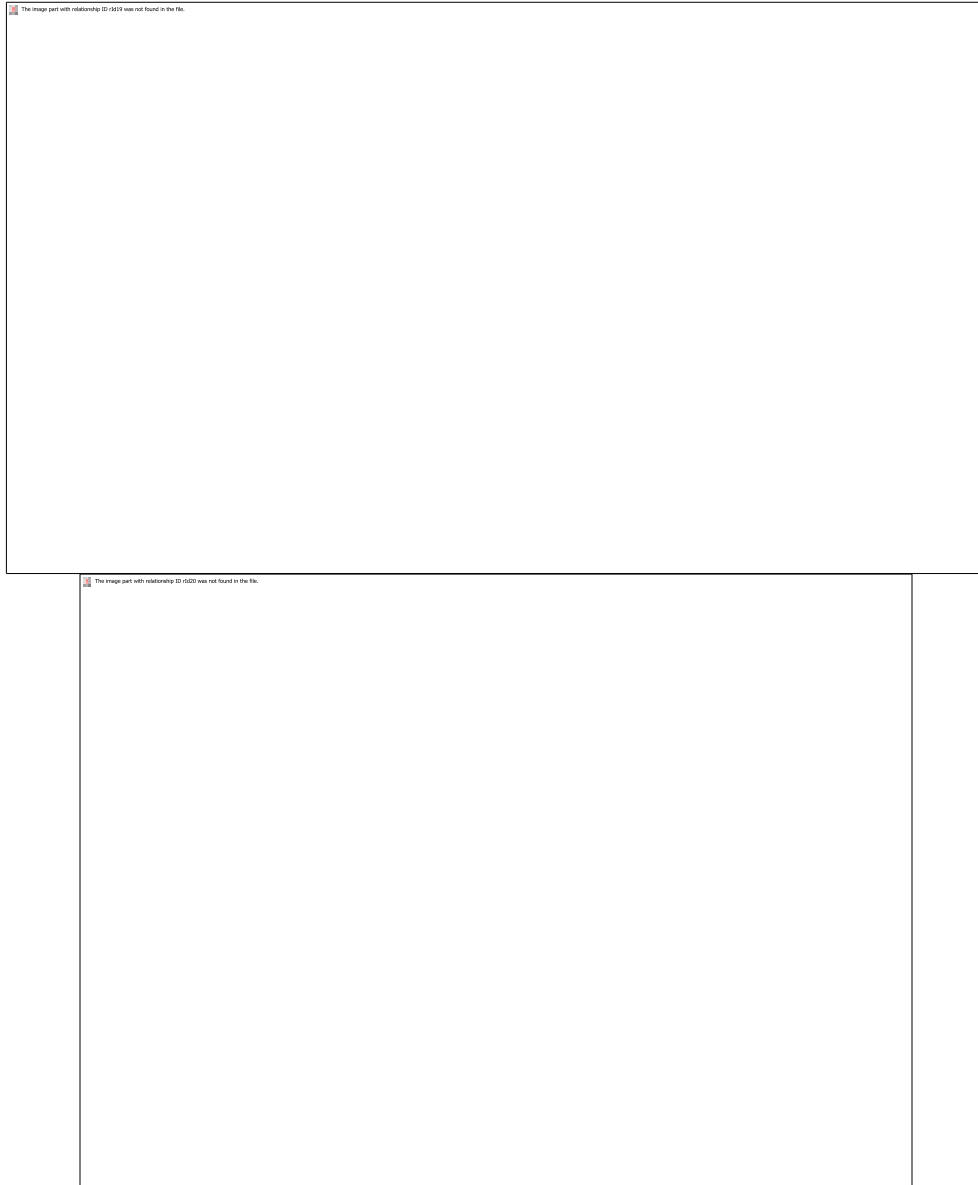
Demography variables

Total patients – 74

Confirmed histology for acute appendicitis – 70 Negative histology for acute appendicitis -04







Discussion:-

Acute appendicitis is one of the most common surgical emergencies, with lifetime prevalence rate of approximately one in seven

Sometimes it becomes difficult to diagnose particularly among young and females of reproductive age group because some genitourinary and pelvic inflammatory conditions present with similar symptoms signs.

Diagnostic accuracy can be improved by using imaging techniques such as USG and CT abdomen but it will increase the cost of health care.

Several scoring systems have been introduced to improvise diagnostic accuracy of acute appendicitis clinically.

Among them, Alvarado score is more commonly used, but sensitivity and specificity of this score is relatively low in Asian population when compared to western population.

Khan et al applied the Alvarado scoring system in Asian population and had sensitivity of 59% and specificity of 23% with negative appendectomy rate of 15.6%.

Regar et al reported that ,RIPASA scoring system is more sensitive (94.74%) as compared to Alvarado score(67.37%).

Conclusion:-

The RIPASA score is better diagnostic scoring system when compared to Alvarado score in diagnosing acute appendicitis in Indian population with higher sensitivity and diagnostic accuracy.

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