



Relationship between Increasing Ripasa Score and Severity of Acute Appendicitis

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Abstract

Aim: To decide whether an ascending RIPASA score is associated with the severity of acute appendicitis, as mentioned in per-operative findings.

Methods: This cross-sectional analytical study have a look at was carried out in Surgical Unit-6, Rajah Muthiah Medical College Hospital, Chidambaram, taking document of sufferers from July 2015 to December 2015. RIPASA score become calculated from affected person case - sheets from Medical records department. Severity classified as regular, inflamed, gangrenous and perforated and noted in operation notes in patients presented as acute appendicitis. Mean RIPASA score for each class of appendicitis and then compared the usage of anova t-scale a look at, maintaining $p < 0.05$ to be statistically substantial.

Results: The mean age became 21.5 ± 13.4 years and 104 (59.8%) men and 70 (40.2%) women sufferers. The mean RIPASA score of patients having non-inflamed appendix become four, 8 for Inflamed, 12 for gangrenous and 15 for perforated. Comparison of average score revealed a p value 0.001.

Conclusion: The ascending RIPASA score causes increase in severity of appendicitis.

Keywords: Acute Appendicitis, RIPASA score.

Introduction

Acute appendicitis is one of the maximum common surgical emergencies encountered within the global especially a few of the teenagers and kids.^{1,7,12} In the USA, the price of bad appendicectomy is about 15% out of the overall appendicectomies finished every year. Surgeon's proper medical evaluation is considered to be the most essential requisite with the treatment of appendicitis. Several different situations can mimic this same cause.² Only contrast enhanced computed tomography (CECT) of abdomen can diagnose the condition with very excessive sensitivity and specificity however financial and

technical contrains restrict the use of CECT in emergency setting.^{3,4}

No single sign, symptom, or diagnostic method appropriately confirms the analysis of appendicitis irritation in all instances, and the traditional history of anorexia and periumbilical pain accompanied through nausea, Right iliac fossa tenderness, and vomiting occurs in average of 50% of cases.

Appendicitis might also arise for numerous motives, such as an contamination of the appendix, however the maximum important thing is the obstruction of the appendiceal lumen. Left untreated, appendicitis has the capacity for

extreme complications, consisting of perforation or sepsis, and can even demise of the patient. However, the diagnosis of appendicitis is tricky as it resembles many abdominal emergency situations.^{5,8}

There has been a need of a scoring system that could overcome those problems with suitable sensitivity, specificity and decrease operative failure rate. The RIPASA score has been advanced, which has claimed to have higher effects in Asian settings.⁶

RIPASA score has been clinically analysed and validated to stratify patients according to threat of having acute appendicitis. This score simplest stratifies the affected person and do not provide prognosis which was done in this study by comparing with-operative findings and histopathological findings. In 1880, Robert Lawson Tait finished the first appendectomy for appendicitis in England. Since then appendectomy is the remedy of choice for acute appendicitis. Per-operatively, appendix can be normal, inflamed, gangrenous or perforated. Gangrenous appendix may additionally result in adhesion formation and require understanding of experienced surgeons to limit accidents to the surrounding structures. Perforated appendix with resultant diffuse peritonitis advocates midline laparotomy incision to perform appendectomy and good enough for peritoneal lavage. Complicated appendicitis when operated by experienced person, effects in less trouble, as indicated via Wei P L et al.¹⁰ There is big proof that patients with complicated appendicitis had longer medical institution stay and greater remedy price and wanting special centers as indicated by Dhurpar R et al.¹¹ There is a paucity of volume of studies available that have tried to predict the severity of acute appendicitis on medical grounds. Thus, there is a want to quantify severity of appendicitis and resource planning in the surgical procedure and suitable referral to tertiary care hospitals if complex acute appendicitis is suspected. We have used RIPASA score, an extensively used scoring system, to decide

whether increasing RIPASA score is related to the severity of acute appendicitis, as suggested in per-operative findings.

Methodology

This observational study performed in Surgical Unit-6, Rajah Muthiah Medical College Hospital, Chidambaram. The record of sufferers admitted in surgical unit-6 after appendectomy from July 2015 to December 2015 was analysed. The observe design was cross sectional analytical. The sampling method used become non-chance purposive sampling. 174 patients, of all age and any gender, who had been operated in surgical emergency as acute appendicitis have been included in this study. We excluded sufferers who were operated for diffuse peritonitis wherein infected appendix was the laparotomy finding, or in whom diagnostic uncertainty mandated midline laparotomy. We also excluded patients with mass formation on scientific examination, who had been then admitted and people with different co-morbidities. RIPASA score became calculated from records, exam findings and laboratory assessments available in the MRD. Per-operative findings had been cited from the system notes available to observe the severity of acute appendicitis. Severity of acute appendicitis became catagorised as normal inflamed, gangrenous and perforated, in which perforated characterized the most intense inflammation. Mean RIPASA score for every category of infection have been then in comparison using anova t-test to investigate whether or not ascending RIPASA score became associated with severity of acute appendicitis, preserving $p < 0.05$ to be statistically significant.

Results

The mean age of the patients was 21.5 ± 13.4 years, with minimum of 7 and maximum of 71 years. Among 174 patients who were operated in the emergency, there were 104 (59.8 %) male patients, while there were 70 (40.2%) female patients. Mean time after which patients were

brought in the emergency after the start of the first symptom was 38.6 ± 17.9 hours, with minimum of 12 and maximum of 96 hours. Table 1 shows the number patients for each tier of RIPASA score.

Table 1(n=174)

| RIPASA Score | N | % Age |
|--------------|----|-------|
| 1-4 | 19 | 10.9 |
| 5-8 | 70 | 40.0 |
| 9-12 | 58 | 33.3 |
| 13-15 | 19 | 10.9 |
| >15 | 8 | 4.6 |

| RIPASA Score | Not Inflamed | Inflamed | Gangrenous | Perforated |
|--------------|--------------|----------|------------|------------|
| 1-4 | 17 | 0 | 0 | 0 |
| 5-8 | 4 | 54 | 1 | 6 |
| 9-12 | 0 | 38 | 5 | 7 |
| 13-15 | 0 | 8 | 22 | 8 |
| >15 | 0 | 0 | 0 | 1 |

The imply RIPASA score of various classes of appendicitis were as compared with each other the usage of anova t-test, and the p score was around to be 0.001 ($p < 0.05$), which is statistically significant.

Discussion

Acute Appendicitis is the maximum common surgical emergency, which is handled with surgical intervention. Initially there may be localised infection because of innate immunity. This reasons swelling and hyperaemia of the appendix. Left untreated the inflammation turns into extreme resulting in gangrenous after which perforated appendix ensuing in localised peritonitis. These ranges correspond to the severity of appendicitis, with perforation being the most severe.^{9,13}

Traditionally it were advocated that acute appendicitis, once recognized should be treated with appendectomy. There is a developing fashion seen closer to the usage of antibiotics to deal with appendicitis. In our observation, all sufferers who had been diagnosed with acute appendicitis had been handled with appendectomy. However Varadhan K.K et al¹³ has mentioned all instances with clear-cut appendicitis handled with antibiotics after being recognized with clear-cut appendicitis on CT-

The most wide variety of patients had 8 RIPASA score after they supplied in the emergency. While there was no patient having rating of four or much less, whose appendectomy was carried out. Table 2 shows the range of cases of different styles of acute appendicitis for every tier of RIPASA score. The cases in which the appendix was declared as without inflammation resided in tier 1-4. One case dealt with appendectomy who had RIPASA score of 16.

scan.¹⁴ However there was no bringing up of quantity of days of clinic stay and the fee / benefit ratio in the ones treated with conservative remedy. In our observation at the negative appendectomy was 12.1% which was higher in comparison to a examine by means of Oguntola A S. et al where complicated appendectomy became 8.2%.¹⁵ Complicated appendicitis may additionally result in more aggressive alternatives taken in step with-operatively. Ileocelectomy is carried out when the inflammation has prolonged to caecum resulting in gangrenous patches that warrant ileocelectomy. It has been described as definitive remedy with the aid of Lane J S. et al.¹⁶ This procedure whilst employed, often involves knowledge of senior surgeons and result in prolonged health center stay. Hence complicated appendicitis poses a greater task for each the affected person and the operating health practitioner which needs an early popularity, in order that a few making plans can be completed pre-operatively. In our observation the time of presentation of patient in emergency after the first symptom become 38.6 ± 17.9 hours, which is more compared to a take a look at through Tannoury J, wherein the imply time of presentation is 12 hours. Delay in presentation can result in irritation progressing to complex appendicitis.¹⁷

Conclusion

In this observe we've concluded that there's direct relationship among growing RIPASA score and severity of appendicitis. It is deducted from the outcomes that there is a excessive possibility of more complicated appendicitis with an RIPASA score of 7 or greater. There is a need to broaden a scoring device with or without incorporating radiological findings, to determine the severity of acute appendicitis. Having decided a case of complex acute appendicitis will permit a better planning and choice making prior to the start of the surgical intervention. Decision of treatment can be made with RIPASA scoring system.

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