

June 23-24, 2022
WebinarJournal of Surgery
ISSN: 1584-9341

Evaluation of Alvarado score and Appendicitis Inflammatory Response score (AIR) as diagnostic tools for acute appendicitis

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Purpose of the study

Explore the demographic and clinical characteristics of suspected appendicitis cases over a 3 months period at a busy DGH, and by doing so evaluate the diagnostic accuracy of AIR and Alvarado scores for acute appendicitis.

Statement of methods

We conducted a prospective and comparative analysis with 73 patients to compare the efficacy of Appendicitis Inflammatory Response (AIR) score with the Alvarado score in the diagnosis of acute appendicitis from January 2021 to March 2021.

The study included all consecutive patients referred by a general practitioner or emergency physician to the on-call surgeon's team with suspected appendicitis or acute RIF pain were identified at the point of admission to the surgical unit at Tunbridge Wells Hospital, Tunbridge Wells, England, UK.

The results

Correlation between AIR score and histopathological findings

On the AIR score, five (8.5%) patients scored high, 41 (69.5%) scored moderate, and 13 (22.0%) scored low in the positive group. AIR scores for those in the negative group were low for 12 (85.7%) patients, moderate for 2 (14.3%), and none (0.0%) scored high with only 2 patients were false positive.

The correlations between the AIR score and histopathology results were highly significant (P value 0.000).

Correlation between Alvarado score and histopathological findings

In the positive group, 33 (55.9%) patients had high, 17 (28.8%) moderate and 9 (15.3%) low scores for the Alvarado score, while 6 (42.9%) patients had low scores and 6 (42.9%) scored moderate and 2 (14.3%) patients scored high in the negative group. 8 patients were false positives. A significant correlation between Alvarado score and histopathology results was found (P value = 0.011).

It is noticed in the study the sensitivity of the AIR and Alvarado scores are 77.97 % and 67.80 % respectively and the specificity was 85.71 % and 78.57 % respectively.

Conclusion

The AIR score had higher specificity, sensitivity, positive predictive value, and lower rate of false positives.

Biography

Mohamed Hassan is a General and colorectal Speciality doctor at [Maidstone and Tunbridge Wells NHS trust](#). He is a member and faculty of the royal college of surgeons of England. He trained in Egypt and he has MSc in General Surgery from Ain Shams University 2016.

Received: April 14, 2022 | Accepted: April 16, 2022 | Published: August 10, 2022