

Diagnostic Value of Alvarado Scoring System

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Background

Misdiagnosis of acute appendicitis is a problem encountered in general surgery. There are different scoring systems for its diagnosis. Alvarado Score was suggested for diagnosis of Acute Appendicitis but this criterion ignores some factors such as age, gender and race.

Aims & Objectives

To evaluate the diagnostic value of Alvarado scoring system in reducing the percentage of negative appendectomy in our setup.

Materials & Methods

This study was conducted in Sir Salimullah Medical College and Mitford Hospital. A cross-sectional study comprising 220 patients suspecting acute abdomen, admitted in the surgical unit 1,2 & 3 of our setup was conducted over a period of one year. Patients of both sexes were included in the study and their Alvarado scores calculated, on the basis of which patients were divided in two groups: Group A (with score <7) and Group B (with score e"7). The signs, symptoms, laboratory values, surgical interventions and pathological reports of each patient were evaluated. Histopathological examination

was considered as gold standard of diagnosis. Sensitivity, specificity, positive and negative predictive values were calculated.

Results

Out of total 220 cases (139 males, 71females), 62 belonged to Group-A (28.2%) and 158 belonged to Group-B (71.8%). Surgical procedures were performed in 98.2% of cases. Final diagnosis by histopathology was confirmed in 154 cases (71.3%). The overall negative appendectomy rate was 28.7% (males: 28.2%, females: 30%). Sensitivity and specificity of Alvarado scoring system was found to be 93.5% and 80.6% respectively. Positive and negative predictive values were 92.3% and 83.3% respectively and accuracy was 89.8%.

Conclusions

Alvarado score can be used effectively in our setup to reduce the incidence of negative appendectomies. It helps to make prompt decision in suspected cases. However, its role in females was not satisfactory and needs to be supplemented by other means. Alvarado scoring system should be used in clinical practice for determining the most probable management option in patient with different scores and clinical suspicion.