ORIGINAL RESEARCH PAPER
Volume - 14 | Issue - 01 | January - 2025 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

RETROSPECTIVE ANALYSIS OF HEART SCORE TO PREDICT THE PROGNOSTIC OF EMERGENCY DEPARTMENT PATIENTS WITH CHEST PAIN

Emergency Medicine

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ABSTRACT

Chest pain is a frequent cause of patient admissions in emergency departments (EDs). Clinical scores can help in the management of chest pain patients with an undefined impact on the appropriateness of hospitalization compared to usual care. In this study we collected the retrospective data of the Emergency patients with chest pain came in SMS Hospital Emergency Medicine Department we collected the data from January 2024 to 30 June 2024. The aim of this study was to assess the prognosis with HEART score to predict the prognostic outcome of cardiac patients presenting with chest pain in the Emergency Medicine Department.

KEYWORDS

DESIGN, SETTINGS AND PARTICIPANTS

About 500 patients came in emergency medicine department presenting with chest pain from 1 January 2024 to 30 June 2024, (under inclusion criteria) exclusion criteria (ST-segment elevation >1 mm, shock, absence of telephone number) we selected a sample of 25% chosen randomly. We retrospectively assessed the clinical course, definitive diagnosis, and HEART score according to ED final report. Follow-up was made by personal contact/interview/routine follow up with discharged patients. This study was also important to analyze the clinical records of ED Patients to evaluate the major cardiac events (MACE) incidence.

Outcome Measures and Analysis

The primary endpoint was MACE, comprising cardiovascular death, myocardial infarction, or unscheduled revascularization at 6 months. We assessed the diagnostic performance of the HEART score in ruling out MACE at 6 months. We also assessed the performance of ED usual care in the management of chest pain patients. And ensure all routine investigations and cardiac markers to justify the clinical management and also to ensure patients satisfaction.

Main Results

Patients visited in Emergency Department with chest pain were screened in which 500 were included for analysis after excluding patients lost to follow-up; 200 patients had been discharged and 100 were hospitalized. Incident MACE was 18.3% (n = 206). The HEART score was retrospectively calculated in 500 patients showing increasing MACE incidence according to risk category (0.98% for low risk, 38.02% for intermediate risk, and 62.21% for high risk). Low-risk category allowed to safely excluding MACE at 6 months with a negative predictive value (NPV) of 99%. Usual care diagnostic performance showed 97.38% sensitivity, 98.24% specificity, 95.5% positive predictive value, and 99% NPV, with an overall accuracy of 98.00%.

CONCLUSIONS

In Emergency Department patients with chest pain, a low Heart score is associated with a very low risk of MACE at 6 months but need to be careful for regular follow up and more time and routine investigations are required to ensure the cardiac free symptoms.

REFERENCES

1. Stepinska J, Lettino M, Ahrens I, Bueno H, Garcia-Castrillo L, Khoury A, et al. Diagnosis and risk stratification of chest pain patients in the emergency department: focus on acute coronary syndromes. A position paper of the Acute Cardiovascular Care Association. Eur Heart J Acute Cardiovasc Care 2020; 9:76–89.
2. Cortés M, Haseeb S, Lambardi F, Arbucci R, Ariznavarreta P, Resi S, et al. The HEART score in the era of the European Society of Cardiology 0/1-hour algorithm. Eur Heart J Acute Cardiovasc Care 2020; 9:30–38.
3. Rui P, Kang K. National Hospital Ambulatory Medical Care Survey: 2017 emergency department summary tables. National Center for Health Statistics. 2018.