

RISK STRATIFICATION AND INTENSIVE THERAPY IN PATIENTS WITH NON-ST-SEGMENT ELEVATION ACUTE CORONARY SYNDROME IN CLINICAL PRACTICE

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Annotation: This study evaluates the application of risk stratification and intensive therapy principles in the clinical management of patients with non-ST-segment elevation acute coronary syndrome (NSTEMI-ACS). A retrospective analysis was performed on clinical data from 76 hospitalized patients. The findings revealed that formal risk stratification at admission was not documented in routine practice. Reassessment using the TIMI risk score demonstrated that the majority of patients belonged to low- and intermediate-risk categories. Pharmacological management, including anticoagulant, antiplatelet, β -blocker, and statin therapy, was generally consistent with contemporary clinical guidelines, although certain deviations and unjustified omissions were identified. The results underscore the critical importance of implementing validated risk assessment tools, such as GRACE and TIMI scores, to optimize therapeutic strategies, improve prognostic accuracy, and enhance clinical outcomes in patients with NSTEMI-ACS.

Keywords: acute coronary syndrome, NSTEMI-ACS, risk stratification, TIMI score, GRACE score, intensive therapy, anticoagulants, antiplatelet therapy, statins, β -blockers.

Relevance

Unstable angina was historically regarded as a distinct clinical entity positioned between chronic stable angina and acute myocardial infarction. Contemporary understanding, however, indicates that unstable angina and myocardial infarction represent different manifestations of a common pathophysiological mechanism, primarily involving rupture or erosion of an atherosclerotic plaque followed by thrombus formation and distal embolization. Consequently, these conditions are unified under the concept of acute coronary syndrome (ACS).

Non-ST-segment elevation acute coronary syndrome (NSTEMI-ACS) remains one of the most frequent causes of hospitalization in emergency cardiology and continues to contribute substantially to cardiovascular morbidity and mortality. Despite advances in diagnostic and therapeutic strategies, the risk of in-hospital complications, recurrent ischemic events, and mortality in this patient population remains significant.

The clinical course of NSTEMI-ACS is highly heterogeneous, ranging from relatively stable presentations to rapid clinical deterioration with progression to myocardial infarction or life-threatening arrhythmias. Under such circumstances, early and accurate risk stratification becomes critically important for guiding therapeutic decisions, determining the urgency of invasive interventions, optimizing pharmacological management, and ensuring efficient utilization of intensive care resources.

Current international guidelines emphasize that validated risk assessment tools, including the GRACE and TIMI scores, are closely associated with improved clinical outcomes. Nevertheless, real-world clinical practice continues to demonstrate challenges related to the

systematic implementation of standardized risk assessment protocols and individualized treatment strategies. Therefore, the evaluation of risk stratification practices and intensive therapy approaches in NSTEMI-ACS patients remains of considerable clinical importance.

Objective.

To evaluate the adherence of clinical management strategies for patients with non-ST-segment elevation acute coronary syndrome to contemporary evidence-based recommendations.

Materials and Methods

A retrospective analysis was conducted involving 76 patients treated in the emergency cardiology and acute care unit. Clinical data, pharmacological management, and risk profiles were assessed.

Results

The study population consisted of 55.5% males and 44.5% females. The predominant age groups were 61–68 years (32%) and 50–59 years (29%). Notably, formal risk stratification at the time of hospitalization was not documented for any patient.

Retrospective application of the TIMI risk score revealed that 65% of patients were classified as low risk (0–2 points), 25% as intermediate risk (3–4 points), and 10% as high risk (5–7 points).

Anticoagulant therapy was most frequently administered using unfractionated heparin at a dose of 5000 IU subcutaneously four times daily for an average duration of 5 ± 2 days. This regimen was prescribed in 51%, 55%, and 79% of low-, intermediate-, and high-risk patients, respectively. Low-molecular-weight heparins (enoxaparin) were used in 18 patients, including individuals across all risk categories.

Anticoagulant therapy was not provided to 14% of low-risk patients and 2% of intermediate-risk patients. Antiplatelet therapy was prescribed in 96.5% of cases, with dual antiplatelet therapy (most commonly aspirin combined with clopidogrel) utilized in 70% of treated patients. Antiplatelet agents were not administered in 3.5% of patients.

β -blockers were prescribed in 65% of patients; among those who did not receive β -blockers, approximately 30% had documented contraindications. Target heart rate levels (50–60 beats per minute) were achieved in 57% of patients.

Statin therapy was widely implemented, predominantly with atorvastatin (54%) and simvastatin (35%), whereas rosuvastatin was prescribed infrequently (1%). Statins were not administered to 10% of patients despite the absence of clear contraindications.

Conclusions

Early risk stratification within the first hours of hospitalization represents a fundamental component of optimal NSTEMI-ACS management. In the present cohort, only a minority of patients were retrospectively classified as high risk. Overall, pharmacological treatment strategies were largely consistent with contemporary guideline recommendations.

However, the absence of systematic risk assessment at admission highlights a significant gap in clinical practice. The routine implementation of validated risk stratification tools, such as the GRACE and TIMI scores, is essential for improving clinical decision-making, particularly in patients at elevated risk of adverse cardiovascular outcomes.