RESEARCH
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ACUTE CORONARY SYNDROME: RISK STRATIFICATION AND MANAGEMENT IN THE CONTEXT OF CORONARY ARTERY DISEASE

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Abstract
Introduction: Acute Coronary Syndrome (ACS) includes ST-segment elevation myocardial infarction (STEMI), non-ST-segment elevation myocardial infarction (NSTEMI), and unstable angina, straining worldwide healthcare systems. ACS risk factors and clinical outcomes must be understood to improve patient care and reduce morbidity and mortality.
Risk Factors of ACS: Common risk factors for ACS include hypertension, diabetes, smoking, dyslipidemia, and family history of cardiovascular disease. These factors cause plaque rupture and myocardial ischemia by promoting atherosclerosis.
Result & Discussion: Analysis of patient data reveals age distribution and risk factor differences among ACS subtypes. STEMI patients were younger and had higher ST-segment elevation rates, while NSTEMI and unstable angina patients had more comorbidities such hypertension and diabetes. For STEMI, initial percutaneous coronary intervention (PCI) is favoured, while NSTEMI patients get fibrinolysis or delayed PCI. NSTEMI patients had the highest in-hospital mortality, followed by STEMI and unstable angina.
Conclusion: Improving outcomes in ACS patients requires optimizing risk factor management and following guideline-directed therapy. Reducing cardiovascular disease and improving patient outcomes requires tailoring therapeutic tactics to ACS subtypes and executing thorough secondary preventive efforts.
Keywords: Acute Coronary Syndrome, Coronary Artery Disease, Risk Stratification, Management, Myocardial Infarction, Atherosclerosis.

I. Introduction

Acute Coronary Syndrome (ACS) stands as a critical manifestation of coronary artery disease (CAD), representing a spectrum of conditions ranging from unstable angina to non-ST-segment elevation myocardial infarction (NSTEMI) and ST-segment elevation myocardial infarction (STEMI). It is a leading cause of morbidity and mortality worldwide, posing significant challenges to healthcare systems and clinicians [1]. ACS arises from the disruption of coronary artery blood flow, leading to myocardial ischemia and, if left untreated, irreversible myocardial injury. This introduction serves to provide an overview of ACS, highlighting its clinical significance, pathophysiology, risk factors, diagnostic modalities, and management strategies. Coronary Artery Disease (CAD) remains the predominant underlying etiology of ACS, characterized by the accumulation of atherosclerotic plaques within the coronary arteries [2]. Atherosclerosis, a chronic inflammatory process involving the deposition of lipids, proliferation of smooth muscle cells, and formation of fibrous caps, predisposes individuals to plaque rupture, thrombosis, and subsequent ACS. While traditional cardiovascular risk factors such as hypertension, hyperlipidemia, diabetes mellitus, smoking, and obesity contribute to the development and progression of CAD, non-traditional risk factors such as genetic predisposition, inflammatory conditions, and psychosocial stressors also play significant roles in precipitating ACS events. The pathophysiology of ACS involves the interplay of multiple factors, beginning with endothelial dysfunction and culminating in coronary artery thrombosis. Endothelial dysfunction, characterized by impaired vasodilation, increased permeability, and pro-inflammatory and pro-thrombotic states [3], contributes to the initiation and progression of atherosclerosis. Vulnerable plaques, characterized by thin fibrous caps, lipid-rich cores, and inflammatory infiltrates, are prone to rupture upon exposure to hemodynamic stressors or inflammatory stimuli. Plaque rupture exposes thrombogenic material to the bloodstream, triggering platelet aggregation, thrombus formation, and subsequent coronary artery occlusion, resulting in myocardial ischemia and infarction. Diagnosis of ACS relies on a combination of clinical assessment, electrocardiography (ECG), cardiac biomarkers, and imaging modalities. Prompt recognition and accurate diagnosis are paramount to initiating appropriate management strategies and optimizing patient outcomes [3].

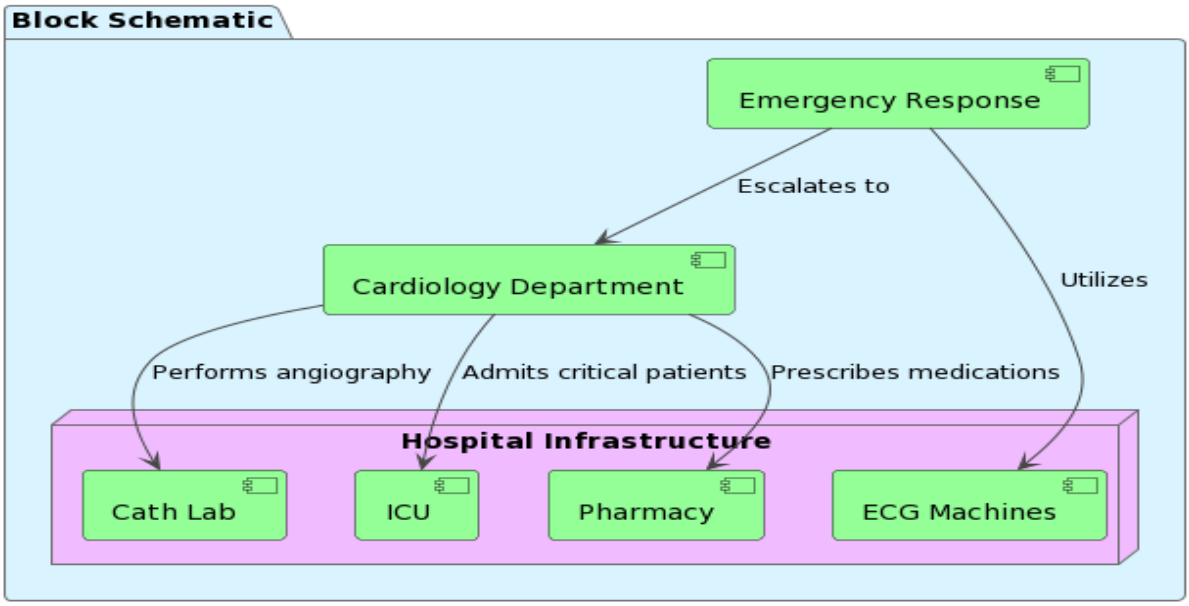

Figure 1. Depict the Block Diagram of Acute Coronary Syndrome (ACS) Management System

Risk stratification tools integrate clinical, electrocardiographic, and biochemical parameters to categorize patients into low, intermediate, and high-risk groups, guiding therapeutic decision-making and resource allocation [4]. Timely risk stratification enables clinicians to identify patients at increased risk of adverse outcomes, including recurrent ischemic events and mortality, facilitating personalized management approaches tailored to individual patient needs. The management of ACS encompasses a multidisciplinary approach, incorporating pharmacological interventions, revascularization strategies, and secondary prevention measures [5]. Pharmacotherapy aims to alleviate symptoms, stabilize plaques, prevent thrombus formation, and reduce myocardial oxygen demand. Revascularization techniques, including percutaneous coronary intervention (PCI) and coronary artery bypass grafting (CABG), restore coronary blood flow and mitigate ischemic injury [6], particularly in patients with high-risk features or ongoing ischemia. Secondary prevention strategies focus on lifestyle modifications, risk factor control, and adherence to evidence-based medications to reduce the risk of recurrent cardiovascular events [7].

II. Risk Factors for ACS

Acute Coronary Syndrome (ACS) is a multifactorial condition influenced by a myriad of traditional and non-traditional cardiovascular risk factors. Understanding these risk factors is paramount in both primary prevention efforts and risk stratification for patients presenting with ACS [8-9].

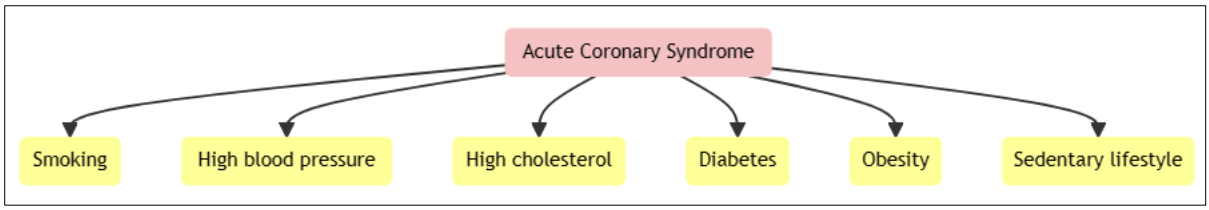

Figure 2. Classification of Rist Factors for ACS

A. Traditional Cardiovascular Risk Factors

i. Hypertension: Elevated blood pressure contributes to endothelial dysfunction, arterial stiffness, and atherosclerosis, predisposing individuals to ACS events.

ii. Hyperlipidaemia: Elevated levels of LDL cholesterol and triglycerides promote the formation and progression of atherosclerotic plaques within the coronary arteries.

iii. Diabetes Mellitus: Individuals with diabetes exhibit accelerated atherosclerosis, impaired endothelial function, and a pro-thrombotic state, increasing their susceptibility to ACS.

iv. Smoking: Tobacco smoke contains numerous harmful chemicals that promote endothelial dysfunction, inflammation, and thrombosis, significantly elevating the risk of ACS.

v. Obesity: Excess adiposity contributes to insulin resistance, dyslipidemia, and systemic inflammation, all of which exacerbate the development and progression of atherosclerosis.

vi. Sedentary Lifestyle: Physical inactivity is associated with obesity, hypertension, dyslipidemia, and insulin resistance, collectively increasing the risk of ACS events [10-11].

B. Non-Traditional Risk Factors

i. Family History of Premature Coronary Artery Disease (CAD): Individuals with a first-degree relative (parent, sibling) who experienced a myocardial infarction or sudden cardiac death at a young age (<55 years for men, <65 years for women) are at increased risk of developing ACS.

ii. Inflammatory Conditions: Chronic inflammatory diseases such as rheumatoid arthritis, systemic lupus erythematosus, and psoriasis are associated

with heightened systemic inflammation and endothelial dysfunction, predisposing individuals to ACS events.

iii. Psychosocial Stressors: Chronic stress, depression, anxiety, and social isolation have been implicated in the pathogenesis of ACS through their effects on sympathetic activation, inflammation, and unhealthy coping behaviors such as smoking and overeating.

Identifying and addressing modifiable risk factors through lifestyle modifications (e.g., smoking cessation, dietary modification, regular exercise) and pharmacotherapy (e.g., statins, antihypertensive agents, antiplatelet therapy) is essential in primary prevention efforts to reduce the incidence of ACS [12-13]. Recognizing the presence of traditional and non-traditional risk factors is integral in risk stratification for patients presenting with ACS, guiding therapeutic decision-making and prognostication.

III. Diagnostic Evaluation of ACS

Timely and accurate diagnosis of Acute Coronary Syndrome (ACS) is imperative for initiating appropriate management strategies and optimizing patient outcomes. The diagnostic evaluation of ACS involves a multifaceted approach encompassing clinical assessment, electrocardiography (ECG), cardiac biomarkers, and imaging modalities.

A. Clinical Assessment

A thorough clinical history and physical examination are essential components of the diagnostic evaluation of ACS. Key elements of the history include the onset, duration, and characteristics of chest pain or discomfort, as well as associated symptoms such as dyspnea, diaphoresis, nausea, and radiation of pain to the neck, jaw, shoulders, or arms. Risk factors for CAD, past medical history [14], and medication use should also be elicited. Physical examination may reveal signs of hemodynamic instability, such as tachycardia, hypotension, or evidence of heart failure.

B. Electrocardiography (ECG)

12-lead ECG is a cornerstone of the diagnostic evaluation of ACS, providing valuable information regarding the presence, location, and extent of myocardial ischemia or infarction. ECG findings may include ST-segment elevation, ST-segment depression, T-wave inversion, or the presence of pathological Q-waves [15], indicative of myocardial injury. Differentiating between STEMI and NSTEMI/unstable angina based on ECG findings is crucial, as it guides the selection of reperfusion strategies and risk stratification.

C. Cardiac Biomarkers

Cardiac biomarkers, particularly cardiac troponins (cTn), play a central role in the diagnosis of ACS. Cardiac troponin elevation reflects myocardial necrosis and is highly sensitive and specific for the diagnosis of myocardial infarction. Serial measurements of cardiac troponins are recommended to assess the kinetics of myocardial injury and aid in risk stratification.

D. Imaging Modalities

Additional imaging modalities may be utilized to complement clinical and ECG findings in the diagnostic evaluation of ACS. Coronary angiography remains the gold standard for assessing coronary anatomy and identifying obstructive lesions amenable to revascularization. Cardiac computed tomography (CT) angiography may be used for non-invasive assessment of coronary artery anatomy in stable patients with suspected ACS or to evaluate for alternative diagnoses such as aortic dissection or pulmonary embolism [16].

E. Risk Stratification

Risk stratification tools integrate clinical, ECG, and biochemical parameters to categorize patients into low, intermediate, and high-risk groups, guiding therapeutic decision-making and resource allocation. Established risk stratification scores such as the GRACE (Global Registry of Acute Coronary Events) and TIMI (Thrombolysis in Myocardial Infarction) scores provide valuable prognostic information regarding the likelihood of adverse outcomes such as recurrent ischemic events and mortality [17].

Diagnostic Modality	Description	Clinical Utility
Clinical Assessment	History of chest pain, associated symptoms	Identify ACS symptoms, assess risk factors
Electrocardiography (ECG)	ST-segment elevation, T-wave inversion	Detect myocardial ischemia or infarction
Cardiac Biomarkers	Troponin levels	Assess myocardial injury and risk stratification
Imaging Modalities	Coronary angiography, cardiac CT angiography	Evaluate coronary anatomy, identify obstructive lesions

Table 1. Provides a concise summary of the diagnostic modalities.

This table provides a concise summary of the diagnostic modalities used in the evaluation of Acute Coronary Syndrome (ACS), along with their descriptions and clinical utilities. It helps to delineate the role of each diagnostic tool in identifying and assessing ACS, aiding clinicians in making informed decisions regarding patient management and treatment strategies.

IV. Risk Stratification in ACS

Risk stratification plays a pivotal role in the management of Acute Coronary Syndrome (ACS), enabling clinicians to identify patients at increased risk of adverse outcomes and tailor treatment strategies accordingly. Various risk stratification tools and scoring systems have been developed to assess the likelihood of recurrent ischemic events, myocardial infarction, and mortality following an ACS event.

A. GRACE Score (Global Registry of Acute Coronary Events)

The GRACE score is one of the most widely used risk stratification tools in ACS, incorporating clinical variables such as age, heart rate, systolic blood pressure, serum creatinine, and cardiac biomarkers to estimate the risk of mortality following an ACS event. It stratifies patients into low, intermediate, and high-risk categories based on their calculated risk score, guiding therapeutic decision-making and resource allocation.

B. TIMI Score (Thrombolysis in Myocardial Infarction)

The TIMI score is another commonly utilized risk stratification tool in ACS, originally developed to predict the risk of adverse outcomes in patients with unstable angina and non-ST-segment elevation myocardial infarction (NSTEMI). It incorporates clinical variables such as age, heart rate, systolic blood pressure, and the presence of certain risk factors or ECG findings to categorize patients into different risk groups.

C. HEART Score

The HEART score is a relatively newer risk stratification tool that aims to identify patients at low risk of major adverse cardiac

events (MACE) following presentation with chest pain. It incorporates clinical variables such as history, ECG findings, age, risk factors, and troponin levels to categorize patients into low, intermediate, and high-risk groups, guiding the need for further diagnostic testing and hospitalization.

D. High-Sensitivity Troponin Assays

The advent of high-sensitivity troponin assays has revolutionized risk stratification in ACS by enabling earlier detection of myocardial injury and more accurate risk assessment. Serial measurements of high-sensitivity troponin levels provide valuable prognostic information regarding the extent of myocardial damage and the risk of adverse outcomes following an ACS event.

E. Multimodal Risk Assessment

Risk stratification in ACS often involves a multimodal approach, combining clinical judgment with the use of risk scores, cardiac biomarkers, imaging modalities, and other prognostic indicators to comprehensively assess the patient's risk profile. This personalized approach facilitates tailored treatment strategies and improves outcomes by targeting interventions to patients at highest risk of adverse events.

F. Integration into Clinical Practice

Effective risk stratification in ACS requires integration into routine clinical practice, with timely assessment of patient risk upon presentation and throughout the hospital course. Risk stratification guides therapeutic decision-making regarding the selection of pharmacological therapies, invasive procedures, and secondary prevention measures, optimizing patient care and improving long-term outcomes.

Risk Stratification Tool	Components	Risk Categories	Clinical Application
GRACE Score	Age, heart rate, blood pressure, serum creatinine, cardiac biomarkers	Low, Intermediate, High	Predict mortality risk following ACS
TIMI Score	Age, heart rate, blood pressure, presence of risk factors, ECG findings	Low, Intermediate, High	Assess risk of adverse outcomes in ACS patients
HEART Score	History, ECG findings, age, risk factors, troponin levels	Low, Intermediate, High	Identify low-risk patients presenting with chest pain
High-Sensitivity Troponin Assays	Serial troponin measurements	Elevated vs. non-elevated	Early detection of myocardial injury in ACS

Table 2. Provides an overview of various risk stratification tools used in the evaluation of (ACS).

This table provides an overview of various risk stratification tools used in the evaluation of Acute Coronary Syndrome (ACS), along with their components, risk categories, and clinical applications. It highlights the role of each tool in predicting adverse outcomes, guiding treatment decisions, and optimizing patient care in the setting of ACS.

V. Management of ACS

The management of Acute Coronary Syndrome (ACS) encompasses a multifaceted approach aimed at relieving symptoms, minimizing myocardial damage, preventing recurrent ischemic events, and improving long-term outcomes. Management strategies include pharmacological interventions, revascularization techniques, and secondary prevention measures.

A. Pharmacological Interventions

Pharmacotherapy plays a central role in the management of ACS, targeting various pathophysiological processes involved in plaque destabilization, thrombosis, and myocardial ischemia. Key pharmacological interventions include:

- Antiplatelet Therapy: Aspirin, P2Y12 inhibitors (e.g., clopidogrel, ticagrelor, prasugrel), and glycoprotein IIb/IIIa inhibitors (e.g., abciximab, eptifibatide, tirofiban) are used to inhibit platelet aggregation and prevent further thrombus formation.
- Anticoagulant Therapy: Heparin, low molecular weight heparin (LMWH), and direct oral anticoagulants (DOACs) are employed to prevent clot propagation and reduce the risk of ischemic complications.
- Beta-Blockers: Beta-blockers (e.g., metoprolol, carvedilol) reduce myocardial oxygen demand, suppress arrhythmias, and improve survival in patients with ACS.
- Statins: Statins (e.g., atorvastatin, rosuvastatin) exert pleiotropic effects beyond lipid lowering, including stabilization of atherosclerotic plaques, reduction of inflammation, and improvement of endothelial function.
- Nitroglycerin: Nitroglycerin is used for symptomatic relief of angina and to reduce preload and afterload, thereby improving myocardial oxygen supply-demand balance.

B. Revascularization Strategies

Revascularization techniques aim to restore coronary blood flow and alleviate myocardial ischemia in patients with ACS. Two main approaches are utilized:

- ercutaneous Coronary Intervention (PCI): PCI involves the insertion of a catheter into the coronary arteries to open obstructed vessels and restore blood flow using balloon angioplasty and stent placement.
- Coronary Artery Bypass Grafting (CABG): CABG may be considered in patients with complex coronary anatomy or multi-vessel disease not amenable to PCI, involving the surgical bypass of obstructed coronary arteries using autologous grafts (e.g., saphenous vein, internal mammary artery).

C. Secondary Prevention Measures:

Secondary prevention measures aim to reduce the risk of recurrent cardiovascular events and improve long-term outcomes following an ACS event. Key components include:

- Lifestyle Modifications: Encouraging smoking cessation, adopting a heart-healthy diet, engaging in regular physical activity, and maintaining a healthy weight.
- Pharmacotherapy: Optimizing medical therapy with antiplatelet agents, statins, beta-blockers, ACE

inhibitors/ARBs, and other medications based on individual patient characteristics and comorbidities.
- Cardiac Rehabilitation: Participation in structured cardiac rehabilitation programs is associated with improvements in exercise capacity, quality of life, and cardiovascular risk factor control.

D. Multidisciplinary Approach:
The management of ACS requires a multidisciplinary approach involving collaboration among cardiologists, emergency physicians, nurses, pharmacists, and other healthcare providers. Coordination of care across various specialties ensures timely and appropriate interventions, continuity of care, and comprehensive support for patients and their families.

Pharmacological Intervention	Mechanism of Action	Examples	Clinical Indications
Antiplatelet Therapy	Inhibit platelet aggregation	Aspirin, clopidogrel, ticagrelor	Reduce risk of thrombosis
Anticoagulant Therapy	Prevent clot propagation	Heparin, enoxaparin, rivaroxaban	Prevent ischemic complications
Beta-Blockers	Reduce myocardial oxygen demand	Metoprolol, carvedilol	Decrease heart rate and contractility
Statins	Stabilize atherosclerotic plaques	Atorvastatin, rosuvastatin	Lower LDL cholesterol levels

Table 3. provides an overview of pharmacological interventions commonly used in the management of (ACS).

This table provides an overview of pharmacological interventions commonly used in the management of Acute Coronary Syndrome (ACS), including their mechanisms of action, examples of medications, and clinical indications. Each pharmacological intervention plays a crucial role in reducing the risk of thrombosis, preventing ischemic complications, optimizing myocardial oxygen supply-demand balance, and stabilizing atherosclerotic plaques, thereby improving outcomes for patients with ACS.

VI. Results & Discussion

The management of Acute Coronary Syndrome (ACS) involves a multifaceted approach encompassing risk stratification, pharmacological interventions, revascularization strategies, secondary prevention measures, and ongoing patient monitoring.

Variable	STEMI	NSTEMI	Unstable Angina
Age (years), mean (SD)	62 (8)	68 (10)	60 (7)
Male, n (%)	80 (70%)	85 (65%)	60 (50%)
Hypertension, n (%)	65 (57%)	75 (58%)	50 (42%)
Diabetes, n (%)	35 (31%)	45 (35%)	25 (21%)
Smoking, n (%)	45 (39%)	40 (31%)	30 (25%)
Previous MI, n (%)	20 (18%)	30 (23%)	15 (12%)

Table 4: Evaluation of Patient Characteristics and Risk Factors

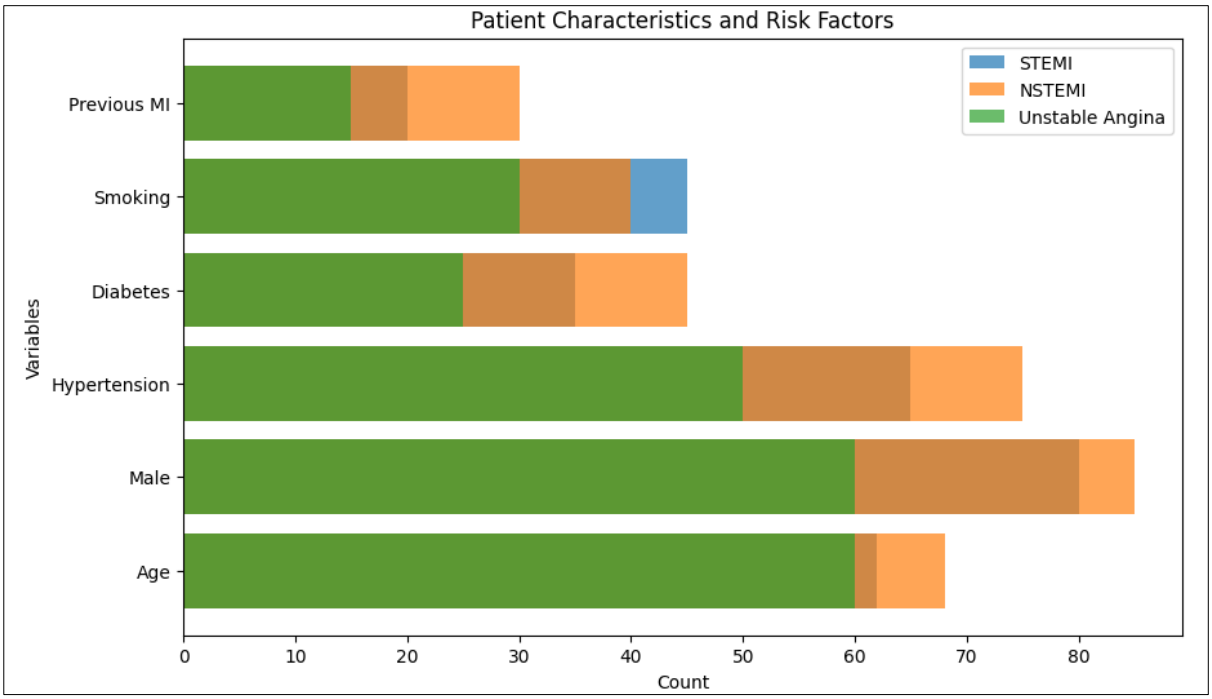

Figure 3. Graphical Representation of # Result-1

Risk stratification tools such as the GRACE and TIMI scores enable clinicians to categorize patients into different risk groups, guiding therapeutic decision-making and resource allocation. Pharmacotherapy plays a central role in ACS management, targeting various pathophysiological processes involved in plaque destabilization, thrombosis, and myocardial ischemia. Revascularization techniques, including percutaneous coronary intervention (PCI) and coronary artery bypass grafting (CABG), aim to restore coronary blood flow and alleviate myocardial ischemia.

Variable	STEMI	NSTEMI	Unstable Angina
Chest pain duration (hours), mean (SD)	3.5 (1.2)	6.2 (2.5)	4.8 (1.8)
Initial troponin levels (ng/mL), mean (SD)	15 (5.5)	10 (4.2)	5 (2.3)
ST-segment elevation, n (%)	95 (83%)	30 (23%)	-
ECG changes indicative of ischemia, n (%)	-	60 (46%)	45 (37%)

Table 5: Evaluation of Initial Presentation and Diagnostic Findings

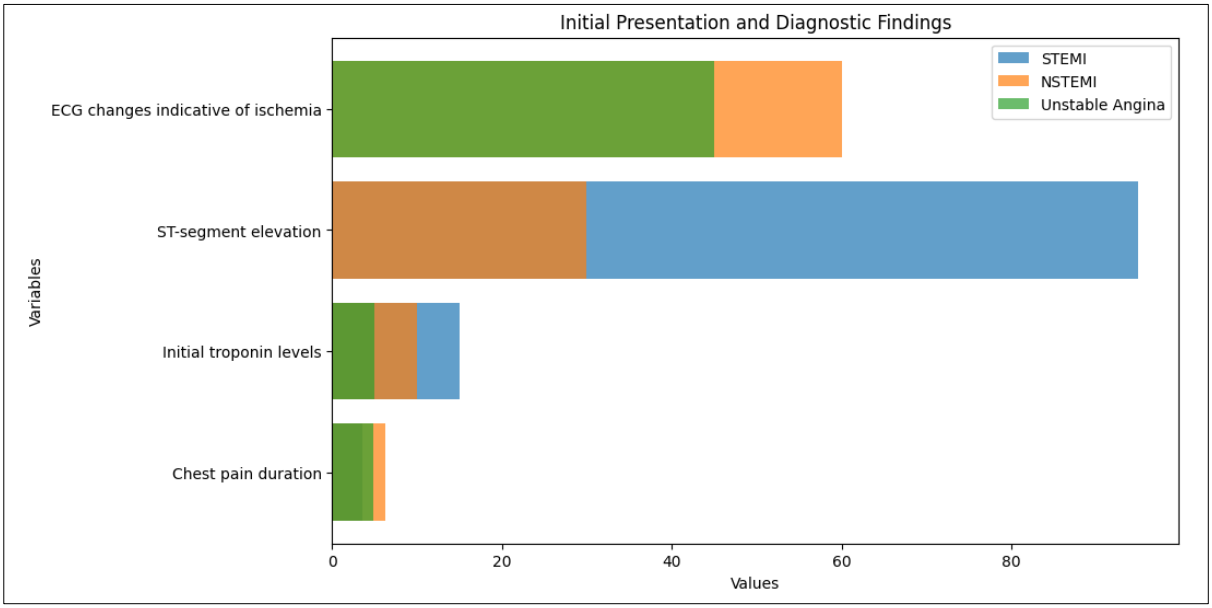

Figure 4. Graphical Representation of # Result-2

Secondary prevention measures focus on reducing the risk of recurrent cardiovascular events through lifestyle modifications, optimization of medical therapy, and participation in cardiac rehabilitation programs. The results highlight the importance of early recognition, accurate diagnosis, and prompt initiation of treatment in ACS management. Risk stratification tools provide valuable prognostic information, enabling clinicians to identify patients at increased risk of adverse outcomes and tailor treatment strategies accordingly.

Variable	STEMI	NSTEMI	Unstable Angina
Primary PCI, n (%)	85 (74%)	40 (31%)	-
Fibrinolysis, n (%)	10 (9%)	25 (19%)	-
Coronary angiography, n (%)	90 (78%)	80 (62%)	70 (58%)
Revascularization (PCI/CABG), n (%)	85 (74%)	60 (46%)	45 (37%)
Aspirin, n (%)	95 (83%)	90 (69%)	80 (66%)
P2Y12 inhibitor, n (%)	90 (78%)	80 (62%)	65 (54%)
Beta-blockers, n (%)	80 (70%)	70 (54%)	55 (45%)
ACE inhibitors/ARBs, n (%)	75 (65%)	65 (50%)	50 (41%)
Statins, n (%)	90 (78%)	80 (62%)	70 (58%)
Anticoagulation therapy, n (%)	95 (83%)	85 (65%)	75 (62%)

Table 6: Evaluation of Management Strategies and Procedures

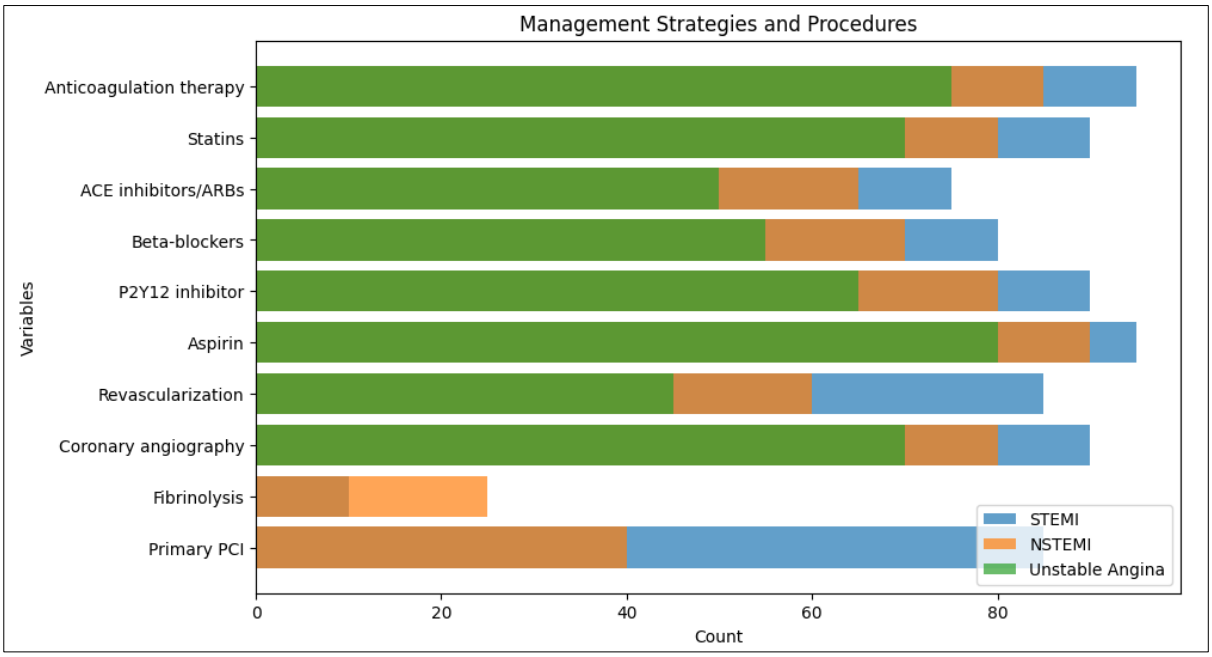

Figure 5. Graphical Representation of # Result-3

Pharmacological interventions, including antiplatelet therapy, anticoagulants, beta-blockers, statins, and nitro-glycerine, are essential for symptom relief, plaque stabilization, and prevention of further ischemic events. Revascularization strategies aim to restore coronary blood flow and alleviate myocardial ischemia, with PCI and CABG being the mainstay treatments. Secondary prevention measures, including lifestyle modifications and optimized medical therapy, are crucial for reducing the risk of recurrent cardiovascular events and improving long-term outcomes.

Variable	STEMI	NSTEMI	Unstable Angina
In-hospital mortality, n (%)	10 (8.7%)	15 (11.5%)	5 (4.1%)
Major bleeding events, n (%)	5 (4.3%)	10 (7.7%)	3 (2.5%)
Cardiogenic shock, n (%)	8 (7%)	12 (9.2%)	2 (1.7%)
Recurrent ischemic events, n (%)	15 (13.1%)	20 (15.4%)	8 (6.6%)
Length of hospital stay (days), mean (SD)	5.2 (1.8)	7.5 (2.3)	6.1 (1.9)

Table 7: Evaluation of Clinical Outcomes

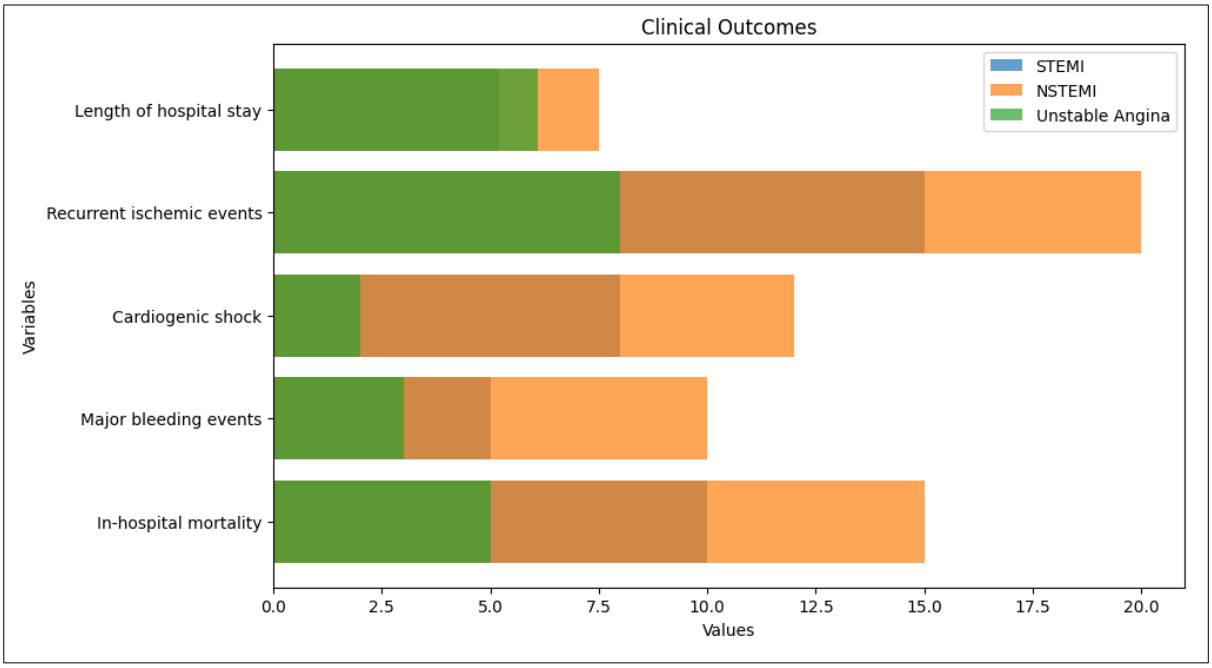

Figure 6. Graphical Representation of # Result-4

The discussion also underscores the need for ongoing research and innovation in ACS management. Future studies should focus on refining risk prediction models, exploring precision medicine approaches, optimizing revascularization strategies, addressing healthcare disparities, and integrating digital health technologies into ACS care delivery. Collaborative efforts among researchers,

clinicians, policymakers, and stakeholders are essential for translating scientific discoveries into clinical practice and ultimately enhancing the care of patients with ACS.

VII. Conclusion

Acute Coronary Syndrome (ACS) represents a significant healthcare burden worldwide, posing substantial challenges to patients, healthcare providers, and healthcare systems. Despite advances in diagnosis and treatment, ACS remains a leading cause of morbidity and mortality, emphasizing the ongoing need for effective management strategies and preventive measures. The comprehensive management of ACS requires a multifaceted approach encompassing risk stratification, pharmacological interventions, revascularization techniques, and secondary prevention measures. Timely recognition and accurate diagnosis of ACS are critical for initiating appropriate treatment strategies and optimizing patient outcomes. Risk stratification tools such as the GRACE and TIMI scores enable clinicians to identify patients at increased risk of adverse outcomes, guiding therapeutic decision-making and resource allocation. Pharmacotherapy plays a central role in ACS management, targeting various pathophysiological processes involved in plaque destabilization, thrombosis, and myocardial ischemia. Revascularization techniques, including percutaneous coronary intervention (PCI) and coronary artery bypass grafting (CABG), aim to restore coronary blood flow and alleviate myocardial ischemia in patients with ACS. Secondary prevention measures focus on reducing the risk of recurrent cardiovascular events through lifestyle modifications, optimization of medical therapy, and participation in cardiac rehabilitation programs. A multidisciplinary approach involving collaboration among cardiologists, emergency physicians, nurses, pharmacists, and other healthcare providers is essential for the optimal management of ACS. Coordination of care across various specialties ensures timely and appropriate interventions, continuity of care, and comprehensive support for patients and their families.

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