Assessment of knowledge gaps in STEMI management among intern doctors in Moroccan emergency department: a descriptive analytical study

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Introduction: Acute coronary syndrome (ACS) remains a significant public health issue in Morocco despite progress in management and prevention. ACS includes ST-segment elevation myocardial infarction (STEMI), a life-threatening condition that requires prompt diagnosis and treatment. Intern doctors working in emergency department are critical in managing STEMI, but there is limited information on their knowledge and practice of this condition.

Purpose: This study aimed to assess the knowledge gaps in STEMI management among intern doctors working in emergency department in Morocco.

Methods: This study employed a descriptive analytical design to assess the knowledge gaps in STEMI management among 141 intern doctors working in emergency department in Morocco who were selected through convenience sampling. Data were collected using an online questionnaire consisting of 15 questions on diagnostic criteria, treatment options, and interpretation of three electrocardiograms (ECGs): one typical and two atypical. Descriptive statistical analysis was performed to summarize the data and calculate the percentages of correct answers for each question, and the data were analyzed using Microsoft Excel.

Results: 96.45% of the intern doctors had good theoretical knowledge of typical and atypical clinical presentation. However, only 52.48% knew the typical electrocardiographic presentation, and only 9.22% knew the revised atypical presentations. Regarding hospital management, 99.30% knew the superiority of angioplasty within 120 minutes, but only 29.08% knew the time limit for its implementation in symptomatic patients. In addition, 55.32% knew the contraindications of thrombolysis, 67.38% knew the essential elements of the loading dose, but only 18.44% knew the exact loading dose in elderly subjects and those with renal insufficiency. For complications, most physicians (85.82%) knew the complications of this pathology, 64.53% knew how to manage associated hypertensive emergencies, and 26.95% knew how to manage associated acute pulmonary edema. For clinical cases, 68.79% were able to identify the typical ECG of ST elevation in the extensive anterior territory. However, only 14.18% identified the two atypical electrocardiograms.

Conclusion: In conclusion, this study highlights the significant knowledge gaps in STEMI management among intern doctors working in emergency department in Morocco. While intern doctors had good theoretical knowledge of STEMI management, they struggled to apply this knowledge in practice, particularly when it came to interpreting ECGs and implementing time-sensitive treatments. These findings emphasize the urgent need for targeted training on STEMI management in emergency department, especially for young physicians who may lack experience in this area. By addressing these knowledge gaps, we can improve the management of STEMI and ultimately reduce the morbidity and mortality associated with ACS.