Pitfalls in Emergency Medicine Practice

EMERGENCY MEDICINE
UNIVERSITY OF OKLAHOMA

Or… How to Be a Better Bookie in EM

1. Over-reliance on the classic presentation of chest pain for the diagnosis of Acute Myocardial Infarction (AMI).

Please remember that substantial numbers of patients haven't read the textbook and therefore might not present in a textbook fashion. Indeed, Canto et al examined the presenting complaints of about 435,000 patients with confirmed AMI enrolled in the National Registry of Myocardial Infarction 2 - (NRMI-2) database and found that one third of the patients apparently hadn't read the textbook and presented to the emergency department with AMI without chest pain.[1] Risk factors associated with absence of chest pain and myocardial infarction include increasing age, female gender, non-white race, diabetes, and a prior history of congestive heart failure or stroke. Table 1 is from their article:

Risk Factors	% Without CP
Prior CHF	51%
Prior Stroke	47%
Age > 75	45
Diabetes	38%
Non-White	34%
Female	39%

In another study, women over the age of 65 were the most prevalent group to experience AMI without chest pain.[2] The most frequent chest pain equivalents reported were shortness of breath, weakness, unusual fatigue, cold sweats, and dizziness.

Remember that women, the aged, and diabetics present with AMI without chest pain, fatigue, and that shortness of breath and weakness are common chest pain analogues. Always consider AMI in the diagnosis of diaphoresis and dizziness.

Chest Pain Equivalent	% of Symptom
Shortness of breath	58%
Weakness	55%
Unusual Fatigue	43%
Diaphoresis	39%
Dizziness	39%

Although the NRMI-2 database noted that diabetics were more likely to experience AMI without chest pain, two-thirds of those with AMI without chest pain were still non-diabetics

In addition, analysis of the NRMI database revealed that patients with AMI, without chest pain, were less likely to receive aspirin, heparin, and beta-blockers in the first 24 hours and were much less likely to be treated with thrombolytics or rapid PCI. They were more likely to die in the hospital. Indeed the mortality of the patient who presents with AMI without chest pain is nearly 50% compared with only 18% mortality in those with chest pain.

References

[1] Canto JG, Shlipak MG, Rogers WJ, et al. Prevalence, clinical characteristics, and mortality among patients with myocardial infarction presenting without chest pain. J Am Med Assoc 2000;283:3222-9.
[2] Lusiani L, Perrone A, Pesavento R, et al. Prevalence, clinical features, and acute course of atypical myocardial infarction. Angiology 1994;45:49-55.

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