PATIENT SAFETY RESOURCES

ATYPICAL CHEST PAIN MISMANAGED IN THE ED

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DESCRIPTION

A 50-year-old suffered a cardiac arrest at home following discharge from the Emergency Department (ED).

KEY LESSONS

- Poor communication regarding test results for ED patients can lead to adverse outcomes
- Recognizing high risk situations, e.g., a patient whose condition worsens while being evaluated, affords providers an opportunity to reconsider their findings

CLINICAL SEQUENCE

A healthy 50-year-old woman presented to the ED with atypical chest pain. The patient reported some family history of cardiac disease (uncle with coronary artery disease). While being seen by a physician assistant (PA), the patient reported pain as non-exertional, intermittent for the past few days, radiating to her right arm, with no shortness of breath. The patient's vital signs, EKG, and labs (including troponin and potassium) were all within normal limits.

While in the ED, the patient's pain increased. A repeat EKG showed "peaked T-waves consistent with hyperkalemia, hyperactive ischemia, or possibly a variant of normal." The PA interpreted the test as normal; the attending Emergency Medicine physician was unaware that a second EKG had been done. The PA and attending met with the patient and discussed their findings. The clinicians told the patient that they felt her pain was gastrointestinal, and that a cardiac cause was ruled out. The patient was directed to schedule a stress test as an outpatient.

The next morning, the patient became unresponsive at home and could not be resuscitated. Autopsy revealed that she suffered a heart attack in the setting of atherosclerotic heart disease.

ALLEGATION

A claim was brought forward against the PA and the Emergency Medicine attending for the death of this patient.

DISPOSITION

The PA and attending were criticized for discharging the patient too soon, not recognizing the EKG changes, and for not ordering a stress test while she was in the ED. The case was settled in excess of $1M.

ANALYSIS

COMMUNICATION AMONG PROVIDERS

The attending was not aware that a second EKG was done for this patient. Such awareness, and subsequent review, may have changed the plan of care to perform a stress test immediately, as well as ordering follow-up lab work.

Best Practice/Recommendations

- Create clear process/policy to review and document EKGs
- Identify communication protocol for all team members (nursing, support staff, midlevel providers, physicians) to report any changes in patient status
- Implement routine interdisciplinary huddle, including review of all tests, prior to discharge

RECOGNIZING HIGH RISK SITUATIONS

The environmental contributing factors to diagnostic error can be segmented into high-risk times, high-risk patients, and high-risk diagnoses:

High-risk times

- Patient sign-out (loss of information)
- High acuity or volume
- End-of-shift (personal fatigue)
- A return visit

High-risk patients

- Limited English proficiency, psychiatric or behaviorally dysregulated (hostile, abusive, and intoxicated)
- Unreliable history, atypical presentations, negative visceral response

High-risk diagnoses

- Chest pain: myocardial infarction, pulmonary embolism, coronary artery dissection (e.g., SCAD, aortic)
- Headache: subarachnoid hemorrhage, meningitis, subdural hematoma
- Abdominal pain: appendicitis, ectopic pregnancy, torsion
- Numbness/weakness: stroke, tendon and nerve injuries

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ANALYSIS

Best Practice/Recommendations

During identified high-risk times, patients, and diagnosis, work to implement strategies such as:

- Forced thinking (pausing to ask out loud: What else could it be? Is there anything that does not fit? Is it possible I have more than one problem?)[1]
- Cognitive training with simulation, observation, and feedback/debrief

[1] Kassirer J. Learning Clinical Reasoning. Baltimore: Williams & Wilkins, 1991.