

Two Cases of Aortic Dissection/Rupture

Case 1

A 41-year-old woman went to an emergency department in Ohio with complaints of sudden-onset chest pain. An ECG, chest x-ray, and labs all yielded normal results. The patient developed diarrhea while at the ED and was diagnosed with a gastrointestinal bleed. She was admitted to the hospital but kept in the ED because there was no bed available. She was found dead seven hours later. An autopsy revealed a type A dissecting aorta to the level of the renal arteries.

The plaintiff claimed that the emergency physician failed to rule out all potential life-threatening causes of the chest pain and failed to obtain a CT scan, which would have revealed the dissection. The defendant claimed that the dissection was a very rare condition and the plaintiff did not fit the profile of a person at risk for such an occurrence. The defendant also argued that a chest x-ray almost always reveals such abnormalities, and there was no duty to rule out an aortic dissection.

Outcome

According to a published account, a \$1.4 million verdict was returned.

Case 2

A 70-year-old woman experienced severe chest pain at home in November 2000. Her daughter called 911, and the woman was transported to the ED with an apparent heart attack. She was evaluated by Dr. C., an emergency physician, who diagnosed heartburn and prescribed pain medications and a GI cocktail. The patient was discharged but, according to her daughter, was very weak and had to be “dragged” inside her home.

When the patient’s symptoms returned the next day, an ambulance was called. The woman died of a sudden cardiac event on the way to the hospital. Her death was attributed to a ruptured ascending aortic aneurysm.

The plaintiff alleged negligence by Dr. C. in failing to diagnose the aneurysm. The plaintiff claimed that if Dr. C. had ordered a CT scan, surgery could have been performed, which would have resulted in the decedent’s survival. Dr. C. claimed that all of the decedent’s tests

were normal and that she was discharged in good condition. Dr. C. also claimed that even if a diagnosis had been made, the outcome would have been the same.

Outcome

A defense verdict was returned.

Comment

Just about every monthly batch of malpractice decisions contains at least one case of a missed aortic dissection or a ruptured aortic aneurysm. Typically, the “chest pain” the patients described is atypical in that the patients are young or female, or have sharp, penetrating back pain. The court decisions are all over the map, ending with plaintiff and defense verdicts, settlements, or even dismissals after summary judgment motions.

From the brief descriptions of these cases, it is impossible to know which other factors may have contributed to the final outcome, but clearly malpractice decisions are very subjective. Attorneys will often recommend or seek settlements not always based on the merits of a case. Trial venue, composition of the selected jury, credibility and skills of the expert witnesses—all are considered by both sides.

How can an EP minimize the risk of missing a ruptured aneurysm or dissection? By always considering first the *possibility*—especially when an MI is ruled out—then the *probability*, and finally the *consequences* of missing such a diagnosis—especially in young persons. **NF**

Was Popliteal Artery Injury Overlooked?

At age 16, the plaintiff sustained a knee injury during football practice. He was taken to a Mississippi emergency department, where Dr. S. evaluated him. The knee was dislocated. Dr. S. checked the vascular flow in the leg, which seemed good. Dr. S. released the patient with instructions to see an orthopedist the next day.

At school the following day, the athletic trainer was concerned when he saw the patient’s leg, and the patient was immediately taken to an orthopedist. Compartment syndrome was diagnosed secondary to a popliteal artery injury. The patient underwent complex repair surgeries, including a fasciotomy and skin graft. He continues to have nerve damage in the leg.

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The plaintiff claimed that Dr. S. was negligent in failing to identify and prevent the risk for compartment syndrome. Dr. S. claimed that his treatment was proper and that the vascular flow was good at the time of examination. Dr. S. also claimed that the plaintiff was given instruction to return if his condition worsened. Dr. S. further claimed that the knee had not been dislocated; rather, he claimed, the plaintiff had sustained a posterior cruciate ligament (PCL) tear that caused only an intimal tear to the popliteal artery, which did not disrupt blood flow and which is extremely difficult to identify.

Outcome

A defense verdict was returned.

Comment

This case illustrates an important point—the need to consider popliteal artery (and nerve) injury when evaluating traumatic knee complaints. Injury to the popliteal

artery can occur with knee dislocation (most common), but also with femoral condyle fracture, displaced tibial plateau fracture, multiple ligamentous injuries, and even isolated PCL injury (as in this case).¹

Distal pulses (and nerve function) should always be evaluated; weakened or absent pulses demand further evaluation. Unfortunately, even a normal pulse does not exclude a popliteal artery injury. For patients with a high pretest probability (ie, one of the injuries above), duplex ultrasound or ankle-brachial index measurement should be performed. The vascular surgery department should be consulted for all demonstrated or suspected popliteal artery injuries. **FLC**

1. Glaspy JN, Steele MT. Knee injuries. In: Tintinalli JE, et al, eds. *Tintinalli's Emergency Medicine: A Comprehensive Study Guide, 7th ed.* New York: McGraw-Hill; 2010:1862.

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