

# EMERGENCY NURSE INPUT: CHANGING THE OUTCOME FOR A PATIENT WITH PSEUDOANEURYSM



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**CE** Earn Up to 7.5 Hours. See page 467.

## Contribution to Emergency Nursing Practice

- The current literature on pseudoaneurysm indicates that patients with unusual or complex problems can greatly benefit from nursing input. It is imperative that emergency nurses establish open dialogues with providers to aid in the early diagnosis of conditions that can turn into medical emergencies if not properly diagnosed.
- This article contributes to the literature on benefits of interprofessional collaboration and for nurses “speaking up” in improving patient outcomes, especially for those patients with unusual or complex diagnoses presenting to the emergency department.
- Key implications for emergency nursing practice found in this article are nurses’ contributions to the diagnostic process through interprofessional collaboration in promoting optimal outcomes for patients in a fast-paced clinical environment.

In the past, some physicians and nurses have practiced as separate health care providers rather than as a team. Physicians have traditionally seen themselves as the primary decision makers regarding patient care.<sup>1</sup> Today, however, it is imperative for all health care providers to communicate and collaborate effectively to improve performance and patient outcomes. In the emergency department, poor communication has been cited as a root cause of medical errors.<sup>2</sup> Effective teamwork and interprofessional communication have been demonstrated to

produce fewer errors and improved patient outcomes.<sup>3</sup> It is critical to acknowledge the importance of nurses’ knowledge, expertise, and input in patient assessment, diagnosis, and treatment to enhance patient safety and health care outcomes. It is just as important for nurses to feel comfortable and confident in “speaking up.” Nursing’s contribution to the provider diagnosis in an unusual, potentially life-threatening patient problem is discussed in the following case review.

## Case

A 28-year-old man presented to the emergency department with the chief complaint of right groin and scrotum pain. The patient described the pain in his right groin and scrotum as a “squeezing” pain that had worsened over the last 2 weeks, rating the pain as a “10 out of 10” on a 0 to 10 pain scale. The patient complained that he was unable to bear full weight on his right lower extremity because of severe pain extending up into the lower part of his right lower quadrant and traveling down into his right groin. He denied any recent or past injury, trauma, heavy lifting, or associated symptoms of dysuria, urinary urgency/frequency, hematuria, flank pain, penile discharge, penile or scrotal swelling, genital lesions or sores, or history of hernia. In addition, the patient denied back pain, paresthesias in his lower extremities, and added that he never had this type of pain before.

The resident’s interview initially included a history of a blood clot in the brain in 2008 after a motor vehicle accident, hyperlipidemia, hypertension, and coronary artery disease. The patient denied taking medications. He had no known allergies. Social history included smoking 2 cigars a day. He denied drinking any alcohol, using any other illicit drugs with the exception of smoking marijuana. His family history included his father having had a stroke, hypertension, hyperlipidemia, and heart disease. The emergency nurse had also interviewed the patient.

The resident performed a thorough physical examination (PE) and found the patient to be alert and oriented, very cooperative, but anxious and in apparent pain. The patient was afebrile, and all vital signs were normal. The rest of the PE revealed a normal exam with the following positive findings: a firm pulsatile mass was noted in the right

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groin when palpating the femoral artery approximately 2 to 3 centimeters in length, which widened upward into the groin, approximately 2.5 centimeters wide. The patient complained of mild tenderness upon palpation to the lower aspect of the right lower quadrant and the right testicle. He was able to perform a right straight leg raise minimally but complained of a significant amount of pain during this maneuver.

No laboratory tests were performed at this time. The ED resident considered multiple differential diagnoses including infection and abscess, incarcerated hernia, appendicitis, deep vein thrombosis, testicular torsion, and epididymitis. While the resident was discussing the differential diagnoses and plan to perform an incision and drainage of the mass for suspected abscess with the ED attending physician, the emergency nurse interjected that the patient had disclosed to her having had a femoral angioplasty recently secondary to a myocardial infarction (MI). The resident reinterviewed the patient and confirmed an MI 3 months earlier, with a coronary angioplasty and stent placement. It was further ascertained that the patient was actually taking multiple medications including aspirin, atorvastatin, clopidogrel, lisinopril, and metoprolol. Learning about the angioplasty prompted the attending physician to add pseudoaneurysm to the list of differential diagnoses. The attending physician ordered a duplex study of the right femoral artery/lower extremity, which was positive for a right common femoral artery pseudoaneurysm (FAP) measuring 1.8 cm x 1.5 cm.

FAPs are a known but uncommon complication after angioplasty. A FAP is a contained rupture from a damaged artery affecting all 3 layers of the arterial wall that can occur after certain cardiac procedures if blood leaks and pools outside the artery.<sup>4</sup> The FAP forms at the site where the artery was punctured if the arterial puncture site does not seal adequately.<sup>5</sup> It forms a pulsating encapsulated hematoma, which is in persistent communication with the ruptured vessel, confirmed by ultrasonography.<sup>4-6</sup> Other causes of FAPs include damage at the access site of a native artery graft anastomosis, infection, and trauma.<sup>4</sup> Risk factors for FAPs include an inadequate period of manual compression after certain procedures, using large-bore sheaths, being on anticoagulation during or after the procedure, older age, presence of a tumor, obesity, hypertension, peripheral artery disease, hemodialysis, aortic surgery, arteritis, complex coronary intervention, cannulation of the superficial rather than the common femoral artery, and self-injection in IV drug abuse.<sup>4,6</sup>

Treatment of an FAP used to be only surgical repair. Now there are other options such as ultrasound-guided compression repair, thrombin injection, or para-

aneurysmal saline injection.<sup>7</sup> The patient underwent ultrasound-guided thrombin injection and was discharged with no further complications.

The primary nurse caring for this patient was instrumental in contributing to the physician's determination of the appropriate diagnosis and treatment for this patient. If it had not been for the emergency nurse's keen insight and comfort level reporting critical information to the physician, the outcome may have resulted in an unnecessary emergency surgical intervention.

## Review Summary

Initially, this patient was thought to have an abscess, incarcerated hernia, appendicitis, testicular torsion, or possibly a complication from a sexually transmitted disease. The emergency nurse however, informed the attending physician that the patient had an angioplasty procedure, which clued the physician into ordering an ultrasound. This one vital fact may have been a life-saving piece of information.

It is not always easy for nurses to "speak up." Studies have shown that nurses benefit from tailored communication training, coaching, mentoring, and from administrative support to eliminate fear of reprisal.<sup>8</sup> The Joint Commission states that lack of communication is a key factor in errors that cause patient harm, especially when information is inaccurate, incomplete, untimely, or misinterpreted.<sup>9</sup> Recommendations for better communication include (1) talking to staff frequently about speaking up and supporting them when they do, (2) reviewing organizational policies so nurses know their options when problems occur for speaking up, (3) role-playing scenarios, (4) mentoring nurses, and (5) sharing of situations in which speaking up protected patients.<sup>10</sup>

Nurses play a critical role in keeping the lines of communication open with providers to help ensure that patients receive the best care possible. It is essential for emergency nurses to review the history on every patient and communicate with providers regarding missing pieces of information that can affect diagnoses and treatment and change outcomes for patients. Successful interprofessional collaboration can spare patients potentially life-threatening complications: in this case, FAP rupture and/or surgery.

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