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Risk Management Review

PATIENT SAFETY & RISK SOLUTIONS

Failure to Recognize Rare Condition Results in Death of Pregnant Mother and Child; Malpractice Lawsuit Follows

Theodore Passineau, JD, HRM, RPLU, CPHRM, FASHRM

Introduction

Many healthcare providers assume that when a catastrophic injury follows treatment, a lawsuit will commence that will inevitably result in a large payment to the plaintiff. However, often this does not happen, as illustrated by this tragic case from the Northeast.

Facts

The patient, a 33-year-old African-American female, was 31 weeks pregnant with her first child. She had struggled with fertility issues and was delighted to be carrying this child to term. Her medical history included morbid obesity (height: 5' and weight: 244 lbs.), hypertension, and gestational diabetes. Ten years before the incident in question, the patient was in a very serious rollover automobile accident, resulting in a C2 fracture and other injuries. She was skillfully treated for her injuries and made a full recovery. Also, 2 years before the incident in question, the patient presented to an emergency department (ED) with intermittent, left-sided chest pain. After a negative electrocardiogram (ECG), bloodwork, and chest X-ray, she was discharged with instructions to follow up with her primary care physician (PCP).

In April of Year 1, the patient presented to the ED (the same ED she had presented to on the two other previously mentioned occasions) at 3:16 a.m., complaining of chest pain and shortness of breath. She was triaged at 3:31 a.m. and placed into a chest pain protocol.

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This protocol included testing for creatinine level and a two-view chest X-ray. Dr. C, a MedPro-insured emergency medicine physician, initially evaluated the patient at 3:58 a.m. Initial testing showed a normal sinus rhythm at 90 beats/minute, blood pressure (BP) at 173/93, respirations at 28, and oxygenation at 100 percent.

A portable chest X-ray was performed shortly thereafter; a teleradiologist did the initial read and reported it to be "unremarkable." Dr. C also reviewed the X-ray and recorded an "abnormal appearing mediastinum," which was consistent with the chest X-ray from 2 years earlier. The abnormality was that the mediastinum appeared to be widened beyond normal limits.

After obtaining a complete history and performing a physical, Dr. C noted chest pain and shortness of breath, but no syncope, abdominal pain, nausea, or vomiting. The patient's BP remained elevated, and her pulse was gradually but steadily increasing. She was given famotidine, ondansetron, and magnesium hydroxide and aluminum hydroxide.

At 4:11 a.m., Dr. C ordered additional bloodwork, including a D-dimer test, as he was suspicious of a pulmonary embolism. The first round of test results arrived at 4:24 a.m. Although some abnormality was demonstrated in the complete blood count, electrolyte, glucose, and magnesium results, nothing seemed to explain the patient's symptoms. Since the patient was in "no acute distress," the creatinine was normal, and the D-dimer was elevated (at 1560), Dr. C recommended a CT scan with and without contrast to attempt to clarify the cause of the patient's symptoms. Initially, the patient and her husband resisted the CT scan because they were worried about exposure of the fetus to radiation; but after 20 minutes of discussion with Dr. C, they agreed to it. The CT scan was done at 5:00 a.m.

The CT scan was read and reported to the ED at approximately 6:00 a.m., the time when Dr. C was going off duty and handing off care for the patient to Dr. J (another MedPro-insured emergency medicine physician who, interestingly, had treated the patient for the C2 fracture 10 years earlier). The teleradiologist again performed the initial read of the CT scan and reported that it suggested a thoracic aortic aneurysm that had not dissected or ruptured. The teleradiologist also suggested the aneurysm could be a lymphoma. In his note before going off duty, Dr. C characterized the

patient as suffering worsening pain that was now severe. Her BP was 153/104 and she was described as “anxious.”

At 6:36 a.m., the patient suddenly began having increased difficulty breathing, which quickly progressed to tachycardia without a pulse. A code blue was called and resuscitation was commenced. Because of the patient’s obesity, the anesthesiologist had difficulty intubating her, although she succeeded on the fourth attempt.

Efforts were immediately made to locate an obstetrician to emergently deliver the baby. Fortunately, an obstetrician in the labor & delivery unit immediately responded to the ED. He performed an immediate cesarean section, extracting the baby in 2 minutes from the time of incision (while the mother was receiving resuscitation). The total time for delivery was 19 minutes from the time the patient coded. Immediate resuscitative efforts were commenced on the baby girl, who had Apgar scores of 0, 0, and 3. She was then transferred to the neonatal intensive care unit.

After another 40 minutes of resuscitation of the patient (who was asystolic throughout), she was pronounced dead at 7:23 a.m. The baby survived for 1 year before dying as a result of the profound neurologic injuries she received in the moments before her birth (she spent approximately half of that year in the hospital). A postmortem examination of the mother determined that she had died of a ruptured thoracic aortic aneurysm. It was speculated that she had suffered the original injury to her aorta in the vehicle accident years earlier and that it had gone undetected until the time of her death.

A medical malpractice lawsuit was commenced against Dr. C, Dr. J, their professional corporation (PC), and the hospital, alleging negligence in diagnosing and treating the patient, resulting in the death of mother and baby. Because of the doctors’ willingness to defend themselves, the strong expert support of their care, and plaintiff counsel’s intention to ask for a jury award of $30 million, the decision was made to take the case to trial.

All of the defense counsel were very experienced and cooperated well to present a united defense. After a 2-week trial, the jury returned a verdict in favor of all of the defendants. Defense costs for the MedPro-insured defendants (the two doctors and their PC) were in the high range.

Discussion

In almost every edition of *Risk Management Review*, mistakes made in the healthcare delivery process are identified and analyzed with an eye toward providing techniques and strategies that can minimize such errors in the future. In this case, we have the opportunity to review care that was generally considered well within the standard of care and beneficial to the patient, notwithstanding the very unfortunate outcome.

In evaluating this case, MedPro sought expert opinions from three medical specialties: (1) emergency medicine, (2) maternal-fetal medicine (MFM), and (3) cardiothoracic surgery. All three experts were very experienced, well credentialed, and expected to make excellent witnesses before a jury.

The emergency medicine expert opined that, given this patient, he would not have done anything differently. He noted that the patient was carefully monitored from the standpoint of vital signs/overall hemodynamic status and pain level. When there were changes, it was recognized immediately and the emergency physicians responded promptly and appropriately. The emergency medicine expert stated that he would not have treated the patient's elevated BP without knowing its etiology. He also said he would not have ordered a CT scan based on the chest X-ray, but suggested it was appropriate (including when it was ordered) based on the D-dimer result. While he would have included a dissecting aneurysm in his differential diagnosis, because of its rarity (he has never personally encountered one in a pregnant patient), it would have been near the bottom of his list.

The emergency medicine expert felt the care provided once the patient coded was completely appropriate. He disagreed with the plaintiff's emergency medicine expert that this condition could have been diagnosed sooner; the proper protocols were followed, and the (ultimately) diagnosed cause of the patient's death was extremely unusual.

The MFM expert was also fully supportive of the care rendered. He noted that he had seen this condition three times in his 27-year career, and all three patients died. He also provided some very relevant statistics. According to the research he had done, the incidence of aortic dissection in pregnancy is approximately 1 in 4 million pregnancies, and that includes patients who have Marfan syndrome (which is a known precursor to

dissection). Further, statistically, the median time for diagnosis of this condition in pregnant patients is 4.3 hours (this patient had had the CT scan ordered within 2 hours and she had died within 3.5 hours of presentation to the ED). Additionally, the MFM specialist indicated that, after diagnosis, the median time to surgery is another 4.3 hours. He was prepared to testify that, simply put, this patient could not be saved, and that the injury to the baby was similarly unavoidable.[1]

The MFM expert did acknowledge the plaintiff's obstetrical expert's criticism that fetal monitoring should have occurred in the ED, but stated that, in his opinion, all measurements would have been normal until the rupture occurred. For that reason, he saw no reason that the ED physician would call for an obstetrician before the time of the rupture (which is when Dr. J did). Finally, he explained that, while a widened mediastinum can be an indication of an aortic dissection, it is very common in third trimester pregnant patients who are perfectly healthy.

The cardiothoracic surgery expert was also fully supportive of the care for somewhat different reasons. He opined that he would not be able to diagnose a dissection without a CT, and that there was no reason to suspect this condition until the CT scan (which was actually ordered to rule out a pulmonary embolism) was completed and read. The patient ruptured and coded no later than 6:36 a.m.; the expert stated that even if he had received that CT scan interpretation at 6:00 a.m., it would have been impossible to assemble a suitable surgical team in 36 minutes. Further, he noted that if the rupture had somehow been immediately diagnosed in the ED, the mortality rate under these circumstances would be approximately 90 percent. His ultimate conclusion was similar to the MFM expert; he did not see how this patient could have been saved.

In its totality, the defense expert support was evaluated to be much stronger than plaintiff's expert criticisms, and the decision was made to move forward to trial.

[1] For more information, see Mancini, M.C. (2020, July 24). Aortic dissection. *Medscape*. Retrieved from https://emedicine.medscape.com/article/2062452-overview

Summary Suggestions

This case could not have been successfully defended unless the defense proved at trial that the clinical care rendered was within the standard of care. A careful review of the evidence shows that the standard was met, and it emphasizes the importance of following these risk recommendations:

- EDs should have written chest pain protocols and clinical pathways identifying specific interventions and timeframes based on professional organizations' recommendations; patients presenting with complaints of chest pain should be promptly triaged and placed into an appropriate protocol.
- Staff should be engaged in an ongoing triage competency process that includes competency validation, chart review, and identification of protocol compliance gaps and educational needs.
- Obstetric patients presenting to the ED with medical problems require concurrent evaluation, treatment, and monitoring of the fetus. Policies should trigger appropriate staff and protocols to care for the fetus.
- Handoffs are a critical time when communication gaps can and do occur. Implementing a standardized handoff procedure, such as Safer Sign Out, can provide a reliable structure for the safe handoff of care.
- Informed consent is essential, even in the ED. In this case, time was of the essence; but an informed consent process that included a discussion of risks and benefits was also essential to the patient's decision to have a CT scan. Documentation in the health record should reflect the process, including the discussion as well as the provision of educational information.
- Transfer procedures and transfer agreements are essential for EDs. Protocols should identify transfer processes and transfer agreements with other facilities that support the prompt and effective flow of patients.
- In this case, documentation was the key determinant in defending the care provided and obtaining a defense verdict. Documentation should allow reconstruction of the care and include specific times. Complete and timely

documentation of patient care should include communication with the healthcare team and critical thinking and processes that include diagnosis.

Conclusion

Unfortunately, medical malpractice lawsuits are sometimes filed in cases where the medical care was appropriate and the standard of care was met. When the defendant physician is willing to defend himself or herself, and the documentation supports the care rendered, such cases can and should be defended.

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