

Adverse consequences of separating patients from family in the intensive care unit

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For Want of a Nail¹

For want of a nail the shoe was lost.
 For want of a shoe the horse was lost.
 For want of a horse the rider was lost.
 For want of a rider the message was lost.
 For want of a message the battle was lost.
 For want of a battle the kingdom was lost.
 And all for the want of a horseshoe nail.

Actions have consequences. Decisions have consequences. Sometimes the consequences are adverse events. Sometimes, our good intentions pave a “Road to Hell”² rather than a path to our goal. The following case illustrates a tragic series of events that began by forced separation of an elderly man from his loving wife. Would the case have unfolded in the same way had the couple not been separated? Or was this an example of *For Want of a Nail*? We will never know what might have happened had policy and protocol not mandated separation of the patient from his wife.

FOR WANT OF A NAIL THE SHOE WAS LOST

The case begins on Thursday August 12, 2021. The 78-year-old male patient did not feel 100%. There were no respiratory or gastrointestinal symptoms. His wife started the patient on vitamin C, vitamin D, ivermectin, and zinc; she watched his condition closely.

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His temperature was 99.9°F at 7 a.m., 97.4°F later in the day, and 100.3°F at 5 p.m. Although the patient felt better on Friday morning, an appointment was made with the primary care provider. Physical examination and CBC were normal. Blood cultures subsequently were negative. No changes in therapy were made.

On Sunday August 15, 2021, the patient had diarrhea in the morning and was feeling weak. His wife supplied juices and Gatorade to encourage oral intake. On Monday August 16, 2021, a call to the internist about the diarrhea and weakness led to a new prescription of metronidazole. By the morning of Tuesday August 17, 2021, the worsening condition led to another visit with the internist at 3:30 p.m. It was decided to send the patient to the emergency room (ER).

The ER note gives the chief complaint as hypotension and diarrhea with main symptoms of hypotension with dizziness and weakness. There was no mention of respiratory symptoms or findings. Initial vital signs were obtained at 6:00 p.m.: blood pressure 91/57 mmHg, temperature 98.4°F, and respiratory rate 18 breaths per minute. Initial laboratory findings included a normal WBC (6.84 k/ μ L) and electrolytes. Abnormal laboratory findings included: BUN 60 mg/dL, Cr 1.8 mg/dL, ALK 36 U/L, AST 114 U/L, ALT 65 U/L, and Lipase 390 U/L. The blood pressure was felt to be low given a past history of hypertension. The low BP combined with elevated BUN and creatinine led to administration of intravenous (IV) fluids. His wife administered to the patient and was at the bedside constantly. By 9:46 p.m., the vital signs had improved: BP 102/60 mmHg, HR 88 beats per minute, RR 16 breaths per minute, SpO₂ 98% on room air. However, due to the elevated liver enzymes and symptom of diarrhea, an abdominal computed tomography scan was obtained. The results of this scan included ground glass opacities in the lung bases, so a COVID test was obtained despite the absence of

any respiratory symptoms or signs. The first COVID PCR test came back negative, but hospital personnel rejected that result as a false negative, so the PCR test was repeated. The second test was positive. We do not know whether the patient was a true positive, false positive, true negative, or false negative given the conflicting results, but the hospital concluded that the patient was true positive and admitted the patient to the COVID ward where strict patient isolation was mandatory. Transfer to the COVID ward was on Wednesday August 18, 2021, at 12:29 a.m. There was no indication of any abnormality of vital signs at the time of transfer. His wife was no longer able to administer to and comfort the patient.

Within a few hours, the patient became very hypoxic. The SpO₂ was 30% at 1:00 a.m. High flow O₂ via nasal cannula was started. SpO₂ improved to 60% at 1:07 a.m., 91% at 7:33 a.m., 89% at 8:14 a.m., 89% at 9:08 a.m., and 88% at 11:53 a.m. BP was 133/68 mmHg at 1:07 a.m., and 106/62 mmHg at 7:33 a.m. How does a patient go from a normal SpO₂ on room air to extremely hypoxic despite high flow supplemental O₂ in a few hours in the absence of trauma? SpO₂ is determined by the balance of supply of O₂ to the blood in the lungs and consumption of O₂ from the blood in the tissues. It is possible that the IV fluids unmasked pulmonary edema indicated by ground glass opacities on the CT resulting in reduced O₂ supply. It is also possible that this represented progression of COVID-19, though that hypothesis is a stretch given the complete absence of pulmonary symptoms and signs prior to admission to the COVID ward. It is not even clear that the patient had COVID-19, as a false positive test was also possible given the previous negative test. However, there was a financial incentive to the hospital to accept the positive test and reject the negative test. Even if these hypotheses were correct, it is very bad optics for a patient to be improving in the ER and crash within a few hours of being transferred to the COVID ward.

It is also possible that the rapid deterioration in gas exchange was due to isolation from the spouse. The ABCDEF bundle is a generally accepted practice in intensive care unit (ICU) care.³ F stands for Family Engagement and Empowerment. Family

engagement is an essential tool to avoid delirium in elderly patients (as well as cognitively impaired patients). The presence of the family member serves as a visual and auditory anchor of perception to reality. Without the presence of family, a patient is in a scary room with all sorts of scary noises and lights to discomfort him or her. Furthermore, when a patient calls for help from family, rather than the expected appearance of the family member, the calls may go unanswered. This strange and uncomfortable environment leads to disorientation and agitation. Disorientation and agitation can progress to delirium, which is a very ominous development for a successful outcome. Disorientation and agitation necessarily result in increased activity and O₂ consumption which makes SpO₂ lower than it would be, all other things being equal. Would the presence of his wife have prevented the need for supplemental O₂ as it appeared to do in the ER? We will never know the answer as his wife was not given the option. Even if her presence did not prevent the need for supplemental O₂, would the O₂ requirement been less with the presence of his wife? Although we will never know the answer, most likely the answer is Yes! There is little question that the patient would have been more relaxed with the comforting presence of his wife. More relaxed translates into lower O₂ consumption, which translates into higher SpO₂, everything else being equal. Furthermore, the presence of his wife would be more conducive to the patient's cooperation with the O₂ apparatus rather than struggling with what could easily be perceived by the patient to be a threat. For want of a caring wife, some SpO₂ was lost.

FOR WANT OF A SHOE THE HORSE WAS LOST

By Thursday August 19, the patient was oriented to person only. Although the patient followed commands and his speech was clear, he was forgetful and confused. Success with supplemental O₂ requires patient cooperation, meaning a relaxed patient trying to breathe with an even rhythm, deep volumes, and slow rate. How likely is this going to work out with a patient who has no family to assist, is disoriented, and is confused? Rather than cooperating, the patient is

likely to perceive the O₂ apparatus as a threat and try to remove it. Sure enough, an order was given requesting soft restraints. Requests for sedatives would soon follow. There is a reason that the phrase “liberation from the ICU” has emerged. There is no real debate that the patient’s mental status would have been better with the presence of his wife. For want of a caring wife, the mental status was lost.

FOR WANT OF A HORSE THE RIDER WAS LOST

By Friday August 20, 2021, the patient was restrained and sedated. There should be no surprise that the next problem to emerge would be metabolic problems related to poor oral intake. By Saturday, August 21, 2021, the sodium (Na) had increased from normal to 151 mEq/l. Nephrology was consulted. A change in IV solution to D5W was made. An increase in free water intake was recommended. How a patient who is restrained and sedated is supposed to increase free water intake without his wife present was not considered. By Monday, August 23, 2021, the Na had increased further to 158 mEq/L. By Tuesday, August 24, 2021, the respiratory therapist (RT) noted, “Patient is awake but is not communicating more than moans.” A feeding tube was considered. By Wednesday, August 25, 2021, a feeding tube had been placed. It is not clear how a patient who is restrained and sedated, and who is disoriented to time, place, and situation can give informed consent. No consent was asked for or obtained from his loving wife who had been excluded from both family engagement and empowerment. For want of the mental status, the normal Na was lost.

FOR WANT OF A RIDER THE MESSAGE WAS LOST

The feeding tube and appropriate tube feedings corrected the Na. However, the stage had been set for the next problem. The patient was receiving full anticoagulation due to immobility (from restraints and sedation), location in the ICU, and positive COVID-19 status (whether true or not). Anticoagulation increases risks for bleeding. One bleeding risk is

trauma. The involuntary placement of a feeding tube was a form of trauma. By Friday, August 27, 2021, the patient—despite restraint and sedation—had pulled out the feeding tube. The feeding tube was replaced. The fuse had been lit. There was no caring wife present to maintain oral hygiene and check the mouth and oropharynx. For want of a caring wife the necessary maintenance of the feeding tube was lost.

FOR WANT OF A MESSAGE THE BATTLE WAS LOST

On Saturday, August 28, 2021, things happened quickly. It being a weekend, the documentation was not completely clear. By 10:47 a.m., SpO₂ was declining. Nobody ventured a hypothesis. A decision was made to intubate the patient. It is not clear when the intubation was attempted, but it failed. The practitioner could not visualize the glottis due to the presence of a “mass” obstructing the path to the vocal cords. It would later become apparent that this “mass” was a large blood clot that must have taken hours to accumulate from slow bleeding. The bleeding was most likely due to the re-insertion of the feeding tube made necessary by the high Na and the depressed mental status, both of which were predictable results of the forced separation of the patient from the caring wife. An emergency cricothyroidotomy was placed to secure the airway. The patient was transferred to the operating room (OR) for an emergency tracheostomy. Gas exchange was less than optimal during this time. For want of the message coming from the patient’s caring wife inspecting the mouth and the feeding tube, the airway was lost.

FOR WANT OF A BATTLE THE KINGDOM WAS LOST

Again, due to the weekend, documentation of events was less than optimal. It would appear that inspection of the oral cavity, pharynx, and larynx in the OR demonstrated that the “mass” was a blood clot and it was suctioned away. The tracheostomy was performed. Ventilation was difficult despite the tracheostomy, so a bronchoscopy was performed. The bronchoscopy suctioned considerable bloody

material from the lungs. Most likely, while the bleeding was forming the blood clot obstructing the upper airway, some of the blood was being aspirated into the lungs. Gas exchange was poor for hours during these procedures. Blood pressure was less than optimal as commonly occurs in difficult to ventilate patients who are sedated and anesthetized. When the patient arrived in the ICU, there were immediate concerns about neurologic status. Furthermore, the patient arrived on two vasopressors. To make a sad story concise, his caring wife was informed about the very bad status of the patient and the very bad prognosis. She made the very difficult decision to withdraw life support. Unfortunately, the caring wife was denied the opportunity to offer comfort to the patient during the withdrawal of life support. The patient was pronounced dead within one minute of withdrawal of life support. For want of an airway the patient was lost.

Things are never as simple as they seem from one side of an argument. There are, of course, practical limits to contact with family and patients. One cannot have an unlimited number of family members in a physically limited room. There are behavioral limits as to what can be tolerated from the family members. However, family members are a potential resource. This is the rationale for the 'F' of the ABCDEF bundle. Family members have more time and more motive than physicians and nurses to make difficult things work for the patient.

Needless to say, his caring wife was very upset about this case. I was asked to review the case as an expert for a wrongful death lawsuit. I dissuaded her from filing a suit. I found no evidence of negligence or incompetence on the part of any caregiver. There was no breach in the standard of care. Rather the patient was a victim of a bad standard of care put in place for the COVID-19 epidemic. Forced isolation of patients from family members is barbarism.⁴ Moreover, it is bad medicine.³ We can do better. We must act now to make sure this mistaken policy/protocol is never used again.

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This is a real story about a real patient and a real loving wife. This report was made possible by the wife making the medical records available to the author. The wife is aware of this manuscript and has given explicit consent for it to be published and made public. It is the express wish of the wife for this story to reach as many people as possible. The identities of all the actors in this tragedy will remain anonymous.

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