Court of Claims of Ohio
The Ohio Judicial Center
65 South Front Street, Third Floor
Columbus, OH 43215
614.387.9800 or 1.800.824.8263
www.cco.state.oh.us

BOBBY L. CREAMER, Exec., etc.

Plaintiff

v.

THE OHIO STATE UNIVERSITY MEDICAL CENTER, et al.

Defendants

Case No. 2010-08004

Judge Joseph T. Clark

DECISION

{¶ 1} Plaintiff brought this action alleging medical negligence and wrongful death on behalf of herself and her decedent, Christopher Creamer. The issues of liability and damages were bifurcated and the case proceeded to trial on the issue of liability.[1] On June 10, 2009, plaintiff's decedent, Christopher Creamer, underwent a kidney transplant performed by Ginny Bumgardner, M.D. Dr. Bumgardner was assisted in surgery by transplant fellow, Dr. Samavedi; the surgery was completed at 9:24 a.m. By all accounts, the surgery was a success, which meant that the kidney began to function properly. Upon completion of the surgery, the anesthesiology team consisting of Bhagwandas Gupta, M.D. and Certified Registered Nurse Anesthetist, Elizabeth Hange, began preparing Creamer to emerge from sedation.[2] To ensure that Creamer would comfortably emerge from sedation, Hange administered Dilaudid for pain control at 9:15

[1] The parties' November 7, 2011 motion for an extension of time to file post-trial briefs is GRANTED instanter, and the November 1, 2011 stipulation regarding service thereof is APPROVED.

[2] On October 5, 2010, the court approved the parties' stipulation that Dr. Gupta and Nurse Hange (Paul) are entitled to immunity pursuant to R.C. 9.86 and 2743.02(F).

a.m. and 9:25 a.m. Hange, who recorded such information on the anesthesia flow sheet, could not recall whether she obtained the timing of such events from the clock located on the wall of the operating room or the clock on the monitors by the patient's bedside; however, Hange testified that she used the same clock throughout the procedure to obtain the timing of events. Sometime between 9:20 a.m. and 9:25 a.m., Hange ceased administering the anesthetic gas desflurane. Between 9:25 a.m. and 9:30 a.m., Hange administered neostigmine and Robinul to reverse the neuromuscular block in preparation to remove Creamer's endotracheal tube (ET tube) that was connected to a breathing circuit providing him with oxygen. (Plaintiff's Exhibit 5, Tab 6.) Dr. Gupta testified that he performed a test known as "train of four," in order to determine whether the ET tube could be safely removed.

{¶ 2} According to Dr. Gupta, prior to extubation, Creamer was able to follow commands, open his eyes, squeeze a hand, and swing his extremities. After evaluating the "train of four," Dr. Gupta concluded that Creamer had met the criteria for extubation. Prior to performing the extubation, Hange documented that Creamer was spontaneously ventilating, that his blood pressure was 140/70, and that his heart rate was 70. (Plaintiff's Exhibit 5, Tab 6.) After suctioning out his airway, Hange extubated Creamer by removing the tape holding the ET tube in place, deflating the pilot balloon and extracting the ET tube. According to the anesthesia flow sheet, Creamer was extubated at 9:31 a.m. (Plaintiff's Exhibit 5, Tab 6.)

{¶ 3} Hange testified that after Creamer was extubated, she began preparing to move Creamer to the recovery room. According to Hange, she disconnected the ET tube from the breathing circuit, discarded the ET tube, and connected a face mask to the breathing circuit. She subsequently handed the face mask to Dr. Gupta, who placed it over Creamer's nose and mouth. Hange then removed the EKG leads and silenced the alarms on the monitors. Hange could not recall whether she also removed both the blood pressure cuff and the pulse oximeter, which was attached to Creamer's finger.

Dr. Gupta asserted that the pulse oximeter was still connected to Creamer inasmuch as it is the last thing removed prior to transporting the patient to the recovery room. Hange testified that the process of extubation, providing the patient with oxygen through the face mask and disconnecting the patient from the monitors requires only a matter of seconds.

{¶ 4} Dr. Gupta testified that Creamer struggled to breathe almost immediately after extubation at which point he placed an ambu bag on Creamer's face and forced three or four breaths of air into his lungs for approximately 20 to 25 seconds. At that point, Dr. Gupta determined that oxygen was not moving into Creamer's lungs and decided it was necessary to reintubate. Dr. Gupta also instructed someone to call Dr. Bumgardner back to the operating room, although he could not recall whom he had so instructed or who actually contacted Dr. Bumgardner. Dr. Gupta explained that in a typical intubation procedure, the standard practice is to select a tube to intubate a patient and also have the next smallest size available and ready for use if necessary. Creamer's initial ET tube, which had previously been discarded, was a size eight; however, Dr. Gupta reintubated Creamer using the size seven ET tube that was readily available. Reintubation consists of inserting the ET tube into the patient's trachea, inflating the pilot balloon, securing the ET tube in place by taping it to the patient's head, and connecting the ET tube to the breathing circuit.

{¶ 5} Hange noted on the anesthesia flow sheet that Creamer was reintubated at 9:32 a.m. Both Hange and Dr. Gupta testified that Creamer was reintubated within one minute of extubation. After Dr. Gupta reintubated Creamer, Hange reattached the EKG leads to Creamer to obtain his vital signs, a process that requires only a few seconds. Dr. Gupta initially testified that he discovered that Creamer was bradycardiac when the monitors were reconnected; however, after reviewing the anesthesia flow sheet, Dr. Gupta testified that Creamer's bradycardia developed several minutes after reintubation. According to Dr. Gupta's progress note, immediately after reintubation,

Creamer's monitors were reconnected at which point his oxygen saturation was between 95 and 97 percent and his heart rate was 36-38. (Plaintiff's Exhibit 5, Tab 8.) Dr. Gupta testified that although Creamer's saturation level was low for a patient receiving 100 percent oxygen, such a level is higher than one would expect to see in a patient who had been without oxygen for four to six minutes. Hange testified that the monitors were within an arm's reach and that she did not recall seeing anything unusual regarding Creamer's CO2 level, although she did not record the particular values on the anesthesia flow sheet.

{¶ 6} Dr. Bumgardner testified that after performing the kidney transplant and ensuring that Creamer was stable, she proceeded to a computer and began typing an operative report, although she was unable to recall whether she was present for Creamer's extubation or what time she left the operating room. According to Dr. Bumgardner, such computers are available both in the operating room and in her office, although she could not recall which computer she used that day. Dr. Bumgardner typed both an operative report timed at 9:33 a.m. and an addendum at 9:35 a.m. (Plaintiff's Exhibit 5, Tab 11.) Dr. Bumgardner testified that the computer system automatically generates the time listed on the operative report. Dr. Bumgardner stated that if Creamer had been experiencing difficulty breathing or been in a code situation, she would not have typed a report at that time because she would have been assisting the patient. After completing the operative report, Dr. Bumgardner proceeded to meet with Creamer's family to discuss his status. At some point prior to reaching Creamer's family in the waiting room, Dr. Bumgardner was called back to the operating room. Although she was unable to recall where she was at the time she received the call, she testified that she had only been gone "momentarily" when she received it.

{¶ 7} According to Dr. Bumgardner, she was present for reintubation and personally confirmed Creamer's breath sounds bilaterally with a stethoscope. Dr. Bumgardner testified that after reintubation, Creamer had "palpable strong pulses in the

left-upper extremity fistula. Upper extremities and lower extremities were warm and well-profused, initially." (Plaintiff's Exhibit 5, Tab 8.) Dr. Bumgardner stated that Creamer's peripherial pulse was weak at that time and that, after the monitors were reconnected, it was discovered that he had become bradycardiac.

{¶ 8} Hange testified that at 9:35 a.m., after reintubation, Creamer's blood pressure was 130/70 and his heart rate was 60, which she considered to be "good." According to Hange, sometime between 9:35 a.m. and 9:40 a.m., Creamer's heart rate dropped below 40. (Plaintiff's Exhibit 5, Tab 6.) To stimulate Creamer's blood pressure, Hange administered epinephrine at 9:39 a.m. and atropine at 9:40 a.m. At 9:43 a.m., Hange administered additional doses of epinephrine and atropine but Creamer's heart rate did not rise. Hange then charted "unable to get [blood pressure]" on the anesthesia flow sheet. (Plaintiff's Exhibit 5, Tab 6.)

{¶ 9} Registered Nurse Sylvia Zulauf testified that she made the code call and requested the crash cart, which contained a code sheet.[3] According to Zulauf, the crash cart and code sheet were delivered almost immediately after making such a request. Hange stopped charting on the anesthesia flow sheet sometime around 9:45 a.m. and wrote "see code sheet." Zulauf retrieved the code sheet and began documenting what was occurring in the room. According to the code sheet, the code began at 9:28 a.m. and was considered a "respiratory compromise." (Plaintiff's Exhibit 5, Tab 7.) Although the code sheet states that Creamer was extubated at two separate times, Zulauf testified that Creamer was extubated at 9:31 a.m. rather than at 9:26 a.m. and reintubated at 9:32 a.m. Zulauf explained that the times and events on the code sheet are reported to her by the nurse anesthetist, although she was unable to explain why she had written extubated two separate times or why the code sheet indicated a "time event recognized" prior to Creamer's extubation.

[3]Zulauf testified by deposition. See Plaintiff's Exhibit 3.

{¶ 10} According to the code sheet, at 9:45 a.m., the anesthesia team began chest compressions to stimulate Creamer's heart to beat on its own. At 9:55 a.m., Zulauf noted that Creamer's heart rhythm was "PEA" or pulseless electrical activity, meaning Creamer had no palpable pulse. After continued resuscitation efforts, Creamer's pulse returned at 10:11 a.m., and after it was determined that he was stable, Creamer was moved to the intensive care unit. According to the discharge summary, Creamer suffered an anoxic brain injury and was eventually discharged to a long-term care facility. As a result of his injuries, Creamer died several months later. Creamer's death certificate lists anoxic encephalopathy as a cause of death. (Plaintiff's Exhibit 2.)

{¶ 11} Plaintiff alleges that the anesthesiology team had a duty to properly maintain Creamer's airway and monitor his respirations to ensure his ability to breathe, and that the team members' failure to do so was the proximate cause of Creamer's anoxic brain injury and ultimately his death.

{¶ 12} "To maintain a wrongful death action on a theory of negligence, a plaintiff must show (1) the existence of a duty owing to plaintiff's decedent, (2) a breach of that duty, and (3) proximate causation between the breach of duty and the death." *Littleton v. Good Samaritan Hosp. & Health Ctr.* (1988), 39 Ohio St.3d 86, 92, citing *Bennison v. Stillpass Transit Co.* (1966), 5 Ohio St.2d 122.

{¶ 13} "In order to establish medical malpractice, it must be shown by a preponderance of evidence that the injury complained of was caused by the doing of some particular thing or things that a physician or surgeon of ordinary skill, care and diligence would not have done under like or similar conditions or circumstances, or by the failure or omission to do some particular thing or things that such a physician or surgeon would have done under like or similar conditions and circumstances * * *." *Bruni v. Tatsumi* (1976), 46 Ohio St.2d 127, paragraph one of the syllabus.

{¶ 14} Plaintiff presented the expert testimony of Marek Mirski, M.D., Ph.D., vice-chair of the Department of Anesthesiology and Critical Care Medicine at Johns Hopkins

School of Medicine. Dr. Mirski is board certified in anesthesiology, critical care medicine, and neurology. Dr. Mirski testified that defendants failed to meet the standard of care by first removing Creamer's ET tube before he was able to breathe on his own and thereafter failing to monitor Creamer after the ET tube was removed. Dr. Mirski asserted that when Dr. Gupta removed the ET tube, it was his responsibility to guarantee that Creamer's airway was managed and that ventilation was continued. According to Dr. Mirski, after reintubation, the standard of care requires documentation of the patient's end tidal CO2 level and that such documentation does not exist in this case. Dr. Mirski asserted that the anesthesia team's failure to monitor Creamer's ventilation proximately caused his anoxic brain injury and ultimately his death.

{¶ 15} Dr. Mirski testified that the standard of care for emergence from a surgical procedure requires that the anesthesiologist ensure that the patient has met four criteria commonly called the "train of four." According to Dr. Mirski, for proper emergence, an anesthesiologist should ensure that the patient is properly oxygenated, has sufficient strength to breathe, is neurologically able to breathe, is sufficiently aroused, and lacks any airway obstructions.

{¶ 16} Dr. Mirski questioned whether Creamer was sufficiently aroused at the time of extubation, inasmuch as there is no notion on either the anesthesia flow sheet or the code sheet whether Creamer was awake and following commands prior to extubation. However, Dr. Mirski acknowledged, upon cross-examination, that the standard of care does not require contemporaneous documentation of such facts. Dr. Mirski testified that when an ET tube is prematurely removed, the patient is at risk of re-anesthetizing, which may cause a patient to stop breathing but that a patient who is fully awake almost always breathes spontaneously after extubation. Although Dr. Mirski criticized the timeliness of Dr. Gupta's decision to extubate Creamer, he was aware that Dr. Gupta's post-operative progress note states that Creamer was sufficiently aroused prior to extubation. (Plaintiff's Exhibit 5, Tab 8.)

{¶ 17} Dr. Mirski testified that the standard of care requires additional monitoring that did not occur in this case. According to Dr. Mirski, Dr. Gupta failed to document any reason for reintubation and failed to document Creamer's end tidal CO2, which was necessary to confirm proper placement of the ET tube in the trachea. Such information could have been obtained through the end tidal CO2 monitor, which, according to Dr. Mirski, was not connected to Creamer at the time of reintubation. Dr. Mirski explained that auscultation, which Dr. Bumgardner performed after Creamer had been reintubated, does not ensure that the ET tube is properly placed. Dr. Mirski testified that proper monitoring would have given the anesthesia team an accurate picture of Creamer's ventilation. Although Dr. Mirski admitted that a chest x-ray performed at 10:16 a.m. confirmed proper placement of the ET tube, he questioned whether someone had adjusted placement of the ET tube after reintubation and prior to the x-ray.

{¶ 18} Dr. Mirski also testified that Creamer suffered a respiratory event and developed respiratory acidosis, eventually leading to bradycardia. Dr. Mirski based his opinion upon subsequent tests performed in the hospital. According to Dr. Mirski, blood gasses drawn from Creamer during and after the code are consistent with a patient who has been without oxygen for an extended period of time. Dr. Mirski explained that a patient who has been reintubated within one minute of extubation would not develop respiratory acidosis. Dr. Mirski explained that a patient who is not being properly oxygenated will develop hypoxia, a lack of oxygen in the body combined with a corresponding build up of carbon dioxide, which can lead to respiratory acidosis. Dr. Mirski explained that respiratory acidosis increases the difficulty of resuscitation because it makes the recovery of muscle function more difficult. According to Dr. Mirski, respiratory acidosis is more consistent with a patient who has been without oxygen for four to six minutes rather than one minute as claimed by Dr. Gupta and Hange. Dr. Mirski opined that based upon Creamer's blood gas values, Dr. Gupta and

Hange failed to monitor Creamer's airway for a period of four to six minutes. Dr. Mirski testified that Creamer suffered an anoxic brain injury ultimately causing his death, which could have been prevented had defendants complied with the standard of care.

{¶ 19} Defendants presented the expert testimony of David Warner, M.D., a professor of anesthesiology at Duke Medical Center. Dr. Warner testified that the anesthesia team met the standard of care both in anticipating an emergent event and in performing subsequent resuscitation efforts. According to Dr. Warner, the anesthesia team properly evaluated Creamer's arousal prior to extubation. In Dr. Warner's opinion, once the breathing tube had been removed, the anesthesia team recognized Creamer's inability to breathe and took immediate corrective action. Dr. Warner testified that Dr. Gupta's decision to reintubate Creamer is an acceptable practice and that it is within the discretion of the care provider to determine whether reintubation is necessary.

{¶ 20} According to Dr. Warner, the anesthesia team monitored Creamer after reintubation in compliance with the standard of care. Dr. Warner explained that the doctor and nurse were both present and recorded Creamer's blood pressure, heart rate, and end tidal CO2 values shortly after reintubation. Dr. Warner testified that the standard of care does not require documentation of end tidal CO2 immediately after reintubation and that the emphasis is on patient care rather than documentation. Dr. Warner explained that the only reason why an anesthesiologist would use an end tidal CO2 value is to ensure that the breathing tube is in the correct position. Dr. Warner testified that proper placement of the breathing tube was ensured by auscultation performed by Dr. Bumgardner, a chest x-ray during the code, and subsequent documentation of end tidal CO2 in the medical records.

{¶ 21} Dr. Warner testified that after reintubation, Creamer was still receiving oxygen, as evidenced by Dr. Bumgardner's notations that Creamer's extremities were well profused and that Creamer had a strong palpable pulse in his upper-left fistula. Dr. Warner explained that when it is struggling to obtain oxygen, the body will direct

available oxygen away from the extremities and toward the organs. According to Dr. Warner, Dr. Bumgardner's findings are not consistent with a patient who has not been receiving oxygen for four to six minutes. Dr. Warner testified that an anesthesiologist could not conclude that a patient was improperly ventilated based upon blood gasses drawn twenty minutes later.

{¶ 22} According to Dr. Warner, chest compressions performed during the resuscitation efforts do not circulate blood throughout the body as efficiently as the heart is able to circulate on its own. Dr. Warner explained that under such circumstances, the body's tissues are not receiving adequate oxygen, and in the case of a long resuscitation, such as with Creamer, the tissues are less likely to recover. In Dr. Warner's opinion, the extended resuscitation efforts were sufficient to have injured Creamer's brain. Dr. Warner agreed that Creamer developed respiratory acidosis; however, he was unable to opine as to the cause of Creamer's respiratory acidosis or bradycardia.

{¶ 23} Upon review, the court finds that the anesthesiology team did not breach the standard of care. The court finds that the standard of care required Dr. Gupta to ensure that Creamer was sufficiently aroused prior to extubation. The court is persuaded by the testimony of Dr. Gupta that Creamer met the established criteria for extubation. Indeed, Dr. Mirski conceded that according to Dr. Gupta's post-operative progress note, Creamer had met the criteria under the "train of four."

{¶ 24} The court further finds that the standard of care requires an anesthesia team to monitor a patient after extubation to ensure that the patient is properly ventilating. The court concludes that the anesthesiology team did not fail to monitor Creamer after extubation. The court is convinced by the testimony of Dr. Bumgardner that she was present for reintubation and noted that Creamer's extremities were warm, that he had a palpable pulse in his fistula, and that she confirmed proper placement of the ET tube through auscultation. The court is persuaded by Dr. Warner's testimony

that Dr. Bumgardner's findings as noted above are not consistent with a patient who has been without oxygen for four to six minutes. Indeed, Dr. Gupta's post-operative progress note states that at the time of reintubation, Creamer's oxygen saturation was between 95 and 97 percent. The court notes that the medical records contain inconsistencies in terms of the timing of specific events; however, the testimony of Dr. Gupta, Dr. Bumgardner, Nurse Hange, and Nurse Zulauf is consistent with a finding that Creamer was reintubated within one minute of extubation and that the anesthesia team monitored Creamer's airway after extubation. The court therefore concludes that defendants did not breach the standard of care.

{¶ 25} For the foregoing reasons, the court finds that plaintiff has failed to prove any of her claims by a preponderance of the evidence and, accordingly, judgment shall be rendered in favor of defendants.

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Defendants

Case No. 2010-08004

Judge Joseph T. Clark

JUDGMENT ENTRY

{¶ 26} This case was tried to the court on the issue of liability. The court has considered the evidence and, for the reasons set forth in the decision filed concurrently herewith, judgment is rendered in favor of defendants. Court costs are assessed against plaintiff. The clerk shall serve upon all parties notice of this judgment and its date of entry upon the journal.

_____
JOSEPH T. CLARK
Judge

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