The Case

Adverse outcomes associated with respiratory events continue to constitute the single largest class of injury in Closed Claims Study Reports published by the American Society of Anesthesiology. In these studies, the esophageal intubation group of claims was notable of a recurring diagnostic failure in 48% of cases where auscultation of breath sounds was performed and documented, but when used alone lead to the erroneous conclusion that the endotracheal tube was correctly located in the trachea.

This case involves the death of a 29 year old female patient who underwent an ERCP under general anesthesia. The Anesthesiologist and the CRNA were both present during induction. As per protocol, the patient received pre-oxygenation at 100% oxygen prior to intubation. The endotracheal intubation was without incident.

The Anesthesiologist and CRNA confirmed endotracheal tube placement by monitoring the patient's carbon dioxide (CO2) tracing. Following intubation and induction, the surgical team turned the patient to a prone position for the procedure. After repositioning, neither the Anesthesiologist nor the CRNA checked the endotracheal tube position or for breath sounds. At this time, the Anesthesiologist and CRNA observed that the CO2 monitor did not display any expired CO2.

The Anesthesiologist asked the surgeon to pass a catheter through the endotracheal tube to take out secretions to determine if the endotracheal tube was in the esophagus versus the trachea. Suddenly, the patient's heart rate began...
to drop rapidly and the patient went into cardiac arrest. All attempts to resuscitate the patient failed and the patient was pronounced dead after 30 minutes of cardiopulmonary resuscitation.

After the patient’s death, the hospital sent the medical equipment for testing with the result being that all the equipment functioned normally.

The plaintiff’s estate did not file suit against the hospital or surgeon. Only the anesthesia team was named. The patient was married with two minor children.

The Allegations

The plaintiff alleged the anesthesia team failed to check the patient or verify endotracheal tube placement.

- Anesthesia believed the equipment malfunctioned and turned the monitor on and off several times.
- No one confirmed endotracheal tube placement at induction or after repositioning
- Anesthesia failed to visually or physically assess the patient for any signs of distress
- No attempt was made to manually ventilate the patient while the equipment was being checked.
- The anesthesia team did not trust their CO2 Monitor

Risk Management Commentary & Advice

The major errors made in this case were that the Anesthesia team did not auscultate both sides of the chest after re-positioning the patient, and did not trust the monitors.

- Correct positioning of the endotracheal tube or laryngeal mask should be verified by both clinical assessment and measurement of the amount of CO2 in the expired gas.
- Resources for the treatment of potential anesthesia complications during surgery should be immediately available.
- Alarms on monitoring equipment should never be disabled, and should be audible.
- In addition to preventative maintenance checks, Anesthesia Departments should conduct pre-use system checks at least before the first case every day.

This case settled for a substantial amount of money.

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