Fire In The OR

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I was recently introduced to a web site that made me think about what can go wrong during surgery. As a journalist reporting to medical professionals, I've spent quite a bit of time researching medical errors such as wrong site surgery, retained foreign objects, and hospital acquired infections, as well as familiarizing myself with all the issues each of you face.

On www.surgicalfire.org [1], I read the personal accounts of victims of surgical fires and viewed the photos (a forewarning if you check them out, they can be graphic) of the patient after a fire had occurred. The surgical fires were intra-operative errors in which a fire ignited in or on the patient, often leaving irreversible damage.

According to this individual web site, while surgical fires are a rare medical error, they do happen. However, the possibility of a surgical fire can be overlooked by surgical professionals—trumped by other, more prevalent medical errors. According to the non-profit health agency, Emergency Care Research Institute (ECRI), "Virtually all operating room fires ignite on or in the patient." As a result, patients and staff alike are shocked when a surgical fire occurs, and at the devastating after-effects the error can cause.

Take, for example, Dennis "Rocky" Rockenbach. Rocky underwent an outpatient surgical procedure in 2003 to have a minor polyp removed from his vocal chords. The doctors used laser surgery to burn the surface of the vocal chord to eliminate re-growth. When the laser hit the cuff the second time, it exploded and set Rocky's throat on fire.

As a result, Rocky has endured 18 surgeries since August 2005 just to help him breathe. "A plastic tube holds his throat open so he can breathe, but breathing is difficult," the web site reports. "His vocal cords are gone. Rocky can whisper, but not well--and too much whispering results in hours of severe pain. He is able to swallow most of the time."

This year, the Wall Street Journal reported there is no national database for hospital fires and burn incidents, but studies in Pennsylvania show 650 surgical fires occur in

hospitals annually in the U.S., not including the “near-miss” incidents that could increase this number three to four times, according to the Pennsylvania Patient Safety Reporting System.

According to ECRI sources on the article, flammable anesthetics have been discontinued for more than 25 years, but risks such as lasers and electrosurgical tools, and enriching oxygen delivered to patients under anesthesia, pose significant risks for surgical fire in today’s ORs. In 2008, the Joint Commission reported the three basic elements of surgical fires. In the OR, these elements include:

1. Ignition sources: electrosurgical equipment, surgical lasers, electrocautery equipment, fiberoptic light sources and defibrillators.
2. Oxidizers: oxygen-enriched atmospheres, nitrous oxide, medical air and ambient air.
3. Fuels: mattresses, sheets, gowns, towels, drapes, dressings, and sponges, volatile organic chemicals, body hair, intestinal gases, tracheal tubes and body tissue.

Obviously, because surgical fires are rather rare—and preventable—surgical technology such as lasers and electrosurgical tools do more good than harm in an OR, and advance surgery and patient care. However, it is at least important to note that surgical professionals should be aware of the risks of surgical fire in the OR (in 2007, the Joint Commission mandated that all hospitals have fire-prevention measures in place) as it may not be as high on the list of concerns in relation to other errors and complications, such as infection.

After reading victim accounts online and learning the potential consequences of a surgical fire, reviewing fire prevention measures at a given medical facility, communicating potential fire hazards before procedures and taking precautions during surgery seems to be time well-spent for surgical professionals, and will help keep the “surprise” element of these disastrous OR errors from surfacing.

What’s your take? E-mail amanda.mcgowan@advantagemedia.com [2]

Sources:

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