Medical Xpress

Reports of retained guidewires draw attention to 'never events' in anesthesia

June 20 2013

Retention of guidewires used to place central venous catheters (CVCs) is a complication that is considered always preventable—but nevertheless still happens, according to a report in the July issue of *Anesthesia & Analgesia*, official journal of the International Anesthesia Research Society (IARS).

Dr Andrea Vannucci and colleagues report their hospital's experience of four patients with retained guidewires, and analyze risk factors for these rare, preventable medical errors. A pair of accompanying editorials support the need for more open discussion of so-called "never events," along with systems approaches to minimize the chances of their occurring.

'Never Events' Should Never Happen…But Still Do

Dr Vannucci and coauthors report on four cases of retained guidewires after CVC placement. Guidewires help in placing CVCs, which are widely used for patient monitoring, fluid or drug administration, and other essential purposes. All four patients underwent CVC placement during complex surgeries such as lung transplantation. The presence of the guidewire was missed on routine postoperative x-rays, and went unrecognized for up to two days after surgery.

Dr Vannucci and colleagues analyzed each case in detail to identify potential contributing factors. Retained guidewires are regarded as

"sentinel" safety problem or "never event"—they should never occur as long as routine precautions are followed.

All four patients became unstable during surgery, requiring "urgent and complex" procedures. In two cases, there was confusion related to the use of two different guidewires.

Another contributing factor was "inattention blindness"— because of the patients' unstable condition, supervising doctors were distracted from ensuring that residents assisting in the operating room followed proper steps in guidewire and CVC placement. "We suggest that distraction of the clinicians and task interruptions resulted in unrecognized deviations from proper technique, which resulted in intravascular guidewire loss," Dr Vannucci and coauthors write.

Even After Precautions, Further Episodes Occur

After the first two cases, steps were introduced to prevent further incidents, including a mandatory training program for residents. Despite these changes, a third event occurred two years later. A "pop-up" reminder regarding guidewire removal was introduced into the electronic medical record—yet the fourth case occurred the following year.

Based on a "root cause analysis," additional preventive measures were introduced, including a checklist to guide every CVC placement. Further training included CVC placement steps to make it less likely for a retained guidewire to be overlooked. "This training recognizes that errors will occur," Dr Vannucci and coauthors write, "but that procedures can be designed to minimize error frequency, decrease the severity of errors when they inevitably occur, and recognize errors before they cause irreversible harm."

In an accompanying editorial by Drs Robert B. Schonenberger and Paul

G. Barasch of Yale University School of Medicine applaud the authors' courage in sharing their experience with and response to preventable medical errors. They warn that CVC insertion should never be regarded as a "mundane, routine, or commonplace" technique.

In a separate editorial, Drs Jeffrey Green and John Butterworth of Virginia Commonwealth University emphasize the need to "re-engineer the process" of CVC placement. They conclude, "Only after we adopt systems approaches to counter the failure modes present in many of the high-risk activities in anesthesiology will we begin to move these sentinel events into the 'never' category."

More information: www.anesthesia-analgesia.org/c … ntent/117/1/102.full

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