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ID chips keep sponges out of surgery patients

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NEW YORK (Reuters Health) - Radiofrequency ID (RFID) chips, similar to those implanted in products to deter theft, may help prevent sponges and other materials from being left in a patient during surgery, the findings from a small study suggest.

Still, further research is needed to determine whether placement of these chips in surgical sponges and other operating room materials will be cost effective for a problem that occurs once in every 10,000 procedures.

At most hospitals, the operating room staff counts the number of sponges before the operation starts and then counts them again at the conclusion to make sure none are been left inside the patient. Still, according to lead author Dr. Alex Macario, counting strategies are not perfect.

"A majority of retained sponges occur with normal counts, perhaps falling outside human safeguards designed to prevent these types of errors," Macario, from Stanford University in California, told Reuters Health. "In fact, a...review of malpractice claims related to retained foreign bodies found that sponge counts had been falsely correct in 76 percent" of non-gynecologic surgeries.

The present study, which is reported in the Archives of Surgery, involved eight patients who underwent abdominal or pelvic surgery. RFID-tagged or untagged sponges were placed by one surgeon and then a second surgeon, who did not know the sponge type, ran a wand over the patient's abdomen to look for the sponges.

The wand identified all of the RFID-tagged sponges and never reported the presence of a tagged sponge when, in fact, there wasn't one. On average, it took just 3 seconds for the wand to pick up the presence of an RFID-tagged sponge.

While surgeons and nurses reported that the RFID system was easy to use, they also indicated a desire for a smaller wand device. In addition, many believed that retained objects would persist unless the system was made fail-safe.

"When we started, I was concerned about the technological part of the problem," Dr. Macario noted, "but our study found the device works 100 percent of the time. The real challenge is how you incorporate a new device into the workflow of the operating room. We need a system that is really fail-safe -- where, regardless, of how people use a counting system technology, the patient doesn't leave the operating room with a retained foreign body."

SOURCE: Archives of Surgery, July 2006.

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