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Tagging surgical sponges could prevent medical errors

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Putting tiny tracking chips on sponges could help prevent the objects from being left in patients accidentally after surgery, say U.S. researchers who tested the idea.

Leaving a sponge in a patient after a procedure is rare. Between 2000-01 and 2002-03, it happened to an estimated one in every 6,667 patients, a Canadian team found.

In some cases, the sponges cause no problems and may remain undiscovered for decades, but they can add an average of four days of hospital stay after surgery and may lead to toxins in the blood or blockage of the intestines and death, the U.S. team noted.

Dr. Alex Macario of Stanford University School of Medicine in California and his colleagues tagged some surgical sponges with radio-frequency identification chips and tried to detect the objects with a battery-powered scanning device.

"It is likely that technology alone will not be foolproof in solving the retained foreign-body program," the team concludes in the July issue of the journal Archives of Surgery, although it could be added to the current practice of counting sponges before, during and after surgery.

In the experiment on eight patients undergoing elective abdominal or pelvic surgery, a surgeon placed a tagged or untagged sponge in the patient while another surgeon looked away.

The edges of the wounds were pulled together while the second surgeon used a wand to try to find tagged sponges.

The wand detected tagged sponges 100 per cent of the time in an average of less than three seconds, the team reported.

Surgeons and nurses who were interviewed about the device said it was easy to use, but they asked for a smaller, more efficient version than the 0.68-kilogram wand.

If the technology is adopted, the operating team would remain responsible for inspecting the surgical site to avoid the problem, the researchers proposed.