

Study identifies risk factors for foreign bodies left in children after surgery, outcomes

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Few children leave surgery with a foreign body left inside them, but such events appear most likely to occur during gynecologic operations, according to a report in the November issue of *Archives of Surgery*, one of the JAMA/Archives journals. This surgical error was associated with longer hospital stays and increased costs, but not with an increased risk of death.

The Institute of Medicine identified [medical errors](#) as a significant contributor to costs, illness and death in a report issued in 1999, according to background information in the article. In response, the Agency for Healthcare Research and Quality (AHRQ) developed a set of [Patient Safety](#) Indicators designed to identify adverse events in the inpatient setting. Researchers soon questioned whether these indicators were relevant to the pediatric population. In 2006, AHRQ developed a second set of indicators specifically for children, the Pediatric Quality Indicators.

When linked to hospital administrative databases, these indicators can identify patient safety and other errors that occur in children. Melissa Camp, M.D., M.P.H., and colleagues at Johns Hopkins Children's Center, Baltimore, used this type of linkage to analyze data on 1.9 million hospitalized children from two databases between 1988 and 2005. Of these, 413 children (0.02 percent) were found to have foreign bodies left during a procedure. These patients were matched to three

controls each, for a total of 1,227 controls.

Compared with all other types of procedures—including ear, nose, throat, heart and chest, orthopedic and spine surgeries—gynecology surgical procedures had the highest likelihood of having a foreign body left during a procedure. Average length of hospital stay was increased for children experiencing this complication compared with controls (seven days vs. three days) and total hospital charges were also higher (\$89,415 vs. \$40,503).

Of the 17 patients who had a foreign body left during a gynecologic procedure, 15 had ovarian cyst or cancer-related procedures, one had a cesarean section and one had a procedure for pelvic adhesions (internal scars).

Additional studies should more clearly identify specific procedures associated with leaving foreign bodies in children, the authors note. "This will have implications for providers performing these procedures, because awareness of a higher risk could prompt the need for greater attention to prevent the occurrence of an adverse event," the authors conclude. "Moreover, the results of this analysis are relevant to the ongoing and evolving process of implementing standardized national outcomes measures for pediatric surgical operations."

More information: Arch Surg. 2010;145[11]:1085-1090

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