GUIDELINE FOR PREVENTION OF RETAINED SURGICAL ITEMS

The Guideline for Prevention of Retained Surgical Items has been approved by the AORN Guidelines Advisory Board. It was presented as a proposed guideline for comments by members and others. The guideline is effective January 15, 2016. The recommendations in the guideline are intended to be achievable and represent what is believed to be an optimal level of practice. Policies and procedures will reflect variations in practice settings and/or clinical situations that determine the degree to which the guideline can be implemented. AORN recognizes the many diverse settings in which perioperative nurses practice; therefore, this guideline is adaptable to all areas where operative or other invasive procedures may be performed.

Purpose

This document provides guidance to perioperative team members for prevention of retained surgical items (RSIs) in patients undergoing operative and other invasive procedures. Guidance is provided for implementing a consistent multidisciplinary approach to preventing RSIs, accounting for surgical items (ie, radiopaque soft goods, sharps and miscellaneous items, instruments), preventing retention of device fragments, reconciling count discrepancies, and using adjunct technologies to supplement manual count procedures.

An RSI is a rare but serious preventable error that can result in patient harm. Thus, perioperative team members are ethically and morally obligated to protect patients by preventing RSIs. Case reports of RSIs are documented in the literature, with a case series report dating from as early as 1884.[1] Patient injuries from RSIs vary by the type of item retained (eg, sponge, metal), time to diagnosis, and location of the RSI.[2]

The most common items retained are surgical sponges.[3-7] Other reported RSIs include instruments,[4,5,7,8] needles,[8] and items such as guidewires.[5,7,8]

Time to diagnosis of an RSI can vary greatly. According to Gawande et al,[4] only 6% of RSIs are identified on the operative day. The time to diagnosis ranged from the operative day to 6.5 years, with a median time of 21 days.[4]

The location of an RSI depends on the type of procedure performed. The abdomen and pelvis are reported to be the locations where RSIs are most often found.[3,9] Retained surgical sponges in the abdomen or pelvis can migrate to the intestine, bladder, thorax, or stomach.[10] Other locations for RSIs include the thorax, vagina, and other natural orifices.[3] Retained radiopaque sponges have also been found in the spine, head, neck, and extremities.[4,9]

Retention of items can have disastrous outcomes for patients, such as in the case of a patient's death from myocardial infarction caused by an unintentionally retained pacing wire.[11] In another report, a patient presented with a femur fracture from a retained surgical sponge near the bone.[12] Retained surgical items (ie, guidewires, intravascular devices, broken instruments) in the vascular system can cause complications such as thrombosis, embolization, arrhythmia, tamponade, perforation, or even death.[13-17]

Although patient injury largely depends on variables related to the item retained, overall outcomes are well-documented in the literature. Reported patient outcomes from RSIs include re-operation, readmission or increased length of hospital stay, physical harm, death, and emotional harm.[2,3,18] Re-operation is the most common consequence, reported to occur in 64.8% to 69% of RSI cases.[4,8] Readmission or increased length of stay from an RSI have been reported in 30% to 59% of cases.[4-6]

Physical harm outcomes include infection, fistula development or obstruction, and perforation. Infection is the most reported physical harm, with occurrence ranging from 10% to 43%.[4-6] Development of a fistula or obstruction has been reported to be 15% to 18%, and perforation has been reported to occur in 3% to 7% of RSI cases.[4-6] Mehtsun et al[19] categorized physical harm as being temporary in 78.1% of patients and permanent in 16.3% of patients with an RSI. Death is a less common event, occurring in 2% to 6% of cases.[4,6,19] Although emotional harm has not been uniformly reported, one publication estimated the prevalence to be 1.1%.[19] Further research is needed to assess emotional harm to the patient who has experienced an RSI as this value is likely to be underestimated.

In a survey conducted by Steelman et al,[20] 61% of perioperative nurses identified the prevention of RSIs as one of the top priorities for perioperative patient safety. Avoiding injuries from care that is intended to help patients was identified by the Institute of Medicine as one of six goals to achieve a better health care system.[21] Because an RSI is an event that presents significant risk for patient harm, many states require public reporting when RSI events occur.[22] Federal and state agencies, accrediting bodies, third-party payers, and professional associations consider an unintentionally retained foreign object or RSI to be a serious and largely, if not entirely, preventable event (eg, never event, hospital-acquired condition, sentinel event, serious reportable event).[2,23] Consequently, health care organizations and providers will not be reimbursed for additional care provided as a result of an RSI.[19,24,25] Although the exact costs are highly variable, RSIs can be costly and burdensome to the health care system. Two cost-analysis reports of RSIs in pediatric patients estimated additional hospital