Labor and Delivery: Leave No Sponge Behind

Unintentional retention of surgical items after the completion of a medical procedure was the number one type of sentinel event reviewed by the Joint Commission between 2010 and 2012 (Joint Commission), proving to be a difficult problem to solve.

Retained surgical items (RSIs) are also “never events,” as defined by the National Quality Forum (NQF), and have been on the list of events that the Centers for Medicare and Medicaid Services has refused to pay for since 2008 (CMS). A study of almost 10,000 paid malpractice claims for surgical “never events” reported to the National Practitioner Data Bank between September 1, 1990, and September 30, 2010, found that almost half were for RSIs, with a median payment of $33,953, but with the highest payment of nearly $4 million (Mehtsun et al.).

While RSIs are frequently associated with surgery, this problem extends beyond the operating room. Vaginal deliveries, for example, have a high potential for retained sponges (Garry et al.). The incidence of RSIs after vaginal delivery is unknown, though one facility estimated it to be 1 in 5,000 (Lutgendorf et al.). In New Jersey, 36% of 111 RSI events reported between 2005 and 2009 were obstetrics-related (NJ DHSS). Similarly, one-quarter of 161 RSIs reported in Minnesota over a five-year period also occurred with deliveries, and “nearly all” were sponges used during vaginal births (MDH). Retained sponges can cause serious issues such as infection, pain, and secondary postpartum hemorrhage (Lamont et al.).

Counting sponges and instruments is a highly recommended RSI prevention practice (Goldberg and Feldman), as it has been shown that missing counts are associated with RSIs (Gawande et al.). Counts have also been recommended for vaginal deliveries (ICSI), but researchers state that this is a fairly uncommon occurrence in the labor and delivery department (Chagolla et al.; Garry et al.; Lamont et al.; MDH).

ECRI Institute PSO received a total of 13 reports of sponge counting issues during vaginal deliveries submitted in 2012. No sponge counting issues occurring during vaginal deliveries were reported by the Kentucky Institute for Patient Safety and Quality PSO; however, members should be aware of this topic.

WHAT WE ARE SEEING

Logically, incorrect counts are associated with an increased risk of RSI, with one study estimating a 20-fold increase (Stawicki et al.). One study noted that sponge counts after episiotomies and tear closures were often not conducted (Gawande et al.). The following case illustrates the problem of count issues after vaginal deliveries:

An episiotomy was performed during delivery and was subsequently repaired; however, the sponge count was noted to be incorrect. The sponge was found and removed at the mother's four-week postpartum visit.

Standardization of sponge use is necessary to help avoid retention. For example, procedures should specify a common location for used sponges to be counted before disposal (ICSI). Consider the following example:

The nurse was unable to verify the sponge count after vaginal delivery, because numerous sponges were used and discarded in the under-buttock bag.

RECOMMENDATIONS

Generally, sponges are the most common RSIs reported (Gawande et al.) due to frequent use and the fact that they can be difficult to visualize because they are often small and can blend in after being soaked with blood (Agrawal). Counts for various items, particularly sponges, used during vaginal deliveries should be instituted consistently in policies and procedures throughout the organization. For more detailed information about count policies and procedures, see the November 2013 national PSO Navigator.

Only radiopaque sponges should be used for vaginal deliveries so that in the event of retention, the sponge can be found by x-ray (ICSI). Other technologies recommended to prevent RSI retention include bar coding, which can only be used to count sponges, and radio-frequency identification, which can be used to both count sponges and identify retention (Goldberg and Feldman).

Some facilities have recommended the use of larger sponges, reasoning that they will be less likely to be overlooked during removal (e.g., 4 × 8 inch radiopaque sponges, 4 × 18 inch or 18 × 18 inch laparotomy pads) (Chagolla et al.; Lamont et al.; Lutgendorf et al.). Additionally, sponges should not be cut during the procedure (ICSI).

Facilities may wish to review sponge use in the labor and delivery area to understand the quantity of sponges typically needed. One facility found that most vaginal deliveries used five sponges, so their labor and delivery carts were altered accordingly. Researchers at this organization commented that more sponges are usually needed for relatively rare...


