Retained Surgical Sponge During Breast Surgery

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Citation

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Abstract

We present a case of a retained surgical sponge during breast surgery that was not initially detected during intraoperative radiography. After the sponge count was confirmed, a repeat film showed the missing laparotomy sponge. This report stresses the importance of including the entire surgical field during intraoperative radiography for detection of missing surgical sponges. The use of a radiofrequency identification device may be useful in this situation.

INTRODUCTION

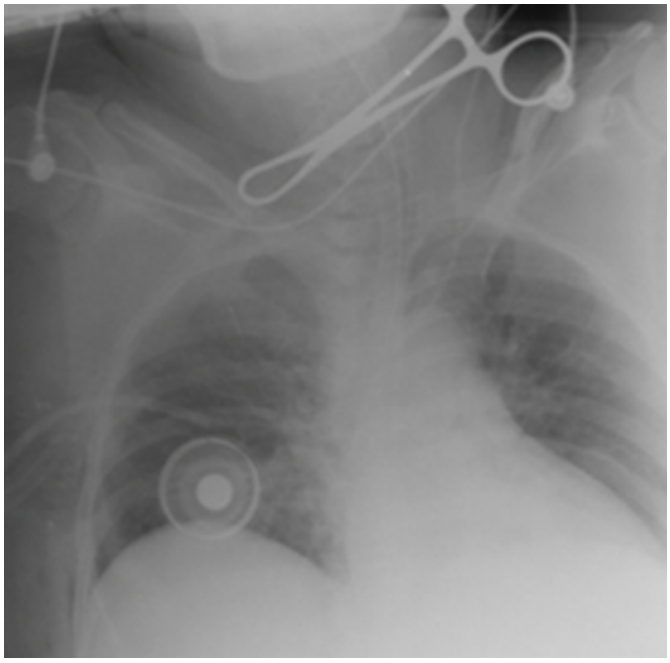
We present a case report where the surgical sponge count was incorrect and yet the initial radiograph taken to detect the sponge was negative. After further confirmation of the count, a repeat film showed the sponge in the wound of a reduction mammaplasty.

CASE REPORT

The patient was an obese 44-year-old woman who was recently diagnosed with invasive colloid carcinoma of the right breast, status-post lumpectomy with positive margins. In addition, she had significantly enlarged breasts with associated neck, back and shoulder pain. As such, a right modified radical mastectomy was performed simultaneously with a left reduction mammaplasty.

The general surgeon performed the right mastectomy and then closed the wound for the left mammaplasty while the plastic surgeon inserted a breast tissue expander on the right. At the time of closure on the left, the initial sponge count was short one surgical laparotomy sponge. After this was confirmed with repeat sponge counts, a chest X-ray was ordered to look for the missing sponge. (18x18 X-ray detectable laparotomy sponge, Medical Action Industries, Arden, NC)

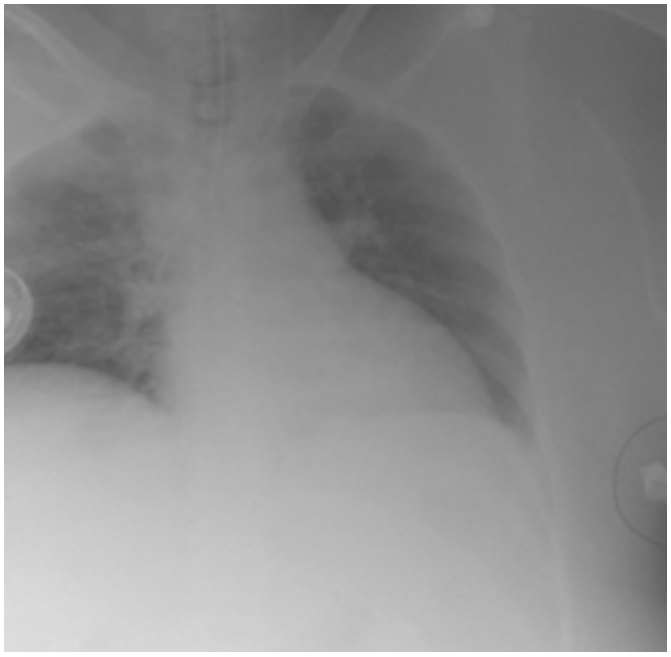
Figure 1



The X-ray did not demonstrate the missing sponge. The count was then confirmed repeatedly with the assistance of additional nurses and two searches through the trash. The count remained one short.

The general surgeon noted that part of the surgical field, on the left side, was not demonstrated on X-ray. The standard 14 x 17 inch film could not capture the entire thorax of this obese patient. A repeat film was ordered, moving the cassette to the left side of the operating room table.

Figure 2



As seen here, the second film demonstrated an opacity consistent with the missing sponge in the very periphery of the left breast. A repeat film with markers defined the precise location. After closure on the right, the wound on the left was reopened laterally and the laparotomy sponge was retrieved. The patient had an uneventful recovery.

DISCUSSION

The risk of retained surgical sponges, or gossypiboma, is associated with emergency surgery, change in surgical procedure and, as in this case, increased body mass index.[1] Despite the use of radio-opaque sponges and sponge counts, this complication still occurs, and in closed case records from one study, an incorrect sponge count was documented 76% of the time.[2] Intraoperative radiography is the standard procedure for detecting a missing sponge, but as seen here, the entire surgical field must be included. This is especially a problem with obese patients. In this case report, a standard intraoperative chest X-ray was too small to completely visualize this patient in supine position.

One new approach to detection of retained surgical sponges and instruments is a handheld device using radiofrequency identification technology.[3] In cases such as presented here, when standard radiography is inconclusive, this device would be useful and might eventually obviate the need for intraoperative radiography.

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