A Cluster of Surgical Site Infections following Breast Augmentation and Face Lift Surgery

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Sir:

Surgical site infections (SSIs) have been reported as the most common causes of readmission after plastic surgery.[1] In July 2013, the U.S. Centers for Disease Control and Prevention and Missouri State Health Department investigated reports of 5 SSI cases following breast augmentation surgeries. The case-patients' surgeries were performed at a single outpatient plastic surgery clinic (clinic A) during May–June 2013. An epidemiologic investigation was performed with the cooperation and support of the clinic and the surgeon who detected the cluster among his patients.

We defined a case as a patient who had surgery at clinic A between May and July 2013, with subsequent signs or symptoms of SSI, which include any of the following: pain, redness, swelling, discharge at the wound, or unhealed wound. We identified 8 case-patient: 6 following breast augmentation using a solid implant and 2 following face lift surgery. The first case-patient had breast surgery in May 2013 and developed symptoms after 4–6 weeks. This case had *Mycobacterium* identified by polymerase chain reaction from a breast tissue sample; the remaining case-patients had negative microbiological testing. All case-patients experienced mild pain and tenderness, some discharge and delayed wound healing. All of the case-patients' procedures were performed by the same surgeon. Cases seemed to occur after the surgeon switched, in April 2013, to a different lubricating gel product to assist with implant insertions. Review of clinic records showed that the clinic's overall SSI rate was 0.2% (13 cases) during 12 months prior to this cluster.

We reviewed the steps of a breast augmentation surgery with the surgeon and observed infection control practices at clinic A. Instead of using disposable implants or Food and Drug Administration (FDA)-approved resterilizable implants as sizers, actual single-use implants were reused by subjecting them to enzymatic cleansing and steam sterilization. Testing of one implant that had been reprocessed in this manner identified alpha *Streptococcus* and coagulase-negative *Staphylococcus* species. The aforementioned lubricating gel was used around the incision sites and on the sizers and implants. The gel was labeled bacteriostatic and as being intended to lubricate body orifices and facilitate entry of diagnostic and therapeutic devices. However, testing of only one available open unused tube of gel at U.S. Centers for Disease Control and Prevention did not identify mycobacteria or other pathogens.

In response to the cluster, the surgeon temporarily discontinued breast augmentation surgery. When surgery was restarted, FDA-approved resterilizable implants were used as sizers, and the surgeon reverted to the previous brand of lubricating gel, which had similar labeling as the gel mentioned above. No new cases have been reported to date.

Although a definitive mode of transmission was not determined, our investigation identified possible sources of infections and raised some important points for plastic surgeons to consider. Growth of bacteria from the tested sizer indicated one potential source of infection; reuse of single-use implants as sizers may be unsafe as this is neither approved by FDA nor recommended by the manufacturer. In addition, the use of lubricating gel directly on sterile tissues during operations represented another potential source of infection. These gel products are not indicated for that purpose; we are not aware of any lubricating gel products that are labeled for use on sterile surgical fields. The labeling of these gels may require clarification and greater specificity in

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this regard. In summary, we recommend that surgeons adhere carefully to manufacturer instructions, use only FDA-approved reusable or single-use sizers, and not use lubricating gel products on sterile tissues for placement of these devices.

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DISCLOSURE

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