

# Letters to the Editor

## THE IMPORTANCE OF DOCUMENTING THE APPEARANCE AND STATUS OF BREAST IMPLANTS AT TIME OF EXPLANTATION

**To the Editor:** We are aware of a lawsuit that resulted from inadvertent disposal of explanted breast prostheses and other allegations of “switching” implants. It is important to retain a “chain of evidence” regarding breast implants, because it may be needed to document the manufacturer in cases in which patients may recover surgical costs related to their removal. This information can be important to patients whether their implants are ruptured or not.

The authors suggest that photography of the implant shell patch(es), shell markings, and any valves that may be present be performed by surgeons and/or pathologists. These features often will be sufficient to identify the manufacturer should, for any reason, the implants become unavailable. If portions of the implant appear to be incorporated into capsular tissue on gross inspection, the tissue also should be photographed. Photography of implants and tissues may be performed with 35-mm film or digitally, with adequate lighting and with the specimen close enough that patch and shell features are clearly visible. Examples of such photographic documentation may be found in Middleton and McNamara (1).

Careful description of the status of the implant elastomer shell should be included in operative reports by surgeons as well as in pathology reports. Assessment of integrity is made on the basis of the gross appearance of the implant. The term *rupture* is used to describe implants that have sticky silicone gel apparent on gross inspection of the implant elastomer shell (2–4). This silicone gel usually escapes from the implant through a defect in the shell. In most instances, the place where the silicone gel is escaping through the shell can be found on careful inspection.

We discourage use of the term *gel bleed* in describing the gross appearance of breast implants because it is not the gel that bleeds. Silicone gel, which is sticky and hence likely to be apparent on gross inspection, is composed of a matrix of cross-linked, long silicone molecules immersed in a fluid consisting of long molecules of silicone not cross-linked to each other. The fluid component passes

through intact elastomer shells. We refer to this as *silicone fluid bleed*, which is not sticky and, therefore, not likely to be apparent on gross inspection. When silicone gel escapes an implant, we describe the implant as ruptured.

Microscopic examination of implant-related fibrous capsules of intact, as well as ruptured, implants frequently reveals droplets of silicone. For intact implants, the silicone droplets observed result from silicone fluid bleed. Occasionally, such deposits also are found in regional lymph nodes. However, the gross appearance of the implant, not the histologic appearance of the fibrous capsule or nodes, determines whether the implant is considered intact.

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## REFERENCES

1. Middleton MS, McNamara MP Jr. Breast implant classification with MR imaging correlation. *Radiographics* [online] 2000;20:E1. Available at <http://radiographics.rsna.org/cgi/content/full/20/3/E1>.
2. Brown SL, Silverman BG, Berg WA. Rupture of silicone-gel breast implants: causes, sequelae, and diagnosis. *Lancet* 1997; 350:1531–7.
3. Middleton MS. Magnetic resonance evaluation of breast implants and soft-tissue silicone. *Top Magn Reson Imaging* 1998;9:92–137.
4. Bondurant S, Ernster V, Herdman R, editors. *Safety of silicone breast implants*. Washington, D.C.: National Academy Press; 2000.