

Do Saline Breast Implants Harbor Microbes?

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Recent anecdotal reports have indicated that a high percentage of saline implants harbor dangerous microbes. These reports have caused considerable alarm and fear to saline implant recipients. Reports in the literature of microbial growth in saline implants are infrequent. The expander implant offers an ideal opportunity to study the internal milieu of saline implants in vivo. The study shows that, if used properly, saline implants do not become infected. In this study, 45 expander implants were studied under clinical conditions. No evidence of microbial contamination of the saline was found.

Becker H, Hartman J. Do saline breast implants harbor microbes? *Ann Plast Surg* 1996;36:342-344

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Received Jul 24, 1995, and in revised form Dec 4, 1995. Accepted for publication Dec 6, 1995.

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The reported incidence of infection following breast implant placement is generally low [1-5]. Infection occurs more frequently in cases of immediate breast reconstruction in which wound breakdown is often a contributory factor [6]. In augmentation mammoplasty, it rarely exceeds 3%. Mladick [7] reported a zero infection rate in a series of 2,863 saline implants over a 17-year period.

Recent anecdotal reports have, however, indicated that a high percentage of saline implants harbor dangerous microbes. These reports have caused considerable alarm and fear to saline implant recipients [8]. Reports in the literature of microbial growth in saline implants are infrequent [9, 10]. The expander implant (Mentor Corporation, Goleta, CA) offers an ideal opportunity to study the internal milieu of saline implant in vivo. The study shows that, if used properly, saline implants do not become contaminated with microbes.

Microorganisms are ubiquitous on the skin, gastrointestinal tract, and the environment.

Saline breast implants are usually filled with

saline solution on the operative field where the possibility of contamination cannot be excluded. Furthermore, it is very difficult to avoid blood coming into contact with saline when using the traditional open-filling technique. The valve on a saline-filled implant has a potential aperture and the silicone shell is semipermeable. Tissue expanders and adjustable implants have a self-sealing injection dome that has a potential aperture at the needle puncture site [11]. Despite these facts, the reported incidence of microbial growth within saline implants remains low.

Materials and Methods

Thirty-two patients, with a total of 45 adjustable saline implants, were randomly selected for the study. No intraluminal steroids or antibiotics were used. Patients were, however, given prophylactic antibiotics (Ancef, SmithKline-Beecham, Philadelphia, PA) preoperatively and postoperatively. The breast pocket and implants were routinely irrigated with Bacitracin solution.

The earlier patients (approximately 60%) had their implants filled by the traditional open technique. Since January 1994, the closed system and no-touch technique have been used [7].

A further precaution in the latter part of this study was the aspiration of 1 to 2 cc of fluid from the injection dome prior to filling any implant. The reason for taking this precaution is to flush out any blood contamination, especially early postoperatively, when blood may be present around the injection dome.

The patients had their implants in position for 1 month to 8.4 years prior to sampling the fluid. Sampling was accomplished by inserting a 23-gauge butterfly needle into the injection dome using a sterile technique. Ten milliliters of fluid was harvested from each implant and immediately sent to the laboratory for study.

All fluid samples were initially centrifuged and the sediment stained with both gram stain and