Silicone or Saline? Expert Takes a Long-Term View

BY BRUCE JANCIN

SCOTTSDALE, Ariz. — Silicone or saline? With $550,000 breast augmentations performed each year in the United States, it’s a question physicians and surgeons get asked a lot.

Today, most women choose silicone. Indeed, silicone gel breast implants have dominated the marketplace since November 2006, when the Food and Drug Administration lifted its moratorium on their primary cosmetic use. Silicone gel now accounts for 36% of all breast implants; saline implants, for 44%. But many cosmetic surgeons say they appreciate the higher long-term complication rate, one expert said at the annual meeting of the American Academy of Cosmetic Surgery.

“It’s really important for these young ladies to understand what they’re getting in for 10-20 years from now, because often the complications are not reversible,” explained Dr. Erik J. Nuveen, an Oklahoma City cosmetic surgeon who has performed more than 4,000 breast augmentations.

Dr. Nuveen uses both silicone and saline implants. In presurgical counseling, he has witnessed how the tactile experience of handling the silicone devices in the consultation room can influence the decision. This makes it all the more critical, he stressed, that a woman fully understands the pros and cons of both implant types before making her decision.

“The silicone gel implants are softer, more natural feeling. It’s easier to place one on the table and then put it in the patient’s hand. You put a saline [implant] in the other hand and, sure enough, 99% of patients say, ‘I’ve got to get that silicone gel,’” the surgeon said.

Silicone breast implants’ purported association with connective tissue diseases—the debunked, controversial theory that prompted the former FDA moratorium—has distracted attention from other, very real problems with silicone gel implants, he said.

An estimated 45% of women receiving silicone implants undergo reoperations within 10 years. In practical terms, this means that among women receiving silicone gel breast implants this year, there will be 138,600 reoperations for device rupture, contracture, pain, or loss of shape within the coming decade. In contrast, the 10-year reoperation rate with saline implants is 20%-26%—roughly half the rate for silicone gel implants. “These numbers are really important, because they directly impact how I advise patients in order to minimize complications in their lives at 10 years,” Dr. Nuveen continued.

Extracapsular rupture of a silicone gel implant with resultant migration of a silicone stream is a major problem. The silicone must be surgically removed before it can reach the lungs or other vital organs—and that involves a lumpectomy or mastectomy. The extracapsular rupture rate is 1% at the time of implantation, 7% at 3 years, and estimated at 10% at 10 years.

In contrast, rupture of a saline implant is less problematic. Implant deflation is immediately apparent, and the saline is readily absorbed by surrounding tissue. There is no need to remove substantial breast tissue. The rupture rate with saline implants is 3%-10% at 10 years, depending largely on surgeon expertise.

“The reoperation rate for capsular contracture is substantially lower with saline implants than silicone gel. Silicone gel implants require a larger placement incision—a minimum of 5 cm—because they go in full. The implants themselves are more expensive than saline ones. More saline gel recipients have to bear a continuing lifelong expense for FDA-mandated MRI evaluation in order to detect silent rupture. The initial MRI is required at 3 years, then every 2 years thereafter. It’s not covered by insurance. MRI has an 89% sensitivity for detection of implant rupture. In contrast, physical examination of the breast has only 10%-30% sensitivity. Mammo gram is poor at detecting silicone implant rupture while it’s still intracapsular and therefore far more easily treated. Moreover, mammography is the No. 1 cause of implant shell failure.

These days the clinical situation in which Dr. Nuveen said he is most comfortable in recommending silicone gel is in the thinnest patients, who are more likely to find saline implants uncomfortable.

Dr. Nuveen said the future of breast augmentation may be a highly cohesive silicone gel known as style 410. It is the most widely used type of implant in Europe but remains investigational in the United States, where large clinical trials are underway. This type of silicone implant is supposed to have unparalleled durability, shape retention, and freedom from rippling, folding, and silicone migration.

Dr. Nuveen reported having no conflicts of interest.