

Implant Capsules Are Sources of Problems

Surgical Options and Indications for Removal of Capsules

Capsules surrounding implants should be resected, and as much of this tissue as possible should be removed. This practice has generally been recognized as necessary but had not been acknowledged prior to the mid-nineties. Since then, several publications have appeared on the topic. The most widely circulated appeared in the Journal of Plastic and Reconstructive Surgery, authored by Dr. V. Leroy Young. The article is entitled "Guidelines and Indications for Breast Implant Capsulectomy" (V.L> Young, Plastic and Reconstructive Surgery, 102(3), 884-891, 1998). The article emphasizes recommendations endorsed by the plastic surgery community in response to increasing numbers of adverse-reaction reports from users with residual capsules. The study was based on approximately 300 implant users explanted after 1990 at the Washington University School of Medicine in St. Louis, Missouri.

Ablation of the capsule is recommended for users who opt for definitive removal of unsatisfactory implants or for replacement of devices which have failed or have initiated adverse reactions. The procedure is more costly and is sometimes associated with a longer convalescence. It also requires more operating time and superior surgical skills. The article describes cases of residual capsules which evolved into fluid-filled and infected cavities that remained many months after implant removal. The article mentions that about 30% of users exhibited severe calcification of the capsular tissue in addition to other implant problems.

Many implant users still undergo removal of implants without resection of capsules. They habitually encounter chronic, long-term problems, and many request secondary surgery to retrieve this debris, sometimes several years after the initial explantation. Explicit indications for removal include systemic and local inflammatory phenomena that remain for a long time after debridement of the original prosthetic site. Capsular material frequently takes the form of dense, hyalinized tissue with multiple layers of encapsulated and calcified debris. It is characteristically recognizable and frequently alarming on radiographic presentation. Simple biopsy-like excision can sometimes be performed for definitive retrieval of such debris if there is a single, small, cohesive mass. Suitable techniques are similar to those employed in oncology, specifically for removal of well-defined, encapsulated malignancies. Secondary removal of implant capsules may not be feasible unless the boundary of the residue is clearly demarcated and ascertained through pre-surgical radiographic studies.

Certain types of implants, in particular the ones with coarse textures such as the Biocell™ (McGhan/Inamed) and textured versions of the Silimed™, bind tenaciously to their capsule and make the removal of capsules almost mandatory. In a practical sense, these prostheses are best explanted with their capsules still attached to the coarse texture. Variations on this procedure are widely employed and present obvious advantages to both the patient and the physician. In some circles, the procedure is termed "extracapsular capsulectomy" It ensures

that implant debris and microorganisms, entrapped between the implant and the capsule, remain incarcerated and minimize the possibility of viable inoculae entering the surgical field. Cleavage planes exist between the capsule and the surrounding natural tissue and can be exploited to facilitate dissection.