BAAPS

Letter to the Editor

To Bloc or Not to Bloc: Challenges in the Management of Patients Requesting "En-Bloc Capsulectomy"

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Awareness of breast implant–associated anaplastic large-cell lymphoma (BIA-ALCL) coupled with increased public interest in the domain of breast implant illness have been key drivers in the evolving trend for patients to request implant removal. Much controversy surrounds the optimal management of implant capsules on removal or exchange.

Primarily, BIA-ALCL is its own entity, with well-recognized management pathways, including "en-bloc" surgical capsulectomy with removal of any involved soft tissue, skin, tumor masses, and lymph nodes.[1] In this context the term "en-bloc" is being used in a way that is true to its oncologic origins, ie, removal of the implant with an intact capsule in its entirety.

Confusion arises when "en-bloc" is used interchangeably in nononcologic domains, thus distancing from its true meaning. Others have recently highlighted this issue, stating the importance of correctly defining capsulectomies as either partial or complete (with or without intact implant capsule).[2] In any non-tumor operation the term "en-bloc" is not considered appropriate.

Currently, no direct scientific links have been proven between implants and any neurologic, connective tissue, or mental health disorders that may contribute to "silicone implant illness."[3] Despite this, a number of physical and psychological symptoms have been described under the umbrella of breast implant illness, which have led to a patient cohort that is well versed (often via the internet and social media) with specific treatment goals.[4] Requests commonly include "en-bloc capsulectomy," patient defined as implant removal enclosed within an intact capsule. Biofilm, silicone "spillage," occult pathology, and risk reduction may all be expressed as reasons for this. A desire for capsule/implant photography, histologic analysis, and even CD-marker testing is commonplace amongst this well-informed group.

For the surgeon treating an asymptomatic patient, this may present a significant dilemma. British Association of Aesthetic Plastic Surgeons guidelines advise that the asymptomatic "worried well" can simply be reassured.[5] However, for the cohort still requesting implant removal, often with total "en-bloc" capsulectomy, the decision-making is more challenging.

Primarily, the term "en bloc" should be dispensed with when discussing capsular procedures, which should instead be described as partial or total capsulectomy. Decisions on the extent (if any) of capsulectomy may be difficult. When we exclude the BIA-ALCL population, some surgeons would suggest never removing any components of the capsule. Others remove only a severely contracted anterior capsule.

The incidence of abnormal pathologic findings in removed capsules is extremely low (invasive pathology <0.2%[6]) and we are not aware of any ALCL cases described in this context. However, some may consider

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total capsulectomy in carefully counseled patients to help alleviate their potential concerns over breast implant illness or other disease development. Given that all BIA-ALCL cases to date are linked to textured implants (or implants of unknown surface),[1] perhaps we should give consideration to performing total capsulectomy in all patients with a history of textured implants. This has been requested by several of our own patients, including reconstructive cases, who believe it will lower or eliminate their future ALCL risk, although this has yet to be scientifically proven. Strategies for managing asymptomatic patients with textured implants have been discussed in detail by colleagues, who state that capsulectomy to alleviate anxiety may be performed where technically safe to do so, and that in specific cases such as a explant of a smooth implant with a previous textured history, one may also consider total capsulectomy if possible.[7] This paper also highlighted that ALCL has been diagnosed where previous implant removal occurred without capsulectomy, but these are assumed to be missed cases of ALCL as there had been seroma present at initial explantation.[8]

Consent for capsulectomy must outline the intraoperative challenges and associated risks: pain, hematoma, and, particularly in the subpectoral implant, the small risk of pneumothorax. Some advocate posterior capsule hydrodissection to reduce risk; however, to avoid interference with electrocautery dissection we prefer a combination of monopolar and blunt periosteal elevation where required.

Safety in capsulectomy is essential. Anterior capsulectomy is often easier with the implant in situ, but posterior capsulectomy (especially subpectoral) may be more controlled once the implant is removed. In all cases we recommend an IMF incision of adequate length for safe access. In the context of a concurrent mastopexy, elevating parenchymal flaps off the capsule greatly facilitates exposure and in our opinion lowers both operative time and risk in a total capsulectomy.

The cosmetic impact of total capsulectomy (particularly when native breast parenchymal volume is low) should be highlighted, together with the loss of the highly vascular capsule as a potential bed for lipofilling.

Postoperative photographs of implants and capsules should be taken. Histopathologic analysis is routine and involves hematoxylin and eosin staining with report on capsule thickness, structure, and cellular composition (macrophages, lymphocytes, fibroblasts, and giant cells). Comment on any foreign bodies, including silicone, is typical. The uncertain value of CD30 testing in the absence of any signs or symptoms of BIA-ALCL is fully explained; however, in our cohort of well-informed aesthetic patients some request this specific analysis, which can be discussed with the local histopathologist. A negative CD30 result subjectively appears to offer patients reassurance, although in the absence of microscopic cellular atypia some may suggest the test to be unnecessary. Of course, the same does not apply to seroma fluid, which if present should be sampled and tested.[1] Ultimately decisions on investigations, operative choice, and postoperative protocols may be patient influenced but should remain evidence based and adhering to best interests.

Long-term data on physical and psychological improvements after total capsulectomy and explant in this patient cohort are lacking in the literature. Improvement in Breast-Q scores (including psychosocial well-being) after explantation and total capsulectomy has been shown, albeit in patients with Baker III/IV capsular contractures.[9] Our own patients have shown subjective and objective improvements (based on pre- and postoperative questionnaire scoring); however, further follow-up and numbers are required before confirming significant differences.

We have now reached another important milestone in the silicone implant journey and it is our responsibility as clinicians to manage patients appropriately based on the scientific data available to us. It is likely the number of asymptomatic patients expressing concerns over their existing implants or requesting “en bloc capsulectomies” may increase and each of us must adopt their own strategies for dealing with these situations based on experience. When a joint decision is made to undertake total capsulectomy, larger incisions or simultaneous mastopexy, combined with meticulous dissection and (if required) separate anterior/posterior capsule removal, may result in lower complication profiles. However, patients must be fully informed and consenting of risks before embarking on this operative choice.

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