

Cosmetology 2015: Correcting animation deformity of the breast- Hilton Becker- Medical College of Virginia

Abstract

When an implant is placed beneath the muscle, points of implant movement or maybe distortion are often seen. Patients who are athletic find this particularly bothersome and seek correction. The technique of correction will be discussed and representative patients will be shown during the presentation.

Background:

Animation deformity after sub pectoral implant placement has been documented; however, the particular prevalence and effect on patient quality of life has not been studied much.

Objectives:

The purpose of this study was to show that all patients with sub pectoral implants experience some degree of animation deformity and that it can affect their quality of life, including causing embarrassment and discomfort in reconstructed patients.

Methods:

Patients who underwent implant surgery were contacted for inclusion within the study. Patients were obtained from one surgeon's practice but included patients operated on outside the practice, and people seen within the practice for a consultation. A six-item questionnaire was developed by the senior author (H.B.) and the medical student (N.F.) involved in the study, to assess quality of life related to animation deformity. Patients had their degree of animation deformity assessed by the senior author and a medico.

Results:

Of 25 patients who agreed to the questionnaire and assessment, 20% had grade I distortion, 44% grade II, 24% grade III, and 12% grade IV. Of the patients questioned, 80% were bothered by an animation deformity and 45% of these patients were bothered to a big degree (≥ 6 out of 10). In addition, 48% of

patients felt that the animation deformity interfered with their lifestyle, and 28% (7/25) of patients underwent, or were scheduled to undergo, revision of their reconstruction at the time of interview. The degree of the clinically observed animation deformity was correlated with patient dissatisfaction, with an R value of 0.47 (P value = 0.0145).

Conclusions:

All patients with sub pectoral implant positioning will experience some degree of animation deformity. Especially within the reconstructed breast population, animation deformity, and its severity, affects patients' quality of life. Other approaches to reconstruction should be considered to stop animation deformity during this population.

Animation deformity occurs when implants are placed within a sub muscular pocket during breast augmentation or reconstruction. The implant can appear to move upward and toward the axilla when patients flex their pectoral muscle. At times, a ridge can be appreciated at the juncture between the lower muscle border and the breast tissue, known as the double bubble effect. Thus far, the prevalence of animation deformity has only been studied in augmentation patients by Spear et al in 2009. The study evaluated 40 patients and found that approximately 78% exhibited some degree of animation deformity based on the subjective grading scale. We believe this to be an underestimate of the true prevalence of this phenomenon in patients who have undergone sub muscular breast augmentation. It has been our observation that any residual muscle over an implant will result in some degree of animation.

Knowledge regarding ADR is most important when it comes to the reporting ADR. It is very important for physicians as well as druggists to possess great knowledge of ADR and procedure of the reporting ADR. The results presented that physicians and pharmacists have Unfortunately, animation deformity is considered to be a normal occurrence

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when using the sub muscular pocket. Patients are often not counselled specifically on animation deformity, and patient education rarely extends further than the initial and preoperative consultations. This leaves implant placement at the discretion of the surgeon. In a 1999 study, patients were counselled on the disadvantages of breast implants preoperatively and those disadvantages discussed included encapsulation, hardening, and slippage of the implant; nothing relating to animation deformity was mentioned.

Animation deformity often causes breast asymmetry. A study assessing the consequences of breast symmetry on patient quality of life found that ladies with pronounced breast asymmetry were more likely to experience poor psychosocial functioning and be at higher risk for developing depression. This particularly affects patients who have undergone mastectomy, because it is often difficult to obtain symmetrical breasts even with reconstruction.

Although the Spear et al article provides us with some insight into the prevalence of animation deformity, they were unable to directly correlate patient dissatisfaction with animation deformity.² The importance of the correlation between the clinically graded severity and patient-perceived deformity creates a standard for the overall effect of implant animation on patient quality of life.

For post mastectomy patients whose quality of life is negatively impacted by animation deformity, revision can be accomplished through the creation of a new pocket in the prefectoral space. Traditional techniques in prefectoral placement can cause insufficient support and coverage for the implant, especially in thin patients or post mastectomy patients lacking adequate glandular tissue. Today, the use of a plane within the subfascial position provides adequate support for the augmentation patient, and it helps in retaining a natural slope to the upper pole of the breast.⁵ In the case of breast reconstruction after a mastectomy, the fascia is removed. However, the implant can be placed above the muscle using an cellular dermal matrix (ADM) for added support, creating the same effect as the

subfascial technique and also preventing animation deformity.

In this study, we have shown that animation deformity is a result of sub muscular implant placement and that it is present, to some degree, in all patients in whom this pocket is utilized. We wish to determine that animation deformity can directly affect patient quality of life and that it needs to be an important aspect of preoperative counselling in all patients undergoing reconstruction or augmentation, especially in athletic patients.

METHODS

Eligibility for sample selection in this study included women who have been diagnosed with either ductal carcinoma in situ (DCIS), BRCA-positive or invasive breast cancer (stage I-III), women who have undergone mastectomy with reconstruction from 1997 to 2014, and women who have undergone reconstruction involving the placement of an implant under the pectoral muscle. The assessors called patients from a list that had undergone mastectomy and reconstruction, until a sample size of 25 women had responded and agreed to participate. Patients were obtained from a single surgeon's practice but included patients operated on outside the practice and those seen in the practice for a consultation. We did not differentiate between patients who had immediate or delayed reconstruction. In addition, we did not differentiate between patients who had reconstruction with total muscle coverage or dual plane with or without ADM, because all of this information was not available. However, it was noted that any implant that was sub muscular, either total or dual plane, with or without ADM showed animation deformity. Chart reviews were utilized to obtain specific clinical information (type of implant, unilateral vs. bilateral mastectomy) and epidemiologic data (race, age).

Note: This work is partly presented at 4th International Conference and Expo on Cosmetology & Trichology June 22-24, 2015 held at Philadelphia, USA.