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LETTER

Use of dermal matrices in breast augmentation complications.

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Breast augmentation is one of the most frequent cosmetic surgical procedures in the USA. During 2012, in the USA alone, a total of 290,000 AM were performed, which represents an increase of 206.8% when compared to 1997 *(Maxwell & Gabriel, 2014; Pozner et al., 2013)*. Globally, breast augmentation is the second cosmetic surgical procedure after liposuction *(ASAPS, 2016)*.

Since the first breast augmentation carried out by Czerny in 1985 with a lipoma, the alloplastic materials and autologous tissues used with inconstant results are multiple. In 1917, Barlett performed breast augmentation with abdominal fat implant to mastectomized patient. In 1953, Bames performed breast augmentation with gluteus dermogram graft due to aesthetic cause. In 1959, Cronin performed breast augmentation using a prosthesis with solid silicone coverage. In 1963, a saline solution was replaced by silicone gel.

However, in spite of how frequent this surgery is, this procedure can have complications, within which we find those associated with the poor implant position caused by capsular contracture, poor position of the inframammary groove, asymmetries and symmastia; and irregularities of the surface, within which we find rippling, wrinkling, bulging and capsular contracture *(Guridi & Arriagada, 2012)*.

Revision surgeries that follow breast augmentation are a significant problem in cosmetic surgery: approximately 1/5 of breast augmentation surgeries go to reoperation and approximately 1/3 of these go to a second reoperation. Multiple techniques have been used in order to solve these complications with disparate and not very encouraging results *(Maxwell & Gabriel, 2014b; Pozner et al., 2013)*.

Dermal matrices have been used with multiple indications in breast reconstruction in recent decades. This has led to a greater knowledge of dermal matrices by plastic surgeons, with the consequent expansion of its use in other surgical challenges, such as breast augmentation revision surgery. Currently, the most commonly used dermal matrices in breast surgery are: AlloDerm, Strattice, DermaMatrix and FlexHD. Each of them with different biomechanical properties *(Spear et al., 2013; Ayeni et al., 2012)*.

In a recent scoping review that I presented on the use of dermal matrices in breast augmentation complications, the main results were:

The high success rate in the management of the poor position of the implant with dermal matrices evidenced in the studies, associated with the low recurrence rate supports the use of these in the management of this complication.

There is no dermal matrix better than another in the management of breast augmentation complications, presenting all similar recurrence rates and complications.

The use of dermal matrices in the management of breast augmentation complications is safe with low complication rates.

The use of dermal matrices in the management of breast augmentation complications shows promising results in terms of their effectiveness.

The high cost of dermal matrices could limit their use in breast cosmetic surgery.

Despite the promising results of current evidence, well-designed studies with a long follow-up period are still required to demonstrate the benefit of dermal matrices in the management of breast augmentation surgery complications.

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