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Use of Ultrapro(R) Mesh for Complex Mastopexy Due to Ptosis and Repeated Implant Rotation

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Abstract

Mastopexy is one of the most performed aesthetic procedures. For certain cases the use of acellular dermal matrices (ADM), which have been widely used, with excellent results, for prosthetic breast reconstruction processes, is widely beneficial. Given their cost, other types of mesh have begun to be used; however, so far, no cases have been published on the use of Ultrapro® mesh for aesthetic mastopexy and even less in cases that have required reintervention. Here we describe the case of a 40-year-old woman who came for revision of her bilateral aesthetic breast pexy after multiple revision surgeries. Concerns prior to the last surgery were pain, flattening of the implant, and asymmetry. We sought the least invasive and definitive operation by placing the mesh. The operation was successful, and the patient is asymptomatic, with soft breasts and stable implant positions. The mesh is easy to fix by suture, lends itself to form a hammock that supports the implant and improves the healing process. Its efficacy in this procedure is yet to be established, so it is considered necessary to continue evaluating and comparing the results obtained with different types of mesh and in different cases of patients undergoing breast aesthetic surgery.

Keywords: *Breast Aesthetic Surgery, Implant, and Asymmetry.*

Introduction

The mastopexy procedure for aesthetic purposes is one of the most frequently performed (1). In the great majority of occasions, the procedure is performed with techniques that use the patient's own tissues, however, when the patient has certain criteria (2), such as, implant volume with a wide difference compared to the mammary volume prior to surgery, malposition and/or descent of the placed implant or poor perception of the patient regarding the result. Different types of mesh have been used and tested, depending on their characteristics and costs (3), with respect to the Ultrapro® mesh, studies have been published for the management of patients with a history of mastectomy in the reconstructive procedure for patients diagnosed with breast cancer with excellent results (4), however, there is no evidence on the results of the intervention in aesthetic procedures and less in patients who have already undergone the pexy procedure on multiple occasions.

The following is the case of a patient who underwent bilateral aesthetic mastopexy, who after 10 years required implant replacement and due to the non-acceptance of the result, it was decided

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to reoperate but with the placement of the mesh to improve the location of the implant, which in turn can improve the perception and the healing process.

Case Report

A 40-year-old woman presented for consultation for revision of the implants after multiple complications of her bilateral cosmetic mastopexy surgery. The patient had undergone the first surgical procedure 10 years earlier, which was performed in order to improve the aspects of size, position and shape, since moderate asymmetry, bilateral ptosis and lower volume than desired by the patient were perceived (Fig.1).

Figure 1. 30-Year-Old Woman with Breast Asymmetry, Bilateral Ptosis and Less Than Desired Volume.

The initial procedure performed consisted of surgical correction of breast ptosis by pectoral suspension with CUI SILIMED 230g implants with vertical technique. The postoperative evolution was satisfactory with respect to healing and acceptance of the prosthetic material by the body (Fig. 2A). In the control performed at the 4th postoperative month the patient manifests that she perceives a decrease of the implants and after the clinical examination it was decided to perform a second procedure to improve the position of the implants and achieve a better breast projection, for which an intervention was performed using the inverted T surgical technique (Fig. 2B). In the annual controls performed after the second intervention, the patient reported an optimal level of satisfaction, however, in the control performed 10 years after the second intervention, it was decided to change and reposition the implants.

During the third intervention it was observed that the implants were intact and rotated in both cavities. The implants were replaced with 280cc implants with pocket reinforcement; immediate postoperative evolution was adequate, however one month after the surgery the patient reported discomfort of the left implant "it felt flattened" and with change in the position of the nipple-areola complex, she also manifested pain in the right side (Fig 2C). Because of that, it was decided to perform a fourth operation for placement of Ultrapro® surgical mesh, with the necessary change of implants, but of the same size. The surgery was performed through an inverted T incision, implants were removed, the cavity was washed with antibiotic, hemostasis was verified and new implants were placed in the existing cavity, Ultrapro® mesh was placed in an inverted T shape in the external part of the implant capsule, the mesh did not come into contact with the implant, the mesh was fixed to the fascia of the submammary sulcus and the implant capsule, and the implant was closed in planes (Fig 2D). In the postoperative control at 3 months the patient was satisfied with the results and the physical examination showed breasts with adequate shape, slight physiological ptosis due to gravity considered within normal parameters (Fig 2E).

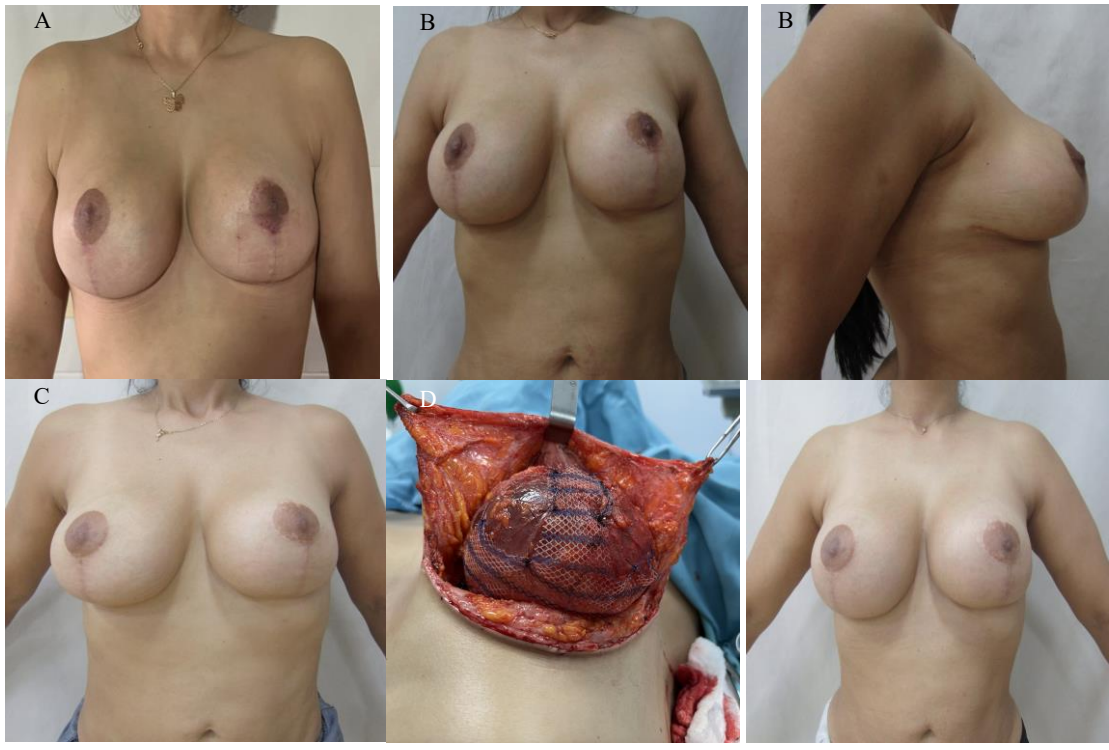

Figure 2

Mediate postoperative control of vertical pexy, first procedure (A). Mediate postoperative control of inverted T surgical technique over 10 years from first procedure (B). Postoperative after the change of implants, asymmetry and flattening of the left side is observed (C). Ultrapro® mesh adapted to provide lower implant support (D). Mediate postoperative control (D).

Discussion

Aesthetic breast surgery performed for revision or correction of problems related to the initial intervention is a challenge for the surgeon (5). In the case of reinterventions performed on patients who underwent aesthetic mastopexy, the main problems encountered are implant rotation or malpositioning, capsular contractures or implant ptosis (6). In cases in which these situations occur repeatedly or in cases in which the mammary volumes are greater than 300cc or the preoperative asymmetry is important, reintervention with the placement of a mesh is considered (7).

Other authors have already reported their experiences with the use of acellular dermal meshes in aesthetic surgery, which are successful (8), however, these meshes are not commonly used in our environment due to their high cost, which can even exceed the total cost of the surgery. It is for this reason that the benefits of the use of acellular meshes have been sought with the placement of other partially absorbable filament meshes, such as the Ultrapro® (Johnson & Johnson Medical), which has a filament of prolene and another of polyglecaprone. Although studies and cases have been reported with other meshes, the good results obtained in a study with patients undergoing reconstruction due to a history of mastectomy for cancer are

noteworthy (4).

The Ultrapro® mesh is not preformed and does not have a total implant envelope, however its fixation by internal suture lends itself easily to give a hammock shape and provide excellent inferior support to the implant. After an exhaustive bibliographic search, no report was found in the literature on this method of mesh application, and even less in a case of successive reintervention. In view of the good results we can consider that it is possible to reinforce the tissues and guarantee that the implant maintains the position observed in the operating room. The technique for mesh placement is particularly compatible with these cases in which the patient has already undergone vertical pexy and/or inverted T-plasty in which the pocket for the implants is created from the patient's own tissues. We also consider that the way in which the mesh is placed allows to achieve greater naturalness to the movement and to notably reduce the tension of the skin, which greatly favors the healing process (9).

Finally, We Strongly Recommend Developing Observational And Experimental Clinical Studies, Preferably Interdisciplinary And Supported By Different High-Tech Simulation Protocols (10), That Allow The Benefits And Limitations Of The Mesh Mastopexy Procedure To Be Reliably Enhanced And With An Important Contribution To The Training Of Plastic Surgeons.

Conflict of Interest

The authors have no financial or other interest in Ultrapro and are not affiliated in any way with Johnson & Johnson nor do they have any relationship with any distributor of the mesh. The senior author also had no communication with any commercial company at the time of deciding to use the mesh for the management of the patient.

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