48.1 Introduction

Breast augmentation is a very common procedure nowadays in plastic surgery, but women are concerned about breast size and breast contour when requesting this surgery. Therefore, different techniques have been developed to offer better results with regard to scar position and natural contour of the breast.

The subfascial plane is well recognized and widely used among plastic surgeons to improve the results in breast augmentation. The authors first described the technique in 1999 and published it in 2000 and 2003 [1–3]. The subfascial position gives a good shape and a natural result. There is additional soft tissue between the implant and skin, also improving mammary glandular tissue resistance in the upper pole and leading to a less noticeable implant edge [4, 5].

The major advantage of transaxillary breast augmentation is to not place a scar in the breast unit. Through the transaxillary access, the implant pocket can be undermined by direct visualization, and the final result can be obtained with a scar at a natural axillary crease [6–8].

Transaxillary subfascial breast augmentation is indicated for patients with hypomastia or micromastia with good skin quality or mild breast ptosis and a normal position of the nipple–areola complex. It is contraindicated for patients with severe breast ptosis and poor skin quality who will need mastopexy. Asians and Afro-American patients are good candidates for the transaxillary approach because they have a greater tendency to develop hypertrophic scarring or keloids mainly at the sternal and breast areas. Patients who present with keloids from previous surgeries can be included in this group.

During the first consultation, it is important to discuss with the patient the size and shape of the implant and the position of the scar. All of these aspects depend on the patient’s desires and the appearance of the breast, e.g., if she has only hypomastia or associated ptosis (after pregnancy or massive weight loss).

48.2 Technique

The markings are done a day before or just before the surgery. With the patient in the supine position, a midline marking is drawn, and the inframammary crease is marked. The neosulcus line is drawn 2 cm below the crease if the distance between the areola and the inframammary fold needs to be increased. The lateral border of the pectoralis major muscle is drawn with the patient placing her hands on her waist and contracting the pectoralis muscle. The design of the pocket for the implant is delineated 1 or 2 cm from the midsternum line and extended cephalically to the level of the upper pole of the breast and laterally to the anterior axillary line (Fig. 48.1). The axillary incisions are placed in a natural crease in an “S” shape, 1 cm posterior to the pectoralis major muscle border and 4 cm in length (Fig. 48.2).
To perform an endoscopic transaxillary breast augmentation, specific instruments are necessary:

1. 10-mm 30° breast endoscope
2. Endoscopic camera with compatible ring connector
3. Tebbetts breast "L" retractor with 90° angle
4. Fiber optic cable connected to the endoscope
5. Suction tube connected to the retractor
6. Insulated cautery dissector – one set in three different sizes: 3, 10, and 30 cm
7. Endoscopic cart containing camera-video output and monitor with DVD recorder
8. Biggs retractor for implant input

The patient is placed in the prone position on the operating room table, her arms are placed at 90°, and the dorsum is slightly elevated. After the patient is prepped and draped, the position is checked. The areas are infiltrated with epinephrine 1:300,000, starting at the axillary incision and going to the periphery of the drawn circle, using an average of 50 ml in each side. The axillary incision is in the natural crease in an “S” shape, 1 cm posterior to the pectoralis major muscle border and 4 cm in length. A tattoo point at the middle of the incision is made to facilitate skin closure, and a retaining suture is placed at the anterior part of the incision to avoid accidental laceration of the skin during retraction. A skin incision is made using a #15 blade.

The lower side of the incision is retracted at the skin, and the subcutaneous tissue flap is created and dissected until the pectoralis major muscle is identified (Fig. 48.3). Careful dissection with electrocautery exposes the lateral border of the pectoralis muscle, where the fascia is incised along the muscle fibers and the subfascial plane created.

The plane between the pectoralis muscle and the superficial pectoralis fascia is undermined to the areolar level with a light-handle retractor, and then using video endoscopy or continuing by direct view, the subfascial pocket is created at exactly the premarked position. After the introduction of video endoscopy, it is possible to see the fascia and the muscle (Fig. 48.4). In the cephalic portion, the fascia is more defined and resistant. Its inferior portion is thinner and more friable. This undermining should be done very carefully to avoid fascia rupture, trying to keep fascia in the roof and muscle below. If there is doubt about the plane, some muscle fibers may be left attached to the fascia. Once the dissection is completed, a careful evaluation for bleeding is carried out.

The surgeon changes gloves and washes his or her hands to remove the talc. As previously discussed with the patient, an implant of the appropriate size, shape, and texture is placed. The patient is placed in a sitting position on the operating table to check the placement and symmetry of the implants. If an anatomical implant is used, it is necessary to be sure that it is in the correct position (Fig. 48.5).

The skin is closed with a running suture of 4-0 Monocryl (Fig. 48.6). No drain is used, and a band is placed at the upper pole of the breast to compress the axillary dissected area. After that, a soft bra is placed on the patient.