

Male Chest Enhancement: Pectoral Implants

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Abstract The authors present their experience with the pectoral muscle implant for male chest enhancement in 21 patients. The markings and technique are thoroughly described. The implants used were manufactured and custom made. The candidates for implants comprised three groups: group 1 (18 patients seeking chest enhancement), group 2 (1 patient with muscular atrophy), and group 3 (2 patients with muscular injuries). Because of the satisfying results obtained, including significant enhancement of the chest contour and no major complications, this technique is used for an increasing number of male cosmetic surgeries.

Keywords Male chest enhancement · Pectoral implant · Silicone implants

Plastic surgeons have paid little attention to male chest enhancement, as indicated by the very small number of articles about this subject. Although chest enhancement is not as common as other body implant operations, it has become increasingly popular, and the demand for this surgery is growing.

Many men strive to develop their pectoral muscles for a look of bulk and projection. Some men work out extensively and still are unable to develop the pectoral muscle they hope to achieve. It is a fact that some body types do not achieve chest muscle tone and definition as easily as others. Genetically, some men are predisposed to building fullness in the lower rather than the upper part of the chest. This gives them an unbalanced, heavy look. Even those

men who work out frequently may gain strength in the pectoral area without noticeable enlargement of the muscle. In other instances, underdevelopment of the muscle in the chest can be a result of a growth defect or injury.

An adequate chest wall is psychologically very important for males. A well-developed chest denotes fitness, strength, and power. The exposure of the male body in media advertising, especially the upper torso, which features large and well-defined pectoral muscles, makes the latter highly desirable as an ideal standard [1].

In 1990, Horn and Aiache [3, 5] developed a pectoral implant for male patients that contains a cohesive silicone gel and a seven-layer capsule with volcanic texture [2]. The implant is rectangular with oval-shaped borders. The shape of the implant reproduces, as much as possible, the outlines of the pectoral muscle. Polytech-Silimed Europe GmbH (Dieburg, Germany) has three available sizes: 190 ml (width, 14.4 cm; height, 2.4 cm), 230 ml (width, 15.8 cm; height, 2.6 cm), and 300 ml (width, 16.5 cm; height, 2.9 cm).

Typically, three groups of patients seek this procedure. The most common group includes men who are unable to develop their pectoral muscles even with a regular exercise regimen and those who are not willing to make the effort to improve their body image. The second group comprises men who have a congenital absence of the pectoralis muscle on the one side (Poland syndrome) or denervation. The third group consists of men with injuries to the muscle due to excessive training (sport injury).

Materials and Methods

Pectoral implantation was performed for 21 men, ages 25 to 56 years, who wished to enhance the bulk and projection

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of their pectoral muscles. For 16 of these patients, we used manufactured anatomic pectoral implants (Polytech-Silimed Europe GmbH, Dieburg, Germany). For two additional men, we used oval buttock implants (Polytech-Silimed Europe GmbH), and for the remaining three men, we used custom-made implants.

Choosing the Implant

The pectoral muscle is measured at the following different levels (Fig. 1):

- Width at the infraclavicular level (level 1) and at the lower border of the muscle (level 2)
- Height at the midportion of the muscle between the clavicle and the lower border (level 3)
- Distance between the axilla and the chondroesternal angle (level 4).

The real pocket usually is about 2 cm smaller than the measurements we have taken on the skin. In cases of unilateral reconstruction, the normal muscle is measured, and the implant is chosen to match the normal side. For custom-made implants, a cast is made with the desired final result. In these cases, projection of the muscle and the curve of the chest are outlined in the model.

Surgical Technique

Markings are made following the outlines of the pectoral muscle with the patient in a standing position, and the procedure is performed with the patient under general anesthesia. The patient is comfortably placed in the supine position with the arms abducted 90°. A solution containing adrenaline 1/100000 is used to infiltrate the area. The incision made in the axilla is transverse for the manufactured pectoral implants and longitudinal

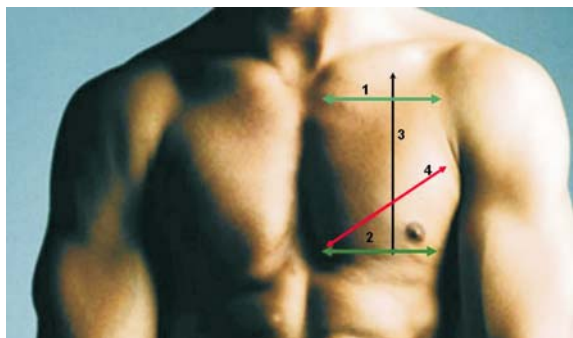


Fig. 1 Measurements for choosing the implant: width at the infraclavicular (1) and caudal levels (2), height at the midportion of the muscle (3), and distance between the axilla and the chondroesternal angle (4)

following the posterior aspect of the border of the pectoralis muscle for the custom-made implants. The mean length of the incision is 4 cm. The lateral border of the muscle is identified, and the pocket is created behind the muscle, initially with scissors and then with a blunt dissector. It is very important to stop the dissection about 1 to 2 cm below the areola without detaching the costal and sternal insertions of the pectoralis muscle. Otherwise, the implant will be positioned too low, resulting in a female appearance [2]. Laterally, we perform a blunt dissection to make room for the implant, stretching out the fascia. Meticulous hemostasis is performed, and the implant is placed.

The orientation of the implant depends on the desired result and the shape of the muscle. The implant can be placed in a transverse or more oblique position. In some cases, we have rotated the implant to use its thickest part to reconstruct an injured portion of the muscle. Closure is performed in layers, and a light compressive bandage is placed on the chest.

Results

We performed 21 surgeries between 2003 and 2006. The 18 men in group 1 were unable to develop their pectoral muscles even with a regular exercise regimen or were not willing to make the effort to improve their body image. One of these men underwent a reoperation to exchange the implant due to a capsular contracture secondary to a hematoma. We used custom-made implants for two patients (Fig. 2), oval buttock implants for two patients (both 240-ml implants), and available implants manufactured by Polytech-Silimed for the remaining patients (Fig. 3). Six these patients received 230-ml implants; three received 300-ml implants; and five received 180-ml implants.

The one patient in group 2 had pectoralis muscle atrophy (Poland syndrome, denervation) (Fig. 4). This patient had a brachial plexus injury with denervation of the pectoralis muscle as well as the radial, median, and ulnar nerves. We placed a custom-made implant to recreate the pectoralis muscle and a Glicenstein calf implant (Polytech-Silimed Europe GmbH, Dieburg, Germany) for the triceps muscle.

The two patients in group 3 had injuries to the muscle caused by excessive training (sport injury) (Fig. 5). One patient lacked definition of the muscle in the tendon area, and the other patient lacked definition of the caudal edge of the muscle. In both cases, a manufactured implant was used.

There were no complications such as hematoma, seroma, or capsular contracture. All the patients resumed exercise and a normal life after 5 weeks.

Fig. 2 Chest enhancement with custom-made implants. This type of implant is best when the patient wants a squared muscle, well defined in all its boundaries

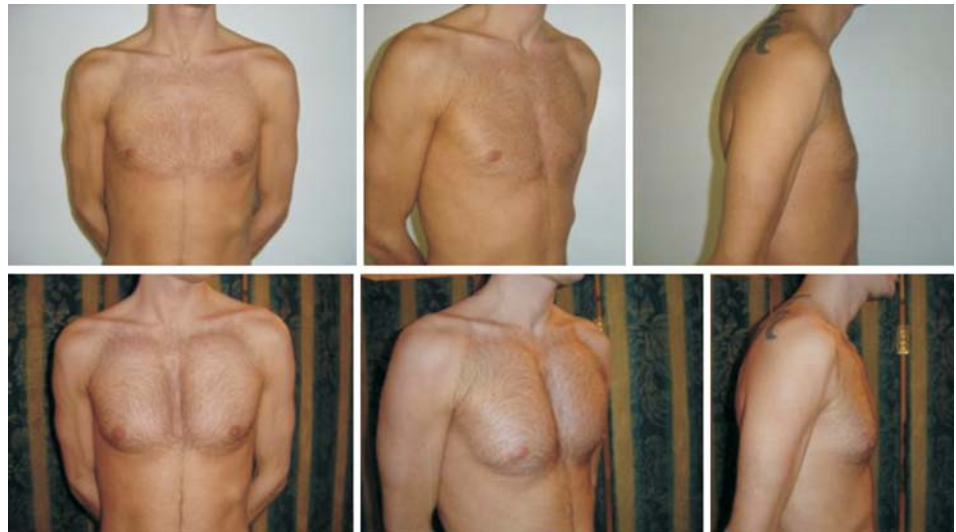


Fig. 3 Two 230-ml pectoral implants. The implants were oriented obliquely to follow the triangular shape of the muscle

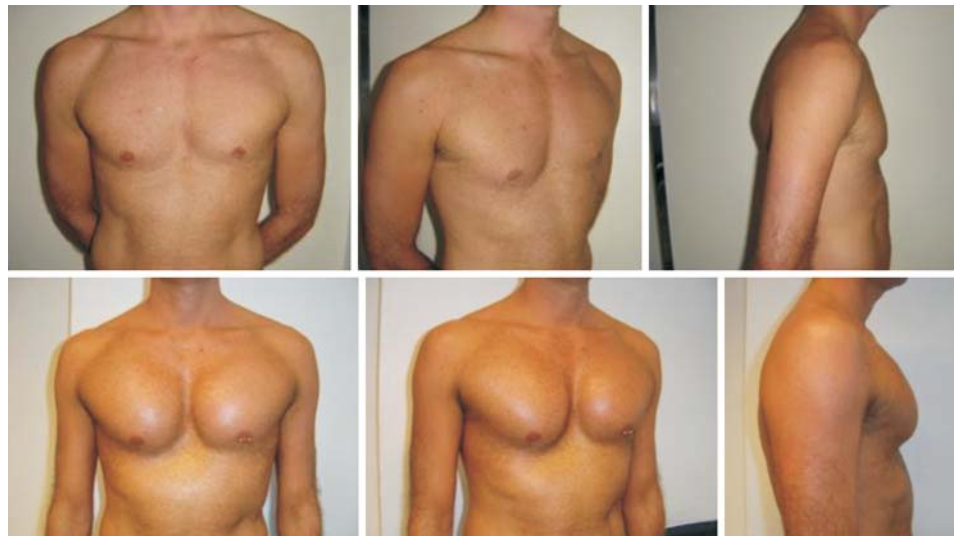


Fig. 4 Left pectoral atrophy after a brachial plexus injury. A custom-made implant was placed to match the contralateral side. Another 90-ml calf implant was placed under the triceps muscle

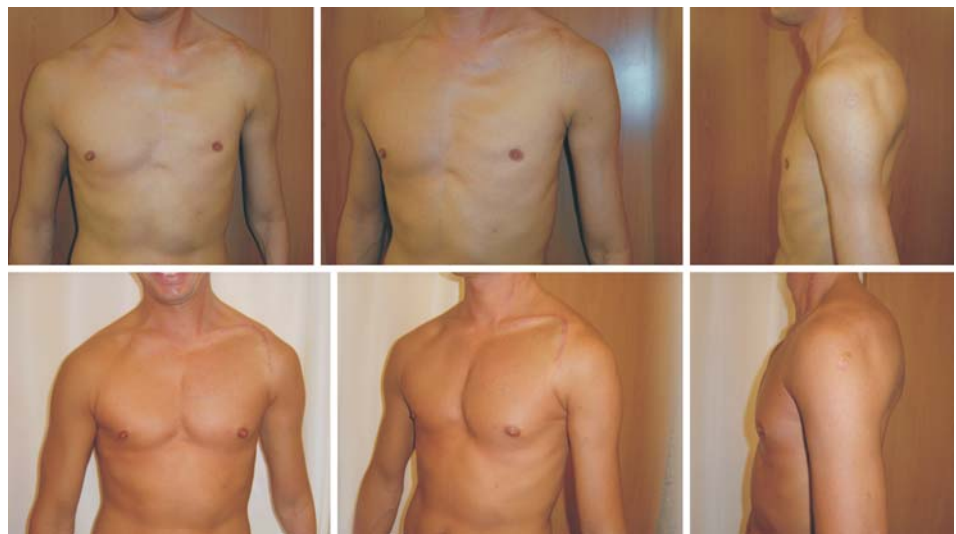


Fig. 5 Sport injury at the axillary aspect of the left muscle. A 180-ml manufactured implant was placed in an attempt to recreate the lateral contour of the muscle. A right implant was used, so that the thickest portion of the implant would be under the lateral edge of the muscle



Discussion

Clinicians can expect pectoral augmentation to be among the surgical procedures included in the increasing number of procedures used in male cosmetic surgery. Few works on the pectoral implant procedure can be found in the medical literature [2–6].

For most patients, pectoral implantation is not a technically demanding procedure, especially if the surgeon has experience with the axillary approach. The best implants are those designed by Aiach and manufactured by Polytex-Silimed Europe GmbH (Dieburg, Germany) because they provide a good contour and are made of cohesive silicone that allows for any type of exercise and muscular workout after the surgery. Custom-made implants are more rigid, and although they provide a good contour, the patient may experience some discomfort when exercising because the implant is not as pliable.

If the manufactured implants are not available, buttock implants are a good option, although they do not fill the most cranial area of the pectoral muscle (upper third). Male pectoral implants are designed to define and shape the chest area. For men unable to achieve the desired results through exercise, the surgery can give the existing muscles a toned,

enhanced look. For patients with congenital defects or loss of muscle from an accident or injury, the pectoral implant procedure often can reproduce a natural, even a symmetric, chest area.

Pectoral implants can help build self-confidence for individuals who once were embarrassed by their appearance. The result is the athletic, natural appearance of a well-proportioned torso.

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