Combined Gluteoplasty: Liposuction and Gluteal Implants

Lázaro Cárdenas-Camarena, M.D.
Juan Carlos Paillet, M.D.
Zapopan, Jalisco, Mexico; and Santa Fe, Argentina

Throughout time, body contouring has been part of the feminine standard par excellence, with the breast and buttocks being the most relevant and important areas. Today, there is a constant evolution in surgical procedures that seek to improve the areas of sparse volume and harmonize areas that exhibit excess tissue. A considerable number of alternatives for improving gluteal contour have been pointed out in multiple studies. Some authors claim good results using liposuction together with fat infiltration.[1–4] Others use liposuction exclusively in adjacent areas, producing better gluteal projection, volume, and appearance, without the necessity of specific manipulation of the area.[5–8] Still other authors demonstrate the efficacy of using gluteal prostheses, and their indications and advantages over fat infiltration. Each one demonstrates the virtues and advantages with regard to the placement plane, the surgical technique, and the type of implants.[9–13] This constant evolution impels us to seek treatment alternatives for patients with marked gluteal hypoplasia and fat deposits in adjacent areas that exacerbate gluteal deformity and simply do not improve their aesthetic appearance. For this reason, we are presenting our casuistic on the combination of liposuction and gluteal implant placement to improve the contour of this area, a combination that up to now has been detailed very little in the medical literature.

PATIENTS AND METHODS

A retrospective review was conducted on our patients who underwent surgery for gluteal area improvement between October of 1999 and March of 2005. The study included and analyzed all those who required gluteal implant placement and liposuction of adjacent areas to achieve integral enhancement of the area. The principal author (L.C-C.) operated on all of the patients, whose ages ranged from 22 to 51 years, with an average age of 26 years. Implants of different sizes and models were used, depending on the needs and preferences of each patient. Liposuction was performed using the tumescent technique in the lumbar, trochanteric, and subgluteal areas, depending on the requirements of each case.

Surgical Technique

The patients are marked preoperatively in two positions: standing and seated. While standing, the liposuction areas are delimited. The lumbar or supragluteal area, the trochanteric area, and the subgluteal area are marked. With these areas delimited, the patient is placed in a seated position for marking the lowest line of the gluteal area. This line will represent the implant's inferior limit, which will encompass the upper two-thirds of the gluteal area. The implants will be placed at approximately 4 cm from the medial line of the buttocks, with a slight upward and inward incline, with the narrowest portion in the upper part. The area for implant placement is marked by using templates specially designed for that purpose. With this marking done, it is possible to calculate the options of available sizes, comparing the measurements of the marked area with the table of sizes. These delimitations and marks are shown in Figure 1. The entire surgical procedure is performed in ventral decubitus position, using peridural anesthesia. The liposuction is performed using the tumescent technique described in previous reports,[1,5] infiltrating a preparation consisting of 1 liter of 0.9% saline solution with an ampule of adrenaline. Liposuction is achieved through incisions in the uppermost portion of the intergluteal fold and in the lateral supragluteal area for

From the Instituto Jalisciense de Cirugía Reconstructiva, Jalisco College of Plastic Surgeons.
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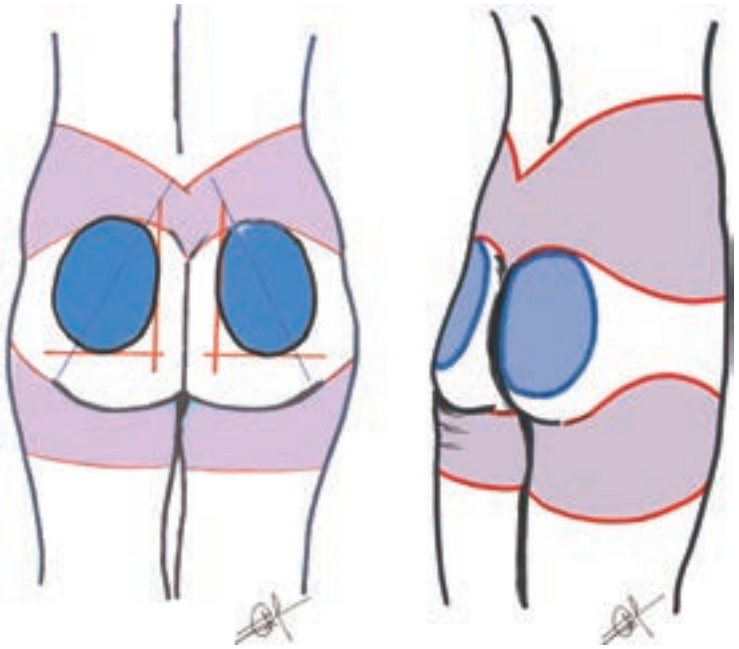

Fig. 1. (*Left*) Posterior view of the surgical design. The horizontal and vertical lines that correspond to the inferior and medial limits, respectively, of the gluteal implants are marked. Also delimitated are the areas to be liposuctioned. (*Right*) Three-quarters view of the surgical design. This design corresponds to patient 1. We notice the great hypoplasia that the patient has in the upper gluteal region.

working in the lumbar area. The trochanteric and infragluteal areas are worked through incisions in the infragluteal fold and the lateral portion of the trochanteric area. Only 4- and 3-mm-diameter cannulas are used for liposuction. After finishing the liposuction, silicon drains are left only in the supragluteal area through the superior incision of the intergluteal fold. The technique for placing the implants is similar to that described by Vergara and Marcos.[12] Gluteal implant placement is approached through an intergluteal incision 7 to 8 cm in length, after isolating the anal orifice with an antiseptic-impregnated gauze. The incision will start approximately 1 cm under the liposuction orifice that was made. It extends to the presacral fascia, and lateral undermining is performed up to the medial edge corresponding to the preoperative marking. This edge is located approximately 4 cm from the intergluteal line. At this level, the plane of dissection becomes intermuscular, for which a dissection is made in the fibers of the major gluteal muscle, to facilitate access to the correct plane. Using digital dissection and then a long blunt dissector, the pocket is completed for implant placement. At this point, special care must be taken to remain on the plane and not go too deep or too shallow, avoiding undermining in the subcutaneous plane. Likewise, it must not extend beyond the delimited lateral plane, to prevent the implant from moving outside. It is important to point out that in the superior region and occasionally in the lateral portion, the implant may remain in a partially subcutaneous plane, because the muscle does not entirely cover those areas. Once dissection is completed, an implant sizer of the volume and characteristics determined preoperatively is used to check for space and projection. If muscle fibers are limiting the space, they can be cut under direct vision using an optic light fiber retractor. Hemostasis is achieved using direct light with the same retractor. Once hemostasis is verified, the implant is placed and the incision is closed by planes after placing a negative-suction drain. Drainage is through a counteropening in the uppermost part of the incision, 0.5 cm under the liposuction drain. This drain will emerge between the liposuction drain and the superior edge of the incision made for placing the implant. We use Monocryl 2-0 (Ethicon, Inc., Somerville, N.J.) for closing muscle fibers. Then, the edges of the major gluteal muscle fascia will be brought toward the presacral fascia with the same type of suture.

Closure of the intergluteal fold has the special characteristic of being performed mostly with nonabsorbable stitches, which overlap the tissues, proceeding toward the presacral fascia to reform that fold. For this, Prolene 1-0 and 3-0 sutures are used as one advances to the surface. Cutaneous closing ends with absorbable Monocryl 3-0 intradermal sutures, thus avoiding postoperative removal. A compress dressing and bandage are applied, keeping the patient in the ventral decubitus position. The compress dressing is made during the first days, with Micropore tape (3M. St. Paul, Minn.) delimiting the gluteal implant area and elastic bandaging. After removal of the drains, around the fifth day, a girdle that is specifically for gluteal implants and liposuction is placed. Medications such as analgesics, antibiotics, and antiinflammatory drugs are used postoperatively for a period of 5 to 7 days. The patient can sit and move around the next day but must avoid the dorsal decubitus position for at least 10 days. The patient receives ultrasound therapy every third day, for approximately 1 month, starting after removal of the drains.

RESULTS

Over a 6-year period, surgery was performed on 44 female patients who required placement of gluteal implants and liposuction for improvement of the gluteal area. The patients were aged 22 and 51 years, with an average age of 26 years. It was necessary to perform liposuction of the supragluteal area in all of the patients. In 32, liposuction of the infragluteal area was performed, and liposuction of the trochanteric region was performed in 26. The amount of fat liposuctioned fluctuated between 250 and 1300 cc, with an average of 500 cc. The implants used were 250, 300, and 350 cc, with five of them being 250 cc, 27 being 300 cc, and 12 being 350 cc. Four lumbar seromas developed secondary to the liposuction and were treated with direct drainage: one gluteal seroma 2 years after surgery, which was treated surgically with drainage and an exchange of implants; one hematoma in the intergluteal incision area, which disappeared with conservative treatment; and evidence in one case of an implant that could be partially felt in the medial and lateral portions of the buttock (this patient decided to keep the implant). Four patients considered the buttocks to be too large, three decided to keep the implants, and one preferred definitive removal. One patient underwent a second operation to increase the buttock size because it felt smaller than she had expected. Results of this procedure are shown in Figures 2 through 4.

DISCUSSION

One of the principal reasons for consultation in aesthetic surgery is improvement of the body contour. A certain percentage of these consultations have to do with the desire for a better buttock profile, increasing its size or improving the definition of the area. Until a few years ago, this projection of the gluteal area was considered an exclusive characteristic of Latin women. However, this concept has changed because of the popularity of different artists who base their publicity on an excellent body shape, with emphasis on their buttocks. This has caused the entire gluteal region to acquire a preponderant place in the daily consultations of any plastic surgeon, regardless of the country in which he or she practices. Because of the infrequency of this surgical procedure, there is little bibliography about it, whether in specialty textbooks or in accredited scientific publications.[9–13] For the same reason, the training of many professionals in this specific area, and especially in the correct placement of gluteal implants, and in the proper evaluation of the patient preoperatively is, in many cases, deficient. For this reason, in the great majority of cases, the results are not what the patients really expected. Nevertheless, there is a lot of information referring to improvement of the body contour with liposuction.[1–8] When liposuction is performed instead of using gluteal implants, achieving good results in areas with abundant fat deposits is more feasible for the plastic surgeon and for the patient.

In some patients, combined liposuction and fat injection can improve the gluteal area, with very good results.[1–4] However, there are patients for whom the placement of gluteal implants in combination with liposuction in adjacent areas is the indicated surgical procedure. In the current literature, we do not find publications that demonstrate the correct manipulation of the gluteal area with the combination of two different surgical techniques, such as liposuction and the placement of gluteal implants. The combination of these techniques is reported only in a letter to the editor that documents the use of a calf implant and liposuction for improvement of the gluteal area.[14]

Despite its being one of our most frequent techniques,[1] we have observed that not every patient is an ideal candidate for gluteal lipoinjection. This is true principally for patients with significant gluteal hypoplasia and little fat in the surrounding area. The combination of significant gluteal hypo-

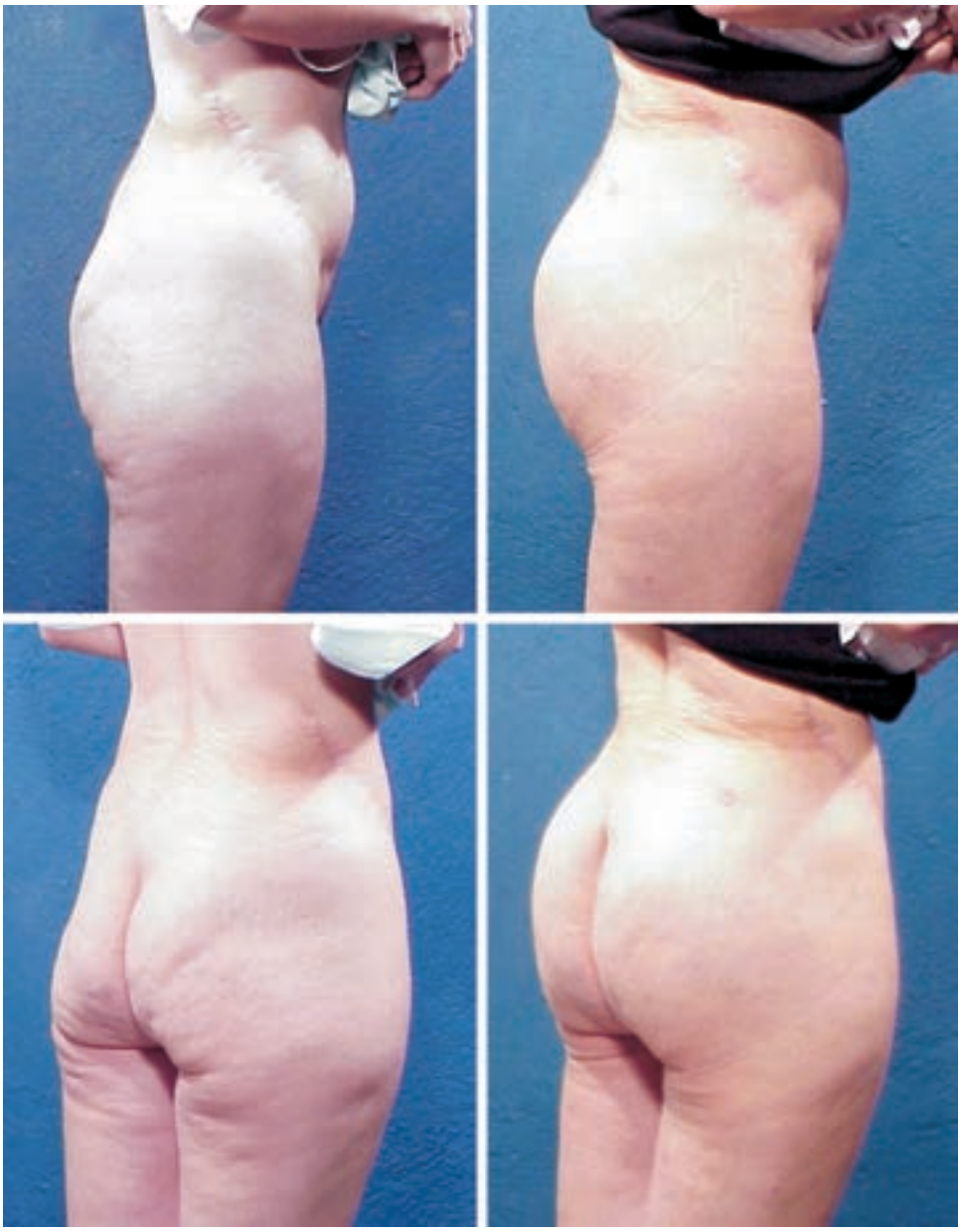

Fig. 2. Photographs of patient 1, aged 32 years, obtained 1 year after surgery with 300-cc gluteal implants. Liposuction was performed on the lumbar, subgluteal, and trochanteric areas. (*Above*, *left*) Presurgical lateral view of patient 1. (*Above*, *right*) Postsurgical lateral view. (*Below*, *left*) Presurgical three-quarters view. (*Below*, *right*) Postsurgical three-quarters view.

plasia and reduced fat in the adjacent area makes an unsatisfactory final result for the surgeon and for the patient. Therefore, we recommend a correct diagnosis, especially in thin patients with marked hypoplasia and little or no buttock projection. For these patients, only the correct use of prosthetic materials will give the desired result for the surgeon and the patient. In these patients, there is the added impossibility of improving the lack of buttock projection using only liposuction in areas adjacent to the gluteal region. This entails, in turn, obtaining a very small amount of fat to then infiltrate into the thick part of the buttocks. In contrast, for those patients who have a greater volume of fat in the periphery of the gluteal area but a sparse projection, we can greatly improve this deficiency by proper manipulation of the fat excess with liposuction and, later, lipoinjection.[1] Therefore, slim patients, with marked gluteal hypoplasia but with excess fat,

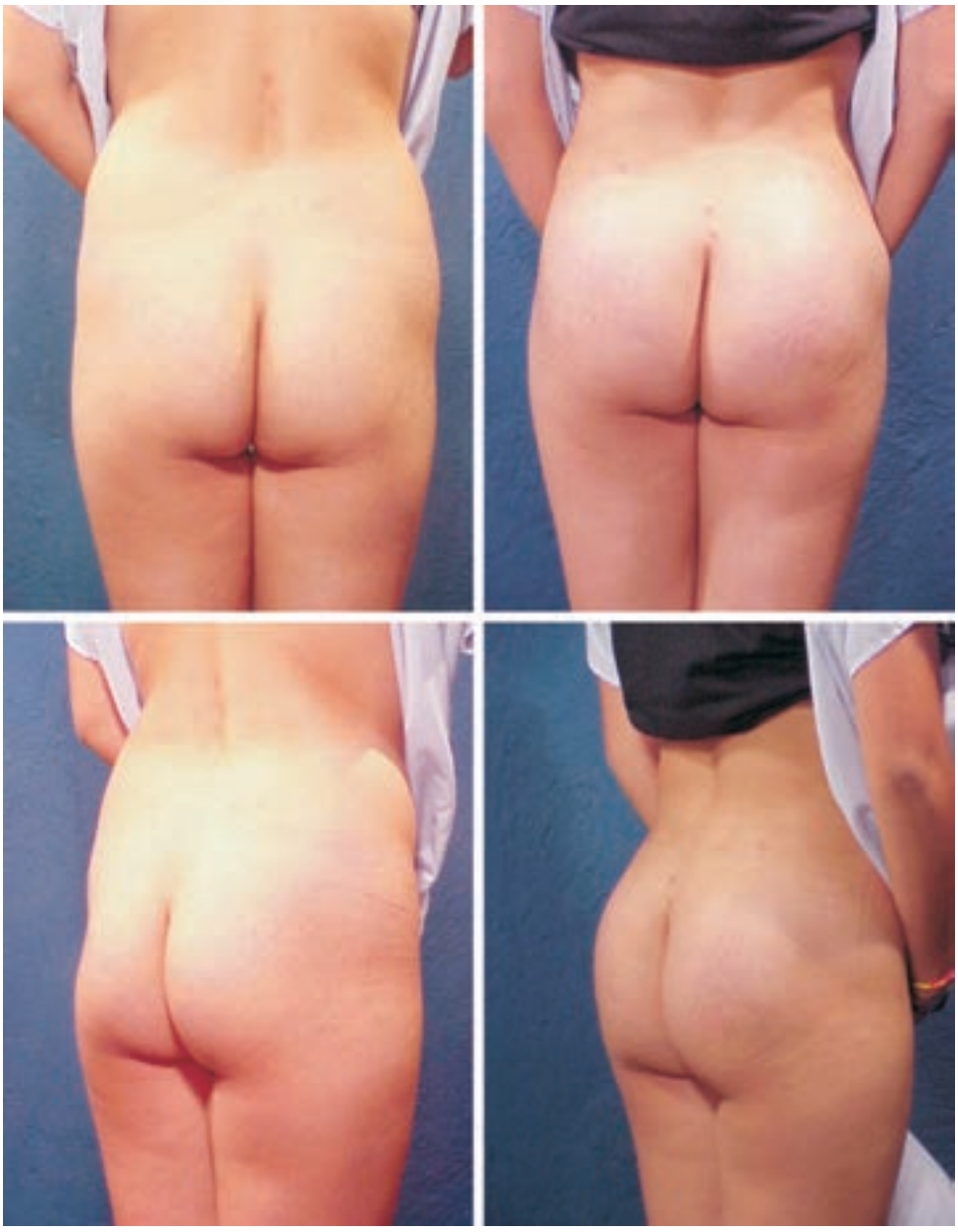

Fig. 3. Photographs of a 21-year-old patient obtained 8 months after surgery with 300-cc gluteal implants. Liposuction was performed only on the lumbar region. (*Above*, *left*) Presurgical posterior view. (*Above*, *right*) Postsurgical posterior view. (*Below*, *left*) Presurgical three-quarters view. (*Below*, *right*) Postsurgical three-quarters view.

principally in the supragluteal area, are the ideal patients for use of the combination of liposuction and gluteal implants. Liposuction will accurately delimit the gluteal area and, to a certain degree, will allow a dissembling of the lack of projection, which will be completed with placement of the gluteal implant. In these slim patients, with marked gluteal hypoplasia and little fat excess, our current treatment option is combined gluteoplasty: liposuction plus gluteal implant.

We recommend specific actions to avoid seromas, our most frequent complication. Drainage in the lumbar area is indispensable, as is adequate compression in that area. Primary attention must be given to this compression, because with an ordinary garment, it is not possible to achieve it, because of a marked lumbar concavity plus the increased gluteal projection. Therefore, specific compression should be placed in this area. We suggest to our patients that they increase com-

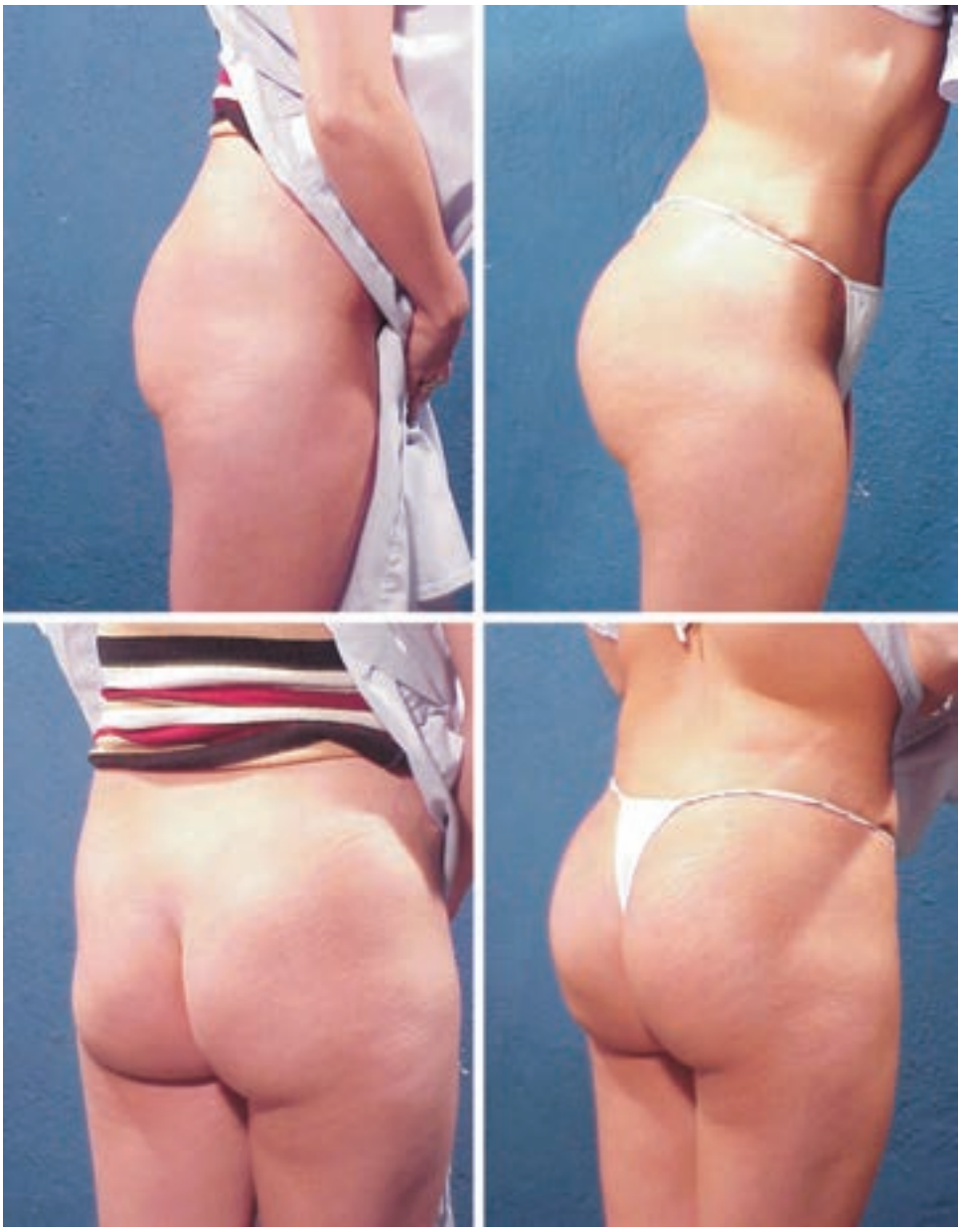

Fig. 4. Photographs of a 29-year-old patient obtained 6 months after surgery with 350-cc gluteal implants. Liposuction was performed only on the lumbar region. (*Above*, *left*) Presurgical lateral view. (*Above*, *right*) Postsurgical lateral view. (*Below*, *left*) Presurgical three-quarters view. (*Below*, *right*) Postsurgical three-quarters view.

pression in the lumbar region with tufts of cotton under the liposuction girdle, which in turn will help them remain dry and comfortable for a longer time. Both factors (drainage plus compression), which together reduce the seromas, are points of vital importance to bear in mind during surgery and in the immediate postoperative phase. During surgery, we know that this complication and others, such as hematoma, can be avoided or reduced with constant drainage. That is why we have always placed separate drains in each area but with the precaution of never making a common exit site for both the liposuction and the implant drains. Doing so can lead to contamination of the latter and the formation of seromas in the gluteal area because of the great volume that drains from the posterior lumbar area with tumescent liposuction. For the same reason, we do not perform liposuction through the same implant incision. We suggest using drainage by gravity in the li-

poaspirated area and continuous vacuum drainage in the implant area.

With this in mind, our markings of the area to be lipoaspirated and the area for placing the implant must be well delimited and differentiated preoperatively. The respective measurements and markings are obtained with the patient standing and seated. These measurements tell us the volume of the implant to be used, which we define based both on the patient's desire and available commercial options, remembering not to move downward beyond the support point that the ischium represents when the patient sits down. This allows the patient to sit on the day after surgery without any discomfort and without any risk to her implants. The measurements obtained on the area where the implants are to be placed are the most important factors that determine the implant's size. Comparing the length and the width of the marked area of the patient with the commercial options is the best way to decide the size of the implants. However, we need to bear in mind that adding liposuction will produce a larger projection than gluteal implants placed without liposuction. For this reason, some patients have felt that the implant was larger than they expected, and this has to be considered when deciding on size.

We do not perform an extensive dissection of our pocket, especially laterally, because it could lead to an unaesthetic displacement of the implant. Because our plane of placement is intramuscular, it is extremely important to keep in mind the surgical anatomy of the area and achieve a superior flap or covering of the implant at least 3 cm thick.[13] This provides a better covering and protection of the implant and a more harmonious and anatomical appearance with the augmentation that has been obtained. Achieving a similar thickness in the entire flap allows us to obtain a more natural appearance and helps avoid sinking into the dissection plane, which can involve nerve damage. We must avoid a superficial or subcutaneous dissection, which will create a thinner superior or covering flap, with the subsequent disagreeable appearance of an implant that is poorly hidden and palpable. Also, we must not forget the well-known consequences that implants in this location can have over the long term, such as prosthetic ptosis, with a consequent unaesthetic appearance and a greater incidence of capsular contracture.

The good results and scarcity of local and systemic complications have made this procedure an important alternative for obtaining body and gluteal contour improvement. This, in turn, has allowed us to combine it with other operations for aesthetic purposes, providing patients with the known benefits that these procedures offer for overall results and recovery time. A common factor in our patients was their desire to improve the gluteal area with a harmonious body contour, without requesting an excessive or obvious increase, as sometimes occurs with breast implants. We always base the size of the implant on our detailed preoperative measurements, the different commercial sizes, and our patients' desires. It is important to point out that we do not suggest this technique as the only treatment alternative for improving the gluteal contour; rather, we believe it forms a part of the treatment alternatives, like liposuction, with or without fat infiltration, and gluteal implants alone. Nevertheless, for cases with marked gluteal hypoplasia and a lack of abundant fatty tissue in the gluteal periphery, we recommend dual gluteoplasty as a treatment option, combining liposuction plus gluteal implants.

CONCLUSIONS

Gluteoplasty combining liposuction and gluteal implants is a treatment option in the aesthetic management of the buttocks and their periphery. It does not invalidate or replace liposuction alone, or liposuction plus lipoinfiltration; rather, it complements current treatment options. It is an effective and safe procedure for improvement of the gluteal profile, but it requires keeping certain premises in mind before, during, and after surgery, to avoid possible predictable complications and to produce widely satisfactory results over the short, middle, and long terms. It is a technique that can be combined with other procedures effectively and safely.

Lázaro Cárdenas-Camarena, M.D.
Centro Médico Puerta de Hierro
Boulevard Puerta De Hierro 5150
Edificio C Int. 403
Zapopan, Jalisco 44800, México
plassurg@mail.udg.mx

DISCLOSURE

None of the authors has a financial interest in any of the products, devices, or drugs mentioned in this article.

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