Clinical Anatomy in Aesthetic Gluteal Contouring

Robert F. Centeno, MD, MBA[a,b,*], Aditya Sood, MD, MBA[a,b], Vernon Leroy Young, MD[c]

KEYWORDS

• Gluteal anatomy • Gluteal augmentation • Body contouring • Buttock lift • Circumferential body lift • Autologous fat transfer • Brazilian butt lift • Gluteal implants

KEY POINTS

- A robust knowledge of gluteal anatomy is critical to the safe execution of gluteal contouring procedures.
- Favorable aesthetic outcomes with the various techniques also require precise anatomic mastery.

TOPICAL ANATOMIC LANDMARKS

Fig. 1 illustrates several superficial anatomic landmarks that have clinical relevance to gluteal augmentation with either alloplastic implants or autologous tissue.[1–8] Not only do these landmarks provide a road map for the procedure, but they have significant implications for the postoperative appearance of specific gluteal features (**Fig. 2**) judged to be appealing in society.[9]

The iliac crest, which forms the superior border of the buttocks, is a palpable and often visible landmark for guiding incision placement in a posterior buttock lift or circumferential body lift (CBL) with autologous gluteal augmentation (AGA) (please see Robert F. Centeno article, "Autologous Gluteal Augmentation with The Moustache Transposition Flap Technique," in this issue). The incision placement is varied superiorly or inferiorly with respect to the iliac crest to achieve a more aesthetically pleasing postoperative result.

The posterior superior iliac spines (PSIS) form two distinct depressions in the sacral region that result from the confluence of the PSIS, the multifidus muscles, the lumbosacral aponeurosis, and the insertion of the gluteus maximus. These anatomic depressions are characteristics of attractive buttocks and attempts should be made to preserve, define, or unmask this anatomic structure to improve surgical outcomes.[9]

These depressions serve as the superior corners of the sacral triangle, which is defined by the two PSIS and the coccyx as the inferior border of the triangle.[1] This triangle is aesthetically pleasing and its borders should be enhanced during surgery if possible. Liposuction and inverted triangle modification of the posterior CBL incision (**Fig. 3**) are surgical maneuvers aimed at enhancing the sacral triangle.[10,11] The original publication on gluteal aesthetic units, which are illustrated in **Fig. 4**, describes how to enhance the sacral triangle and other gluteal units during

Disclosure Statement: The authors have nothing to disclose.
This article originally appeared in *Clinics in Plastic Surgery*, Volume 33, Issue 3, July 2006.
[a] Department of Plastic Surgery, The Ohio State University, 915 Olentangy River Road, Suite 2100, Columbus, OH 43212, USA; [b] Private Practice, The Columbus Institute of Plastic Surgery, 6499 East Broad Street, Suite 130, Columbus, OH 43213, USA; [c] Mercy Clinic Research Institute, 901 Patients First Drive, Washington, MO 63090, USA
* Corresponding author. The Columbus Institute of Plastic Surgery, 6499 East Broad Street, Suite 130, Columbus, OH 43213.
E-mail address: drcenteno@instituteplasticsurgery.com

Clin Plastic Surg 45 (2018) 145–157
https://doi.org/10.1016/j.cps.2017.12.010

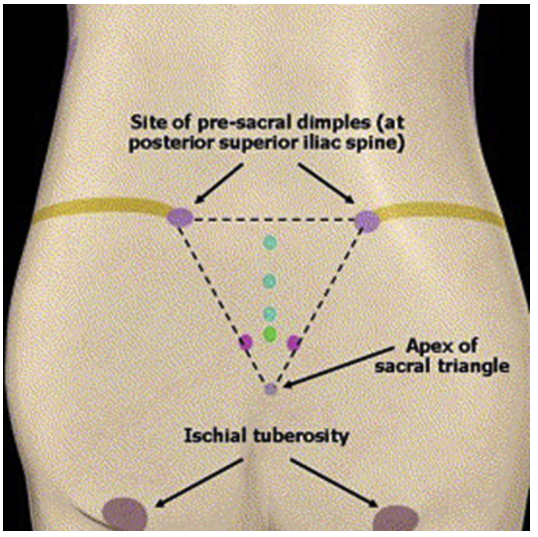

Fig. 1. Superficial anatomic landmarks: iliac crest, posterior-superior iliac spine, sacrum, coccyx, and ischial tuberosity.

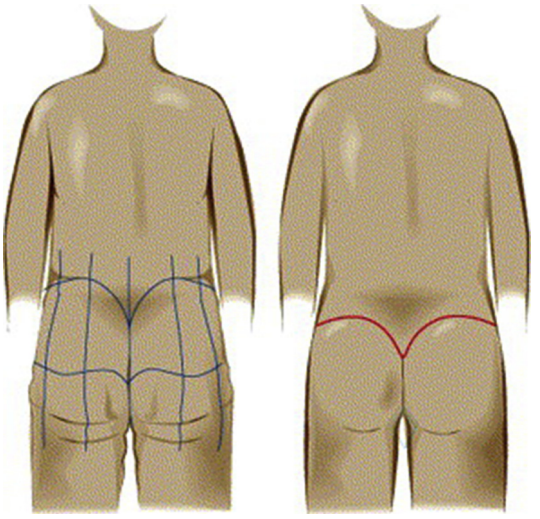

Fig. 3. Preoperative markings and postoperative position of the "inverted dart" modification to the posterior circumferential body lift incision.

body contouring procedures.[10] The sacral triangle should also be marked before augmentation with implants and serves as the medial borders of the dissection (**Fig. 5**). The positions of submuscular, intramuscular, and subfascial implants in relation to fascial and muscular structures are shown in **Fig. 6**.

Another important topical landmark is the lateral trochanteric depression formed by the greater trochanter and insertions of thigh and buttocks muscles, including the gluteus medius, vastus lateralis, quadratus femoris, and gluteus maximus. This depression is important in the aesthetics of an athletically toned buttock, although some ethnic groups (eg, African Americans and US Hispanics) prefer that the trochanteric depressions not be emphasized or even filled if pronounced.

The infragluteal fold serves as the inferior border of the buttock proper and is formed by thick fascial insertions from the femur and pelvis through the intermuscular fascia to the skin. These structures

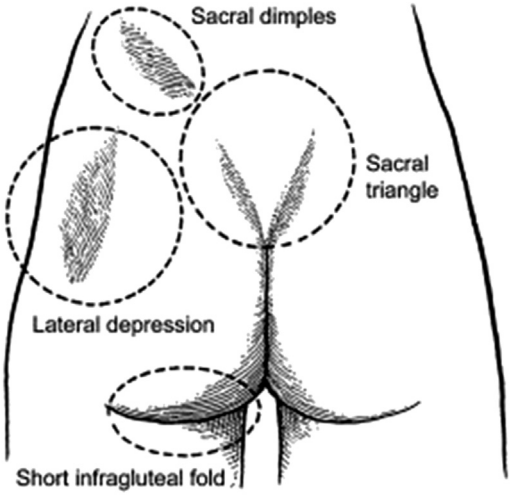

Fig. 2. The sacral dimples, sacral triangle, lateral depression, and a short infragluteal crease and important gluteal aesthetic landmarks.

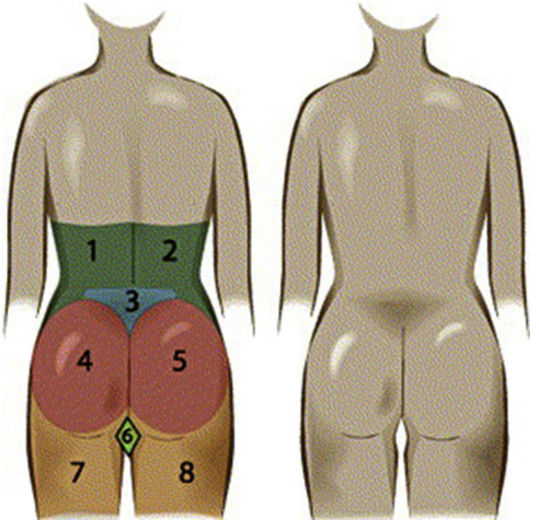

Fig. 4. The following are the eight gluteal aesthetic units: two symmetric flank units (1 and 2), one sacral triangle unit (3), two symmetric buttock units (4 and 5), one infragluteal diamond unit (6), and two symmetric thigh units (7 and 8).