Classification System for Gluteal Evaluation Revisited

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KEYWORDS

• Gluteal contouring • Buttock augmentation • Buttock reshaping • Gluteal fat grafting

KEY POINTS

- Buttock contouring and gluteal augmentation are 2 very different procedures that go hand in hand.
- The proposed classification system will help evaluate the anatomy of each patient and analyze the important contouring zones of the buttock.
- This system will standardize patient evaluation.

INTRODUCTION

The buttock area has received much media attention in recent years, which has produced increased patient demand for buttock reshaping or contouring and augmentation. Increasing patient demand has necessitated a more structured approach to evaluation of gluteal anatomy and the development of surgical procedures to enhance its beauty.

This phenomenon is reflected in statistics collected by the American Society for Aesthetic Plastic Surgery, which demonstrate more than 20,000 buttock augmentation procedures performed in 2016 (a 3267% increase compared with 2002).[1] More recently, the Aesthetic Surgery Education and Research Foundation formed the Gluteal Fat Grafting Task Force to investigate risks associated with fat grafting to the buttocks, and have published several recommendations.[2]

Although physician interest in gluteoplasty has been increasing, most plastic surgeons remain hesitant to perform the procedure because the operative techniques are not well understood, patient selection remains a mystery, and no evaluation system exists to standardize the approach. Although many gluteoplasty articles have been published in the past few years, they have primarily focused on technique and not on evaluation.[3–7] Thus far, with exception of the authors' previous publication, there have been few classification systems proposed for evaluating the different anatomic variations of the gluteal region.[8] This article presents a classification system that can be individualized for every patient to guide surgical planning for buttock contouring and gluteal augmentation.

The overall shape of the buttock is influenced by 4 different anatomic variables:

1. Underlying bony framework
2. Gluteus maximus muscle
3. Subcutaneous fat topography
4. Skin.

The interaction of these 4 variables gives the buttock an individualized and particular shape (**Fig. 1**A). To simplify this complex subject, imagine that the muscle is a removable structure. With the muscle detached, what remain are the bony

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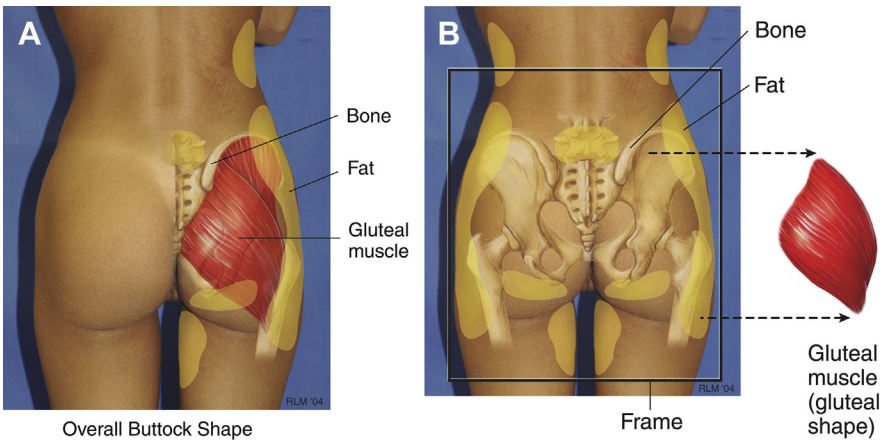

Fig. 1. (*A*) The overall shape of the buttocks depends on the bony framework, the gluteus maximus muscle, the location and amount of subcutaneous fat, and the tightness of the skin. (*B*) The buttock frame, with gluteus maximus muscle detached.

framework, fat, and skin, known collectively as the frame (**Fig. 1**B).

The proposed classification system for gluteal contouring focuses on evaluating and identifying the different frame types, gluteal aesthetic units, gluteal muscle types, and the relationship between the muscle and the frame. Finally, a ptosis classification system is presented.

THE FRAME (FAT, BONE, SKIN) AND GLUTEAL AESTHETIC UNITS

With the muscle out of the way, the surgeon must understand how the variables that compose the frame (bone, skin, and fat) interact to create a particular shape and affect the gluteal aesthetic units.

- The underlying bony framework influences the shape; however, because this structure cannot be surgically changed, it does not play a major role in the classification system other than to refer to it as a tall, short, or intermediate pelvic height.
- The skin plays a role when determining whether an upper buttock lift, inferior gluteal crease excision, or inner gluteal fold excision is necessary.
- Fat topography is the most important component of the frame and the easiest to modify. The subcutaneous fat has the greatest impact in establishing the overall shape of the frame that the gluteus muscle rests on.

The gluteal aesthetic units are most helpful when addressing this component of shape. Understanding the gluteal aesthetic units and their relation to the frame are of paramount importance before undertaking gluteal augmentation. The gluteal units are used to orient and determine which areas may benefit from liposuction versus fat transfer, which undoubtedly affects the overall frame discussion. Previously published work has described 10 aesthetic units to the posterior region (**Fig. 2**),[9] and another has described 8 gluteal aesthetic units: 2 symmetric flank units, 1 sacral triangle unit, 2 symmetric buttock units, 1 infragluteal diamond unit, and 2 symmetric thigh units (**Fig. 3**).[10] Careful anatomic analysis and surgical technique, as well as devoted communication with patients to determine their aesthetic preferences, are encouraged.

HOW TO IDENTIFY THE DIFFERENT FRAME TYPES

Identifying the different frame types is done by comparing and contrasting the amount of fat present in 3 particular zones. The most protruding point in the upper lateral hip is marked point A, the most protruding point in the lateral thigh is marked point B, and the lateral midbuttock is point C (**Fig. 4**).

The connection of points A and B on each side (left and right) of the body leads to identification of the 4 basic frame types: A-shaped, V-shaped, square, and round (**Fig. 5**).

Point C has 2 functions. The first is to help differentiate a round versus a square buttock. The round buttock has excess fat at point C, whereas the square buttock has equal amounts or is deficient (see **Fig. 5**). The second and most important function of point C is to help assess the degree of depression present at point C in the square, A-shaped, or V-shaped buttock. This depression