



We Need to Discuss Gluteal Fat Grafting

Precisamos falar sobre a Lipoenxertia de Glúteos

Gluteal or buttocks augmentation has been a recurring theme in police reports, with numerous accounts of buttocks doctors, use of PMMA or similar, and illegal medical practices by opportunist professionals. Coincidentally, about a week later, an International Multi-Society Gluteal Fat Grafting Task Force composed of members of the ASPS, ASAPS, ISAPS, ISPRES, and IFATS issued a statement condemning the technique of gluteal fat grafting in between muscle planes, and stated that gluteal fat grafting should be restricted to subcutaneous tissue.

Gluteal fat grafting, given the aesthetic preferences in our country, has been carried out for many years, and the refinement of the technique which came to be known in the United States as the *Brazilian Butt Lift* advocates the use of cannulas of up to 3 mm, and lipoinjections in subdermal, subcutaneous, and intramuscular planes in order to reduce the rates of graft resorption.¹

Although the procedure is performed widely, the data regarding associated complications are limited.² However, the most feared complication, fat embolism, was the subject of an important publication by Cardenas-Camarena et al. In this study, the 10- and 15-year death rates related to fat grafting of the gluteal region were assessed in Mexico and Colombia, respectively. More importantly, autopsies were performed on all nine patients who died in Colombia, revealing macroscopic fat emboli in seven. At the time, the authors suggested that fat embolism could be related to inadvertent gluteal vessel injury, and recommended avoiding injections into the deep muscle planes.³

This study aroused the interest of our scientific community who began to address the elephant in the room, and some meta-analyses were published. In 2016, a systematic review that examined the numbers of the outcomes and complications of gluteal augmentation was published. Although not exclusively about fat grafting but also on the use of implants, the study demonstrated a complication rate of 9.9% in 3567 patients included in the study, against a rate of 21.6% in 2375 patients who used silicone implants.⁴

Another systematic review on gluteal fat grafting alone in a sample of 4084 patients failed to demonstrate a higher rate of fat embolism when the graft was placed in the subcutaneous plane versus the submuscular plane. The rate of fat embolism found was 0.12%, with a general complication rate of 7%. However, the authors highlight the lack of randomized studies or case-control studies.⁵

In order to fulfil this need, the Aesthetic Surgery Education and Research Foundation (ASERF) instituted a task force of 11 elements composed of surgeons, pathologists, and statisticians to study the potential risks of fat grafting in the gluteal region. The conclusions of the study were alarming: the risk of mortality associated with the procedure was calculated to be 1:2351 patients. According to this study, the surgeons who performed intramuscular grafting in deep planes had a 403% higher risk of fatal and non-fatal events related to fat embolism. To decrease the incidence, in addition to avoiding injections in the muscle planes, the recommendations were to use a large bore single-hole cannula larger than 4.1 mm, directing the cannula towards the superficial part, and only injecting the fat when the cannula is in motion.⁶

In an editorial commenting on the aforementioned article, Foad Nahai questions whether we should continue to perform a procedure that presents a risk of mortality that is 10- to 20-fold higher than the average of other aesthetic procedures. The quantity of injected volume also does not seem to have a relationship with the increased risk, although it is not recommended to use an excessive volume that causes an increase in tissue pressure, accounting for the proposed mechanism for the occurrence of fat embolism.⁷

Finally, we still have unanswered questions such as whether the procedure holds an increased risk in patients with varicose veins in the inferior limbs and hemorrhoids.⁸

Given the increased reports of tragedies related to gluteal augmentation, we recommend that we do our part and ensure the safety of our patients by precisely following these recommendations, which go against

much of what was considered common sense with the technique. In this way, we can better address society's concerns regarding our technical excellence as well as our concern regarding the safety of our customers.

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