

Autologous Buttocks Augmentation with Fat Grafting: A Systematic Review of the Literature and Meta-Analysis

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INTRODUCTION: Throughout the years, many plastic surgeons have published their techniques for achieving a larger gluteal contour. Still, there's no consensus on the best and safest way to perform fat grafting to the gluteal region. Due to the recent reported fatalities related to fat grafting to the gluteal region, we reviewed the techniques described in the literature in order to analyze and compare the different steps of the procedure, and identify those that could potentially be of concern.

METHODS: We performed a systematic review of the literature in December 2015, with a search of 21 terms related to gluteal fat augmentation in 3 databases. Nineteen articles meeting our predetermined criteria were analyzed allowing evaluation and comparison of techniques. Independent-samples t-test and one-way ANOVA were used for statistical analysis.

RESULTS: Seventeen case series and two retrospective studies were selected, mostly from Mexico, Columbia and Brazil. A total of 4,105 patients composed of 98.2% women and 1.8% men with a mean age of 33.6 years and mean BMI of 24.3 were reported. Most patients received general anesthesia. The thighs and trochanteric regions were the most common donor sites. Harvesting was most often performed with vacuum and syringe-assisted liposuction, and processing was most commonly decantation or centrifugation. A mean of 400 ml of lipoaspirate was injected per gluteal region, in intramuscular and subcutaneous planes with 60 ml syringes. Results were evaluated mainly with pre and postoperative photographs. Most patients rated their results as excellent. The mean complication rate was 7%, consisting mainly of seroma (2.4%), erythema (1.3%) with no significant relation to the planes of injection. Note that one study, which reported 13 deaths, was not included in our data to reduce selection bias.

CONCLUSION: Fat grafting is an effective and predictable way to remodel the gluteal region, however the procedure is not without risks. Avoiding gluteal vessel damage may prevent most feared complications, such as fat embolism. Accurate analysis, systematization of the procedure and reporting cases in the fat grafting registry may provide the foundation for optimization of outcomes.