To Ban or Not to Ban "Brazilian Butt Lifts"? Plastic Surgery, Responsibility, and the Public Health

Sir:

Fat transplantation to the gluteal region, otherwise known as the "Brazilian butt lift," has become the fastest growing plastic surgical operation in its specialty, doubling in growth over the past 5 years.[1] Aided by celebrity icons appearing on television and in social media, the buttock has emerged as the erogenous zone of the new millennium (i.e., "the new breast"). This is presumably due to primal signaling that a female with larger fat deposits in this region is young, fertile, and in a high estrous state.

Patients and plastic surgeons alike have been enthusiastic about the growing popularity of gluteal fat augmentation. Yet mortality rates cited at 1 in 3000 patients have been sobering, and are far greater than those for any other cosmetic operation. If this operation is to be considered an acceptable option moving forward, plastic surgeons need to evolve rapidly and maximize safety.

A 2015 communication from Mexico sounded the initial alarm bell on gluteal fat augmentation, showing sudden intraoperative death during fat grafting procedures from pulmonary fat emboli (14 intraoperative deaths during lipoinjection and 22 perioperative deaths).[2] Autopsy examinations of these deaths revealed fat lodged in the pulmonary arteries, right ventricle, and right atrium, all arising from defects and lacerations in the superior and inferior gluteal veins. The gluteal veins are 25- to 30-mm branches of the iliac vein, just one branch away from the vena cava and the cardiopulmonary circuit. The sudden shut down of the cardiopulmonary system causes immediate intraoperative electromechanical dissociation and cardiac arrest, from which no patient has ever survived.

In 2016, fat transplantation leaders in the United States began lecturing about the treacherous gluteal anatomy, the dangers of the gluteal fat augmentation operation, and recommended precautions for patient safety.[3] Several surgeons formed a task force through the Aesthetic Surgery Education and Research Foundation to conduct an international survey of plastic surgeons on gluteal fat augmentation mortality rates. Although their survey study[4] was flawed by a 14 percent response rate, potential for "participation bias," and the selective omission of data they felt were "in error," there is no disputing the fact that patients did die from the gluteal fat augmentation operation. The authors recommended technical guidelines from their survey: (1) fat should not be placed in the deep gluteus muscle, but (2) placing fat in the superficial muscle was considered safe.

Editorials following this survey called for a ban of the gluteal fat augmentation procedure.[5] In October of 2018, the British Association of Aesthetic Plastic Surgeons asked its members to stop performing the operation until further research on the dangers were conducted. While these acts may have been well intentioned, they threatened patients' access to board-certified surgeons, potentially driving them to other countries and to less qualified, non–core plastic surgery providers.

Historically, prohibition in public health involves objects (e.g., guns, drugs, and alcohol) and has had questionable success. In the face of an unprecedented prohibition on a surgical procedure, 2018 brought efforts to understand how people died from the operation and focused on dangerous technical aspects, instead of indicting the operation as a whole. Possible explanations for pulmonary fat embolism included laceration of a vessel and siphoning of fat versus a bolus intravascular injection. Theoretically safer techniques of inserting fat only in the subcutaneous space were advocated. Concepts such as smaller injection cannulas being paradoxically more dangerous because of their flexibility and misguidance into deeper tissues were first described.[6] Dynamic cadaver studies demonstrated that fat placed anywhere in the gluteal muscle can migrate into the deep space below the muscle. Further, pressure-volume measurements demonstrated that this migration of fat may generate enough force to tear gluteal veins, leading to pulmonary fat embolism.[7]

If fat is not placed beneath the fascia and into the gluteus muscle, it is theoretically impossible to cause a life-threatening pulmonary fat embolism. Ongoing basic science and clinical research studies seek to prove that fat placed just under the skin carries no risk of death from pulmonary fat embolism.

The thoughtfulness of research, patient awareness, and physician education are favored over reflexive fear and prohibition when facing a surgical procedure that is a matter of public health. Admonishing the technique of intramuscular fat transplantation is preferable to banning the entire procedure of augmenting the gluteal region with natural fat per se.

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DISCLOSURE

Dr. Del Vecchio is the founder of Surgistem Technologies and receives royalties from Microaire, Inc. Dr. Dayan is the founder and developer of wikiPlasticSurgery.com, and is a consultant for InMode Aesthetic Solutions.

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AQ6

AUTHOR QUERIES

AUTHOR PLEASE ANSWER ALL QUERIES

AQ1—Please note that the Journal prefers to avoid the use of "Brazilian butt lift" (or BBL) in favor of "gluteal fat augmentation."

AQ2—Ratio correct as edited to "1 in 3000 patients"?

AQ3—Sentence that begins "Historically": Correct as edited? If not, please revise as needed.

AQ4—Please consider including your Instagram, Twitter, or Professional Facebook handle to foster academic #plasticsurgery discussion on social media.

AQ5—Please double-check the financial disclosure statement to confirm that it is correct. If it is incorrect, please revise as needed.

AQ6—Ref 3 is incomplete. Is this book reference or a meeting citation? Please clarify name of publication and/or dates and location of meeting.