PATIENT SAFETY

PRIORITIZING PATIENT'S SAFETY IN BRAZILIAN BUTT LIFT (BBL) SURGERY: THE ADVANCED SAFE BBL USING WIRELESS ULTRASOUND DEVICE

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The fat transfer buttock augmentation or Brazilian Butt Lift (BBL), as it is commonly known, has become one of the top-ranking aesthetic procedures worldwide. However, plastic surgery societies have voiced concerns over the heightened risk of fat embolism with this procedure and have issued warnings.

Recently, a multi-society task force (that includes ISAPS, ASAPS, and ASPS) has funded a study and issued a corresponding patient safety advisory.

The Task Force hypothesizes that complications result from high-pressure extra-vascular grafted fat entering the circulation via tears in the large buttock veins resulting in pulmoner embolism.

Because no records or evidence has as yet shown a case of complication with fat only injected in the subcutaneous space (the space between the muscle layer and skin), the Task Force advisory relates to deeper injections (i.e., those to the muscle or under the muscle), which have led to the complications.

The advisory strongly recommends that surgeons keep the gluteal fat injection level under the skin and above the muscle level. Taking into consideration the advisory twelve months ago, I launched a clinical application called the Real-Time Ultrasound Assisted gluteal fat grafting.

This application entails simultaneous use of a wireless ultrasound Doppler probe placed on the buttock skin when the cannula is introduced in order to scan and identify the tissue layers as well as the vessels. As the fat injection commences, the ultrasound images projected wirelessly onto a screen allowing the surgeon and assistants to follow the planes where the cannula is introduced in order to avoid the danger zones.

Initially, the surgical markings are lined into four gluteal quadrants and the four cutaneous gluteal perforators are verified (by the aid of the doppler mode) and located respectively.

Afterwards, the injection cannula is introduced though an incision located at the superior aspect of the intergluteal crease (Figure 1). With the simultaneous use of the USG probe, the cannula is identified by its acoustic shadow.

The navigation is started as the tissue layer images from deep to superficial (muscle to skin) is projected wirelessly

to a mobile interface screen (Figure 2). Fat injection is then performed in several planes to the area between skin and muscle.

This technique was used on 68 patients in the last year with no complications. The Wireless Ultrasound is a user-friendly device with an easy and short learning curve. I recommend the use of the Wireless Ultrasound device for maximum patient safety during gluteal fat transfer.

Figure 1 – The figure shows the bi-manual approach of the surgeon during the fat injection process. The probe is draped in a sterile cover and placed parallel to the direction of the cannula. The surgeon checks the level of the cannula though the monitor display.

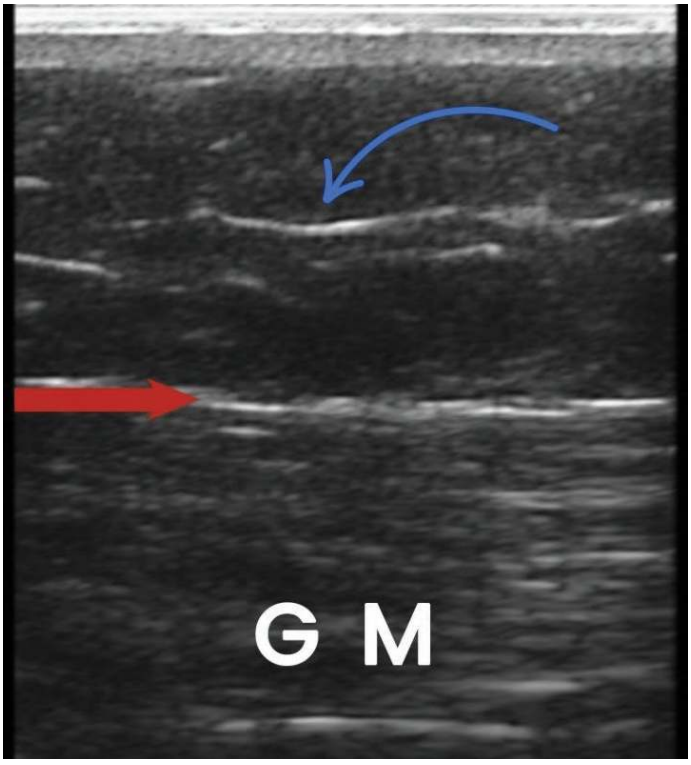

Figure 2 – A screen shot from the ultrasound scan monitor. The scan mode is set to biopsy, the red arrow shows the muscular aponeurotic layer separating (GM: Gluteus Maximus muscle) the adipo-facial layer from the muscular layer. Blue arrow points out the linear acoustic shadow of the inserted cannula.