

Anatomic Study of Fatty Pockets in the Hypogastrium and the Subcutaneous Aesthetic Units

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In lipodystrophies of the anterior abdominal wall, variables such as genetic factors, weight gain, age, and loss of muscle tone, either alone or in combination, determine generalized aesthetic changes or changes localized in the epigastrium, hypogastrium, or both. The aim of this study was to describe the limits, distribution, and dimensions of fat bags in the hypogastrium, as well as their anatomic relationships with the neighboring structures. Fiftyseven anatomical specimens were dissected from patients undergoing abdominoplasty, during which the hypogastrium was resected en bloc. Moreover, the anterior abdominal wall was also dissected in 8 cadavers. In all samples, the lamellar layer was resected, keeping the dermis-epidermis, areolar layer, and superficial fascia intact. In all specimens, 2 symmetrical adipose clusters were observed bilaterally in the areolar layer, which were in the shape of a bag and had peculiar coloration. These bags were analyzed in relation to their neighboring tissues: the skin, superficial fascia, and deep fat layer. The lamellar layer was considered as a structural base of the skin, owing to its thinness. The areolar layer showed accumulations and varying amounts of fat in the various body regions without precise limits, which were particularly observed in dissections of the lower abdominal wall and identified by their elasticity, volume, and coloration.

After massive weight loss (MWL), patients are known to experience significant improvement in obesity-associated comorbid conditions and metabolic disturbances, but almost two-thirds of them require reconstructive body-contouring surgery. The authors present an anatomic study of surgical pieces obtained from 28 patients (17 women and 11 men) during torsoplasty and abdominoplasty

procedures performed in their department from January 2007 to January 2008. The patients ranged in age from 39 to 52 years (mean, 43.3 years). The patients were divided into three groups. Group A consisted of 9 patients who had a normal body mass index (BMI) and stable weight (± 5 kg) over the preceding 3 years. Group B consisted of 10 patients who had followed a nutritional diet over the preceding 3 years, achieving a mean weight loss of 42.2 kg (range, 38-52 kg). Group C consisted of 9 patients who had undergone bariatric surgery and insertion of a gastric band before 2004, achieving a mean weight loss of 47 kg (range, 40-57 kg). The authors evaluated the anatomy of the subcutaneous tissue in four body areas: the epigastric, umbilical, hypogastric, and lumbar regions.

The macroscopic anatomic results of the subcutaneous tissue in the three groups are presented. The patients who underwent bariatric surgery (group C) had significant alterations of the subcutaneous tissue anatomy in all four body areas studied. Plastic surgeons who perform composite body-contouring procedures for this group of patients, combining truncal liposuction and lipoabdominoplasty procedures, should be aware of these anatomic changes. The possibility of a cannula perforating an internal organ during liposuction may have been higher for the group C patients than for the group A and group B patients. Knowledge concerning the anatomy of the subcutaneous fat in post-MWL patients allows a better choice of contouring procedure from an anatomic point of view, performance of a more rational and effective procedure, and differentiation of the technique depending on the area of the body, avoiding major complications.

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Received: January 28, 2021, **Accepted:** February 12, 2021, **Published:** February 19, 2021

Citation: Souza RSD (2021) Anatomic Study of Fatty Pockets in the Hypogastrium and the Subcutaneous Aesthetic Units. *Reconstr Surg Anaplastol*, an open access journal.10:176.

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