



Reversed abdominoplasty as a reconstructive option on a patient with a basal cell carcinoma of the intermammary region

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Abstract

The reversed abdominoplasty is an aesthetic procedure not very commonly used nowadays. It is used more often on patients with skin excess and lipodystrophy of the upper abdominal wall. Regardless of its low rate of complications, it implies perceptible inframammary scars that stretch along the midline. Basal cell carcinoma is the most common skin cancer. It is located mostly in areas of high sunlight exposure such as the face or ears. However, it can appear in uncommon locations like the intermammary area. The authors report the case of a 65-year-old female with a 3-cm nodular basal cell carcinoma of the inferior intermammary region. As the patient had supraumbilical lipodystrophy, we used a variation of reversed abdominoplasty to reconstruct the defect after tumour resection. One year after surgery, there were no complications or cancer recurrence. The scars were aesthetically good and body contour was improved. This clinical case shows the intimate relation between aesthetical and reconstructive surgery. The application of aesthetic surgery techniques in the field of skin oncology ('oncoplastic' techniques) can give significant improvement in the final result with minimal morbidity and without compromising treatment safety. Level of evidence: Level V, therapeutic study.

Keywords Reversed abdominoplasty · Basal cell carcinoma · Supraumbilical lipodystrophy

Introduction

In 1977, Rebello and Franco [1] reported the technique of abdominoplasty by inframammary incision as a method to correct skin redundancy on the supraumbilical abdominal wall. However, this procedure reunited very little attention in the following years, as its aesthetic results were slightly unfavourable due to the perceptible inframammary scars. Indeed, the best candidates for this intervention appear to be patients with previous inframammary scars and no history of hypertrophic or keloid scars.

In this article, we describe the use of reversed abdominoplasty as a technique to reconstruct a defect in the inferior

intermammary region produced by skin cancer excision, in a patient with associated supraumbilical lipodystrophy.

Case report

A female, 65 years old, caucasian and a non-smoker, with previous history of diabetes and gastric cancer submitted to open gastrectomy 2 years before. On the physical exam, she had an ulcerated ill-defined basal cell skin carcinoma of about 3 cm in the wider dimension in the inferior intermammary area. She also had a vertical abdominal median scar derived from the gastrectomy procedure. In addition, the patient had moderate abdominal lipodystrophy and bilateral grade I mammary ptosis (Fig. 1).

The surgical plan was based on the reversed abdominoplasty technique (Fig. 2).

The tumour was resected with safety margins through incisions parallel to the inframammary sulcus that join in the midline. The specimen was sent for histological examination.

The dissection of the supraumbilical abdominal flap was made in the suprafascial layer, just enough to advance and cover the defect produced by tumour resection. No plication of the rectus abdominis muscles nor umbilical transposition was made. After careful haemostasis, the defect was closed in layers with

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Fig. 1 Ulcerated ill-defined basal cell skin carcinoma of about 3 cm in the wider dimension in the inferior intermammary area

absorbable 2-0 and 3-0 monofilaments under two suction drains. Skin was closed with an intradermal suture of absorbable 4-0 monofilament. Postoperatively, there were no complications and the patient left the hospital 4 days after surgery.

Histological analysis of the surgical specimen confirmed a nodular-type basal cell carcinoma. Surgical margins were tumour free.

One year after surgery there were no complications or tumour recurrence. The scars were aesthetically good and body contour was improved. (Fig. 3).

Discussion

The traditional abdominoplasty technique, with or without liposuction, is usually indicated in cases of skin excess and abdominal lipodystrophy due to weight loss or previous pregnancies. However, skin redundancy on the supraumbilical region, with or without fat excess, might be a challenge. In these cases, the reversed abdominoplasty can be an option [2], especially on women with previous inframammary scars.

In our case, we excised a skin carcinoma in the inframammary region with safety margins and used the reversed abdominoplasty technique to reconstruct the defect. One year after the surgery, there was no tumour recurrence; the scars were linear and hidden highly in the inframammary fold.



Fig. 2 Preoperative markings



Fig. 3 One year after surgery

Other options that could be used to reconstruct this type of defect include skin grafts and local and regional flaps. Although a simple procedure, the aesthetic result associated with a skin graft would be worse and the donor-site morbidity higher. This could be improved by the use of a dermal regeneration template, but the cost would be higher and would probably require a two-stage operation. A local-randomized flap, like a Limberg flap, could also be used, as well as perforator flaps, namely an internal mammary artery perforator (IMAP) flap [3] or a superior epigastric artery perforator flap. However, in the case of the IMAP flap, a reduction mammoplasty/mastopexy technique should be used to close the donor site in order to minimize morbidity. Additionally, a reduction of the contralateral breast would be needed for symmetry. The donor-site morbidity is acceptable with these flaps, but the supraumbilical lipodystrophy would not be corrected.

Donor-site morbidity and aesthetic concern should be primary considerations when planning reconstructive surgery procedures. The use of a reversed abdominoplasty in this case enabled the reconstruction of a skin carcinoma defect in the inframammary region with a good aesthetic result along with improvement in regional body contour. The application of aesthetic surgery techniques in the field of skin oncology ('oncoplastic' techniques) can give significant improvement in the final result with the minimal morbidity and without compromising treatment safety.

Compliance with ethical standards

Conflict of interest Tiago Guedes, Horácio Zenha, João Guimarães and Horácio Costa declare that they have no conflict of interest.

Informed consent Informed consent was obtained from the participant included in the study.

Ethical approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. For this kind of retrospective study formal consent is not required.

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