

A Simple Aid to Position the NAC in Nipple-Areolar Reconstruction

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To the Editor,

Reconstruction of NAC is a challenging final step in breast reconstructive surgery. Nipple-sparing mastectomies, although oncologically safe, are at high-risk for subsequent nipple malposition and often require surgical correction (1). In our department, lipofilling and nipple reconstruction are occasionally conducted in the same time, at least three months following autologous or implant reconstruction.

Multiple reconstructive techniques have been elaborated over time to optimize nipple symmetry amongst others concerning its position (2,3). The location for the placement of the nipple is commonly marked in the standing position before the surgery. In our center, the most widely used techniques include arrow and star flap (4), so that satisfying nipple projection is maintained. In pursuance of the NAC, areola hyperpigmentation is recreated by using intradermal tattoo, three months following nipple reconstruction.

This letter is meant to share a simple, economical and practical way of deciding nipple position. At the outset, prior to the actual reconstruction, the surgical team carries out the markings in the preoperative ward (Figure 1). To better identify the visually correct NAC position, we make use of an electrocardiography (ECG) round electrode. It is a key tool in defining the ideal nipple position, meeting surgeon's objective opinion with patient's subjective feeling. This process begins with the surgeon placing the pad in the future nipple area. The patient is able to take a look in the mirror, reflect upon the nipple position jointly with the surrounding team and give adequate feedback.

There are many advantages in using the ECG electrode in the setting of nipple reconstruction. The

first one is that its diameter roughly coincides with the mean diameter of the nipple-areolar region, which is between 4 cm and 5 cm, thereby providing a realistic estimation of the NAC size. The Skintact™ FS-50 electrode used in our department has a diameter of 5 cm. The patient can properly visualize, feel and look ahead the location of the nipple, thus reducing the chances of malposition. Furthermore, the ECG electrodes are part of the standard preoperative ward equipment, where final markings are usually made. The ECG machine – and electrode pads – is widely accessible in rooms, at the surgeon's fingertips. Eventually, it allows for fairly easy handling, being self-adhesive.

For unilateral reconstruction, symmetry with the contralateral nipple is sought and discussed. However, in bilateral reconstruction, the patient's point of view is undeniably relevant, as there is no starting point to compare with. Patient collaboration is indeed promoted to determine optimal position. While some patients prefer symmetry on the horizontal plane, others rather opt for a centered position on the breast mound (5).

Undergoing breast reconstructive surgery is an emotionally laborious process that affects both body appearance as well as sexual sensitivity. Delegating a role in positioning the nipple is undoubtedly a psychological strength, allowing the patient to take a grasp in rebuilding its own body image. Furthermore, the NAC recreation and the finalized breast mound provide closure after an intricate series of surgery (Figure 2).

The electrode, cost-effective and time-efficient serendipitous tip is effortlessly integrated into the surgeon's preoperative routine, smoothing the team's work and enabling the patient to take an active part in the reconstruction of its breast.



Figure 1. Electrodes are placed in the desired nipple-areola complex position.



Figure 2. Postoperative result at one-year follow-up, after autologous reconstruction, nipple reconstruction and areola hyperpigmentation.

Patient's informed consent was obtained for use of photos. Patient data were treated according to the declaration of Helsinki as modified in 2013.

Ethical approval: Not required.

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