Journal of Plastic, Reconstructive & Aesthetic Surgery (2006) **59**, 1068—1072

JPRAS
An International Journal of Surgical Reconstruction
www.JPRASurg.com

Mammaplasty: The 'Modified Benelli' technique with de-epithelialisation and a double round-block suture☆

K. Azzawi, M.D. Humzah*

Plastic Surgery Unit, Russells Hall Hospital, Pensnett Road, Dudley, West Midlands DY1 2HQ, United Kingdom

Received 8 January 2005; accepted 27 November 2005

KEYWORDS
Benelli;
Mammaplasty;
Periareolar;
Double round-block technique

Summary Benelli in 1990 demonstrated the round-block technique in mammaplasty to confine the scar in the areola. However, problems of scar widening and changes in areola shape represent a common problem with this technique.

We present a modification to the technique that preserves the shape of the areola without the need for a non-absorbable suture. This technique may also be used to reduce the areola diameter.

Mammaplasty is one of the most common procedures in plastic surgery. Residual scars may compromise patient satisfaction especially in breast reduction procedures.[1,2] The increasing demand for reduced scars has led to the development of numerous minimal incision procedures. Many periareolar techniques are described in an attempt to eliminate scars on the breast surface by restricting them to the periareolar region.[3] Baxter has described a new technique for areola reduction using a peri-nipple incision[4]; however, it is suitable only for mild cases.

Periareolar techniques have been used in different types of breast surgery: in cases of ptosis or hypertrophy,[1] and for implant augmentation.[5] It has been stated that periareolar reduction mammaplasty is a less aggressive procedure than traditional techniques.[6] It preserves the papillary artery, nerve and a greater number of central glandular lobules. Less than a third of suture material is required compared to conventional techniques, and operative time is shorter.[6] Periareolar incisions confine the scar around the areola region in an attempt to produce an inconspicuous scar. However, the shape of the areola usually changes after a few months to an irregular tear-shape. Benelli

☆ Name of hospital where the work was done: Wordsley Hospital, West Midlands, UK. The work was presented in BAAPS Meeting, Chester, September 2004.

* Corresponding author. Tel.: +44 1384 244 459; fax: +44 1384 244 436.
E-mail address: dhumzah@doctors.org.uk (M.D. Humzah).

1748-6815/$ - see front matter
doi:10.1016/j.bjps.2005.11.036

(1990) devised the round-block technique, using non-absorbable sutures to maintain a circular areola[1]; however, there is a tendency for the sutures to fail, protrude from the skin, and the scar to widen.

We describe a modification, in which we use an absorbable suture (PDS®) so that the risks of non-absorbable sutures can be avoided, and a circular areola is achieved by a de-epithelialising technique.

The technique

- The proposed areola diameter is marked (circle 1). A modified periareolar marking is made with a 1—2 cm smaller diameter (circle 2 — Fig. 1A) to that of the normal Benelli markings (circle 3 — Fig. 1A,B). The area between circles 1 and 2 represents the skin excision.
- Through this area the mammaplasty (glandular reduction, mastopexy, or augmentation) is performed (Fig. 1C). At the time of closure, a purse-string suture (PDS 2/0 intradermal) is inserted, to include only the outer edge (ordinary breast skin) of the wound (Fig. 1C,D).
- This suture is tightened to produce a circle that is smaller than the proposed areolar diameter (2 cm). This will enable the areola/nipple complex to protrude through the hole with its blood supply (Fig. 1D).
- A new areolar circle with a diameter of about 4—5 cm is designed on the breast skin (circle 3), which is equal to that of the areola.
- The skin between the round-block suture and the new circle is de-epithelialised carefully. This will remove most of the ruffles and leave a de-epithelialised area of about 1 cm in width (Fig. 1E).

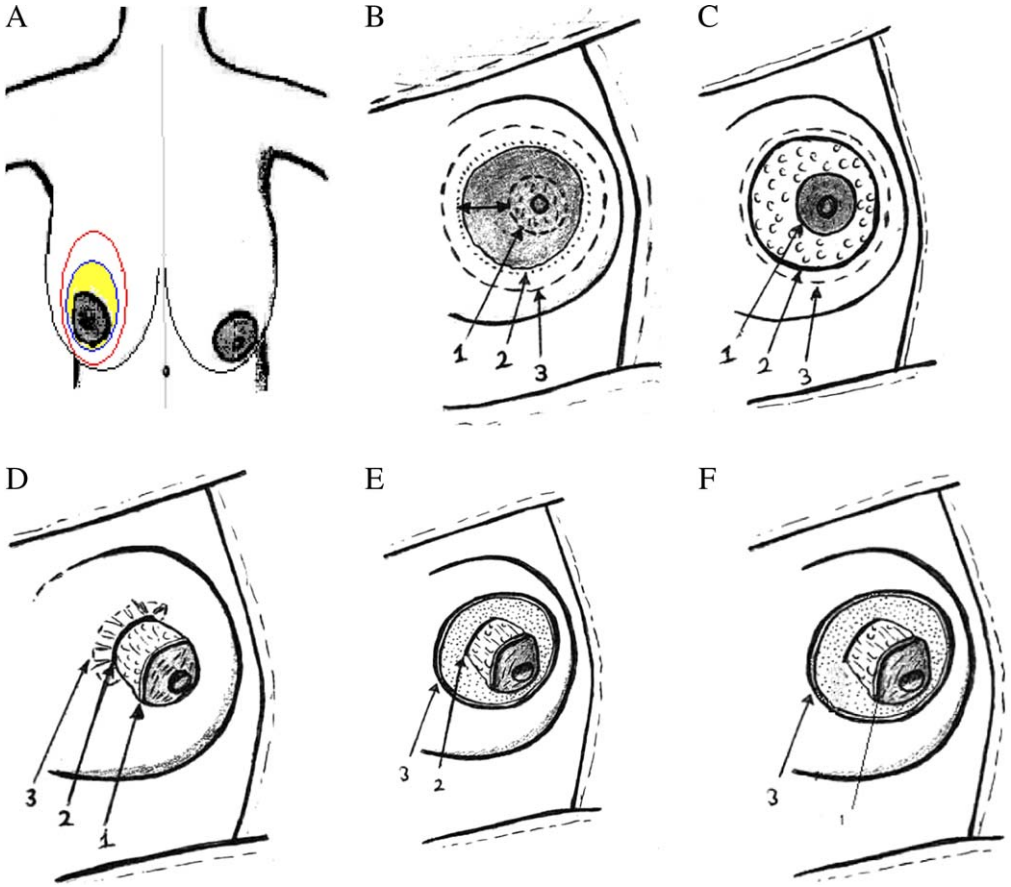

Figure 1 The technique of modified Benelli. (A) The standard periareolar marking is performed as usual (the outer circle). (B) Marking the area to be excised (full thickness skin excision between circles '1 and 2') and (de-epithelialisation between circles '2 and 3'). (C) Through this incision the mammaplasty (glandular reduction, mastopexy, or augmentation) is performed at the time of closure, a round-block suture (PDS intradermal) is inserted to the outer circle of the wound (2). (D) Tightening the (PDS) purse string to leave a hole of 1.5—2 cm for the pedicle of nipple/areola. (E) De-epithelialisation of a circular area. Most of the ruffles are excised. (F) The areola is sutured with subcuticular absorbable suture (PDS) to this de-epithelialised area.