

## A New Periareolar Mammoplasty: The "Round Block" Technique

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**Abstract.** The "round block" acts as a keystone supporting the mammary cone. The keystone lies in the dermo-dermic, glandulo-glandular, and glandulo-musculoperiosteal unions fixed definitively with nonresorbable suture, by a crisscross mastopexy, and by a circular nonresorbable suture of woven nylon included in the periareolar circular dermo-dermic scar block. This technique can be used in numerous types of breast surgery: In cases of ptosis or hypertrophy, it allows the scar to go up to the periareolar circle which is in itself generally inconspicuous. In cases of hypotrophy, the use of the round block technique permits easy access for insertion of the prosthesis as it simultaneously corrects ptosis. In cases of tumoral excision, the round block produces a discreet scar and a more regular breast contour. In all types of mammoplasty, the main goal is to limit the scar. The scar in the submammary fold is visible, particularly when one is lying down. The ideal result is confining the scar to the periareolar area.

### Application of "Round Block" to Mammary Ptoses and Hypertrophies (Figs. 6, 7)

Until now, the indications for various periareolar plasty techniques have been very limited [14]. Only very moderate cases of ptosis of small breasts could be treated using periareolar plasty because of the risk of enlarging or distorting the areola by the excessive tension on the areolar skin. The round block technique completely eliminates this disadvantage and permits the treatment of all mammary ptoses and hypertrophies with periareolar plasty [1, 2, 10].

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### Application of "Round Block" to Mammary Hypotrophy (Fig. 8)

In cases of mammary hypotrophy, the round block technique permits simultaneous correction of ptosis and easy access for insertion of the prosthesis, whatever the volume, by an incision in the horizontal diameter of all the deepidermized periareolar area, leaving only a periareolar scar [4, 6, 8].

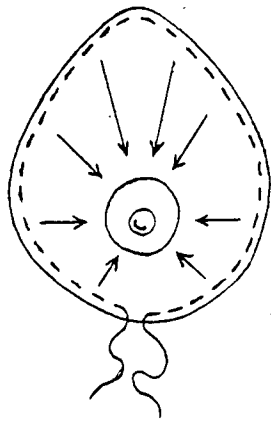
### Application of "Round Block" to Excisions of Breast Lesions (Fig. 9)

In regard to breast pathology, the round block technique permits easy access to a tumor while leaving a very discreet scar and, after the excision, allows reformation of good breast contour [3, 5, 7].

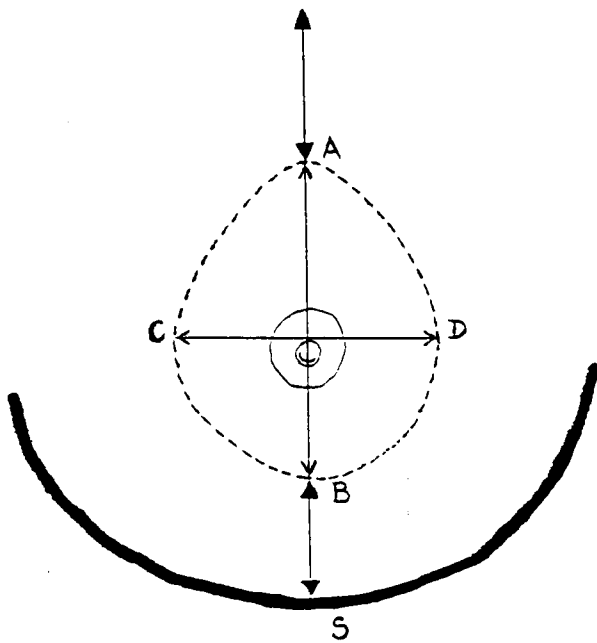
### Application of "Round Block" Technique

#### *Principle*

The goal of the round block operation is to obtain good breast shape with the areola in its proper location, above all, free from any tension that would cause postoperative enlargement. The round block technique leaves a very solid, circular dermo-dermic scar block around the areola, fixed by strong nonresorbable suture in the form of a blocked, circular dermic suture (Fig. 1). This suture, which encircles the areola and fixes its diameter, should preferably be of woven nylon fiber to allow the periareolar scar block to be anchored at the breast. The remodeling of the breast curve is completed by a crisscross periosteal mastopexy. This mastopexy



**Fig. 1.** Diagram of blocked circular dermic suture used in the round block technique



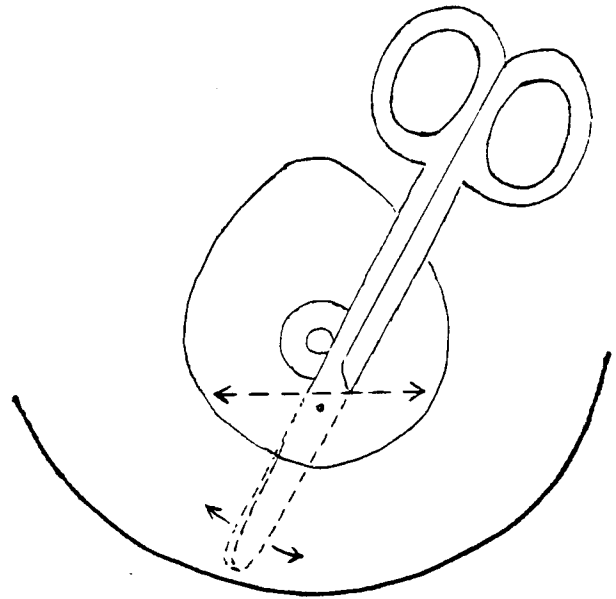
**Fig. 2.** Preoperative outline

is used to increase breast projection, to refine the lower quadrants, and to add to the upper quadrants. The glandular unions and anchorings should be done with a nonresorbable suture, monofilament nylon 2/0.

The round block technique is achieved by these steps. It has as its keystone the supra- and subdermal periareolar blocked suture which is nonresorbable and fixed. It ensures the permanence of the result [1, 9, 10, 11].

#### Technique

(1) The preoperative outline (Fig. 2) depends on the specific deformity to be corrected. The major features of Figure 2 are as follows:



**Fig. 3.** Diagram indicating parameters of dissection

(a) outline of the breast meridian,  
 (b) identification of the tip of the new areola (A),  
 (c) identification of the base of the new areola (B),

(d) outline of the deepidermization zone depending on the amount of cutaneous excess. There is no need to be wary of outlining very large areas for deepidermization. The fixed nature of the round block avoids all postoperative areolar deformities. Large cutaneous excess linked to accentuated ptosis of 14 cm vertically (A-B) by 12 cm crosswise (C-D), can be removed,

(e) outline of the circumference of the new areola, the diameter of which is about 4 cm (depending on breast size).

(2) Careful deepidermization of the area between the areola and the peripheral outline is necessary in order to keep the underlying dermis intact.

(3) Horizontal incision of the skin is at the lower side of the deepidermization area.

(4) Deep subcutaneous dissection of the lower and median parts of the mammary gland extend to but not beyond the submammary fold (Fig. 3).

(5) Careful hemostasis is important. A hematoma could easily form where dissection has taken place.

(6) Mastopexy at the aponeurotic prepectoral level and suturing into periosteal structure must be performed for solidity. A periosteal crisscross mastopexy is done as follows: Retroglandular detachment is in the prepectoral area above the submammary fold. This maneuver individualizes a large glandular flap with a superior base. The nipple-areola complex is then freed from its lower attachments and supported only by a vertical dermo-glandular flap with a superior base.

The large glandular flap beneath the areola is separated in two parts, the external and the internal, by a vertical incision in the center of the flap. A crisscross periosteal mastopexy is then performed by attaching the medial part of the external flap to the presternal periosteum over the submammary fold. The periosteum is secured with a large curved needle that is pushed to the bone through the sternal insertion of the large pectoral muscle. In this way, the external glandular flap is strongly fixed in paramedial position under the internal glandular flap which is then fixed at the costal periosteum laterally over the submammary fold. This crisscrossing of the flaps fixed at the periosteum constitutes a crisscross periosteal mastopexy. Several inverted stitches are placed along the line where the glandular flaps cross. The suture used for all of these points is a nylon monofilament 2/0. The crisscrossed periosteal mastopexy creates strong support for the mammary cone. The anterior projection of the breast is guaranteed by this maneuver.

In cases of mammary hypertrophy (Fig. 7), either medium or minor, an excision of glandular volume can be performed easily by resection of glandular tissue on the external or internal glandular flaps before performing the mastopexy. In cases of major hypertrophy, the excision can be extended to the upper pole of the gland in the pectoral area permitting the flap supporting the areola to be lifted easily.

(7) The subcutaneous dissection can be extended laterally and medially with careful lysis of any adhesions which may appear after mastopexy. Hemostasis should be verified.

(8) There should be alternate supra- and subdermal positioning of the periareolar suture at the edge of the deepidermization area. This suture of nonresorbable strong-quality (0 or 1 according the amount of traction needed) woven thread is begun under the dermis of the lower edge of the incision made to perform the mastopexy. This suture ends at its starting point (Fig. 1).

(9) The skin gathers should be evenly distributed by sliding the excess skin along the suture (Fig. 1).

(10) The suture is blocked in a position that achieves the desired areolar diameter, usually about 4–5 cm.

(11) An aspiration drain is used. To avoid a protrusion of the areola due to inframammary pressure, two crossed sutures are placed: one in the horizontal diameter of the areola and one in the vertical diameter. The braided nylon 2/0 is threaded onto a straight needle and crossed under the nipple in the center of the areola. These stitches are simply placed and should not be tied tightly. They play a passive role in creating tension in order to avoid a tuberos aspect of the areola.

(12) A cutaneous suture is used after positioning the four cardinal points of the areola. No dermo-dermic suture is necessary since the round block technique ensures the fixed state of the structure.



Fig. 4. Sutures are deep to support skin tension and give good circular form to the areola

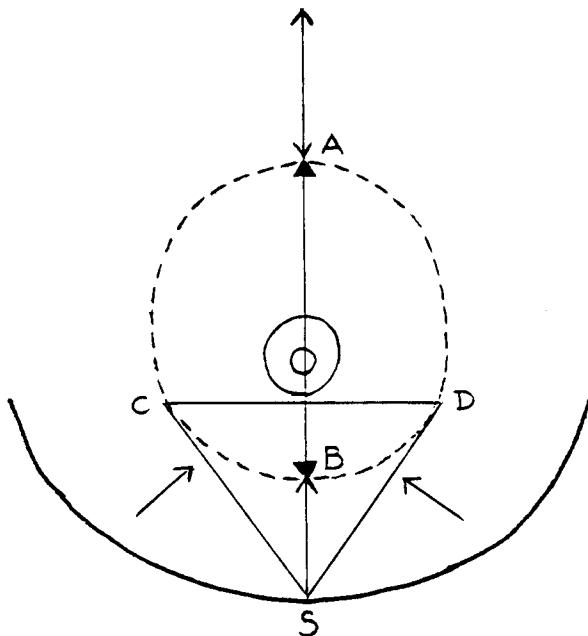


Fig. 5. Preoperative outline with adjustments for correction of gigantomastia

The cutaneous suture can be placed very easily and without tension. A continuous horizontal mattress suture using resorbable suture material permits eversion of the edges for better hygiene of the scar.

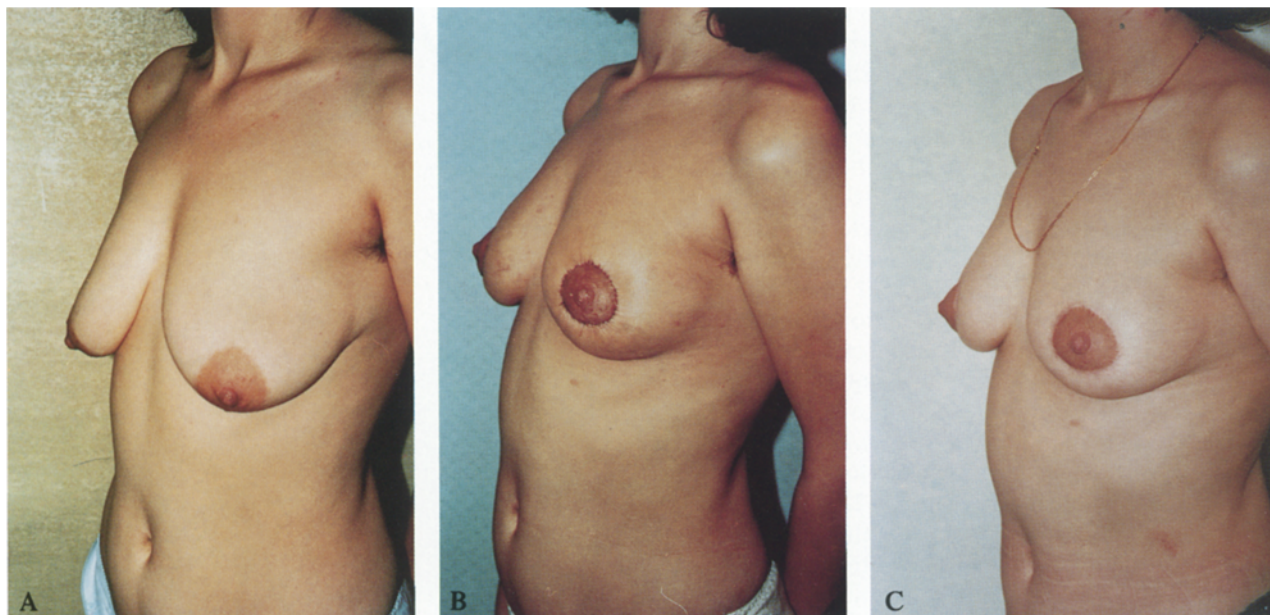
(13) Dressing is held in place by a well-supporting brassiere.

#### Postoperative Care

Postoperative care includes support of the breast by a brassiere worn day and night for a month. The suture is cleaned every day with an antiseptic and covered with a dressing.

#### Postoperative Development

The periareolar skin pleats will disappear in a few weeks. Bruising is common on the lower part of the breast and exposure to the sun is not advised until its complete disappearance. The periareolar diameter is well fixed; the suture encircling the areola is deep and thus supports any subsequent skin tension, thus giving a circular form to the areola (Figs.



**Fig. 6.** (A) Mammary ptosis, (B) 15 days after Round Block technique without modification of volume, (C) one year later showing discreet periareolar scar, good maintenance of breast contour, no distortion of areola

1 and 4). Healing is generally good due to the absence of any cutaneous tension (Figs. 6, 8, 10).

#### *Immediate Complications*

The one complication that we encountered—hematoma—is avoided by good hemostasis and an aspiration drain, or by gluing with human biological fibrin glue.

#### *Later Complications*

If the residual periareolar skin pleats fail to disappear after six months, they can be easily eliminated by slightly reopening the periareolar scar while the patient is under local anesthesia. This should not occur if the excess skin was distributed evenly by sliding the suture uniformly.

Another complication may be breakage of the suture surrounding the periareola. This is unknown in our experience. The solidity of the fibrous scar block penetrated by the woven nylon suture renders such an occurrence most unlikely. In the case of a break after one year, the round block unit should be well fixed so that the presence of the deep periareolar suture is no longer necessary.

#### *Round Block Indications*

Indications for the use of the round block technique include four situations: (1) all mammary ptosis and

hypertrophy. (2) Mammary ptosis associated with augmentation mastopexy. Insertion of the prosthesis is easily managed by a crosswise incision on the lower part of the deepdermization area. In augmentation mastopexy, it is generally unnecessary to perform a plication of the gland since the former projection of the breast is obtained by the proper positioning of the prosthesis. (3) Correction of areolar hypertrophy. An extremely large areola, whether natural or a postoperative result, and unsightly periareolar scars are good indications for round block which ensures no recurrence of the treated deformation. (4) Correction of the tuberous breast. The round block technique permits a definitive correction of the tuberous breast deformity [see (8) and (13) above]

#### **Application of Round Block to Gigantomastia**

##### *Principle*

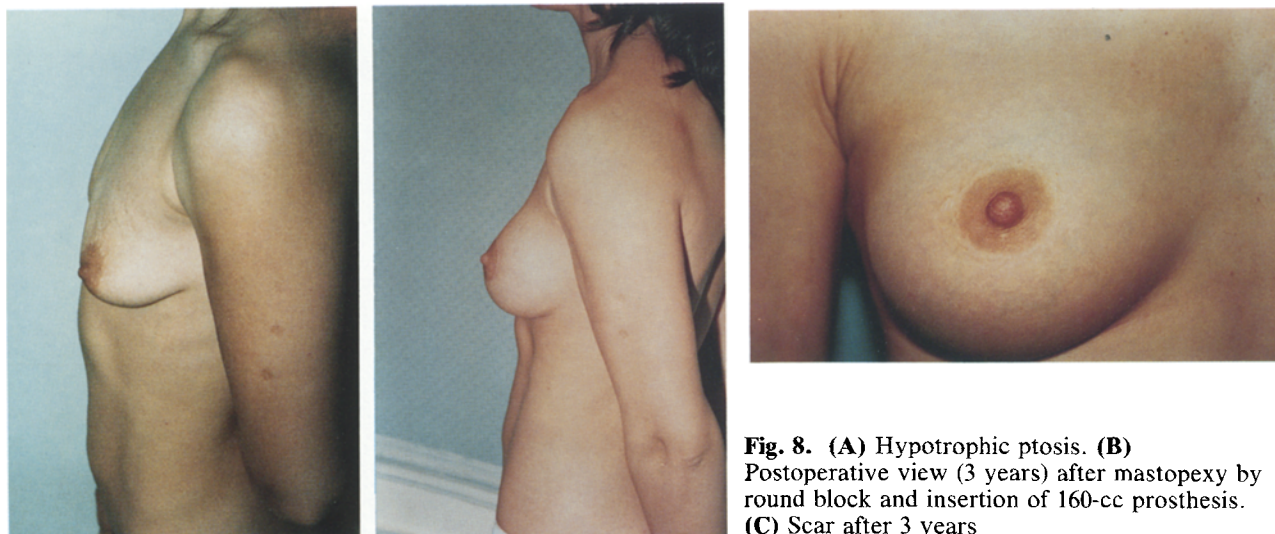
The cutaneous breast excess is gathered on a vertical and periareolar scar. The submammary fold is free of scars because of the solid structure created by the round block. It also eliminates any areolar tension or distortion. The excess breast volume is corrected by excision of the cutaneous-glandular triangle, located under the areola. Tissue excision can be extended easily to the entire glandular area, extending to the posterior surface in the retroglandular prepectoral space to achieve the desired volume [15, 16].



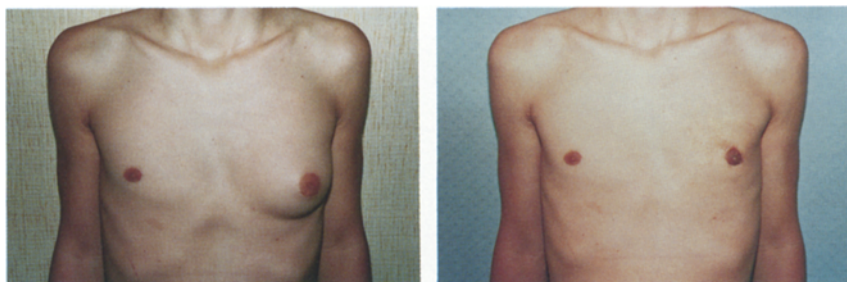


**Fig. 7.** (A) Hypertrophic ptosis. (B) preoperative profile, (C) oblique preoperative profile, (D) Preoperative markings; ellipse with 15-cm vertical diameter and 11.5-cm horizontal diameter. (E) Three days postoperative. Note the regular distribution of the small pleats around areola. (F) Three months after a 400-g reduction. (G) postoperative profile after three months, (H) oblique postoperative profile after 3 months





**Fig. 8.** (A) Hypotrophic ptosis. (B) Postoperative view (3 years) after mastopexy by round block and insertion of 160-cc prosthesis. (C) Scar after 3 years



**Fig. 9.** (A) Unilateral gynecomasty with areola hypertrophy. (B) Postoperative view correcting the asymmetry and reducing the left areola



**Fig. 10.** (A) Black skin areola before mastopexy. (B) Areola one year after mastopexy by round block. Note the regular circular contour of areola

### Technique

(1) The preoperative outline (Fig. 5) for the round block technique applied to gigantomastia is as follows:

(a) classical points of reference: submammary fold, breast meridian, median axis, areolar perimeter,

(b) marking of the summit of new areola (A),

(c) marking of the summit of cutaneous-glandular triangle (S) in the submammary fold,

(d) marking of the points C and D, the lateral limits of the ellipse of periareolar deepidermization area depending on the amount of cutaneous-glandular tissue excess to be corrected,

(e) marking of the limits of the incision joining points C and D. One superior ellipse of the periareolar deepidermization area depending on the amount of cutaneous-glandular excess to be corrected.

(2) Deepidermization of the entire periareolar ellipse and a 1-cm band of dermis along the border of the inferior triangle permits the inferior suture for a strong dermo-dermic union.

(3) Excision of cutaneous-glandular block follows the premarked triangle. The cutaneous triangle can be deepidermized to preserve the subdermic vascularization of the inferior skin flap.

(4) The retroglandular prepectoral space is dissected and excessive tissue at the posterior surface

of the gland is excised until the desired volume is obtained.

(5) The dermoglandular flap is created to support the areola. This flap is vertical with a superior base allowing for better mobilization of areola.

(6) A crisscross periosteal mastopexy is used as described in the preceding section.

(7) Additional deepidermization of the periareolar surface is performed to obtain a perfectly round form.

(8) The supra- and subdermal sutures are placed following the same principles as described for breast ptosis.

(9) The suture is drawn up until the desired areola diameter is achieved. The suture is then tied at this point.

(10) An aspiration drain is placed.

(11) The vertical incision is sutured with an intradermic suture, the same suturing of the areola as described for ptosis.

(12) Dressing is maintained by brassiere to provide good breast support.

### Application of Round Block in Pathological Breast Surgery

#### Principle

Use of the round block technique when surgically excising a mammary tumor has two advantages: an inconspicuous scar and avoidance of depression in the area of excision. Although discreet, the periareolar scar allows for ample exposure and, therefore, easy access to pathological tissue. The incision can be much longer than the areola diameter, spanning the entire surface of the deepidermization area (Fig. 3). After the pathological excision, the remaining mammary tissue is "drawn up" in the manner described for treating breast ptosis. This technique allows one to avoid or greatly limit a depression in the breast contour at the site of surgical excision.

Subcutaneous mastectomy and gynecomastia cases can be treated successfully by Round Block. For subcutaneous mastectomy, the round block technique permits resection of all of the excess skin around the areola thus decreasing the oncologic risk due to the close connection between the glandular tissue and the periareolar skin [1, 10, 12, 13].

#### Technique

Excision of a mammary lesion without associated skin resection is done as follows:

(1) Preoperative skin is marked (Fig. 2).

(a) mark the classical breast points of reference: medial axis of the thorax, meridian of the breast, submammary fold, areola perimeter,

(b) mark the location of the lesion,

(c) mark the area for deepidermization, periareolar, taking into consideration the cutaneous excess. The area marked depends on the relaxation of the skin, the anticipated site of incision, and the volume of excess.

(2) Deepidermization is performed.

(3) Dermal incision in deepidermized area with cutaneous-glandular dissection makes the pathological tissue easily accessible.

(4) The lesion is excised.

(5) Hemostasis is controlled.

(6) The glandular edges are approximated with large and deep sutures to close the excised area.

(7) Additional dissection between skin and gland is done to facilitate the repositioning of the tissue in the area of excision. Adhesions that may have been created by the deep points of glandular approximation are lysed.

(8) Periareolar suture is placed followed by its blockage and even distribution of skin folds as described for the ptosis technique.

(9) An aspiration drain, cutaneous suture, and dressing are used.

For excising a mammary lesion using cutaneous-glandular excision, we apply the principle of round block in the case of gigantomastia (Fig. 5). The cutaneous-glandular triangle is situated at the level of the lesion to be excised. The discretion of the scar, improved breast contour, and regularity of the breast is of interest.

### References

1. Benelli L: Traitement des ptoses mammaires par voie péri-aréolaire: technique personnelle: le Round Block. Symp Aesth Surg Coll d'Enseignement; Res Aesth Surg, Paris, 6 November 1987
2. Benelli L: Technique de Plastie mammaire le Round Block. Rev Fr Chir Esth 13(50):7-11, 1988
3. Benelli L: Une nouvelle technique de plastie mammaire à cicatrice limitée, périaréolaire: Round Block. 6th Int Congr Aesth Surg Eur Féd Soc Nat Aesth Surg, Paris, 18 June 1988
4. Benelli L: A new peri-areolar mammoplasty, Benelli's round block technique. Int Congr Aesth Surg, Tokyo, Japan, 23 July 1988
5. Benelli L: Technique du Round Block. Rev Fr Chir Esth 13(52):9-13, 1988
6. Benelli L: Breast ptosis surgery: round block. World Congr Am Acad Cosmet Surg, Miami, FL, 29 October 1988
7. Benelli L: Une nouvelle technique de plastie mammaire à cicatrices limitées: le Round Block. 10th Symp Aesth Surg Coll d'Enseignement Res Aesth Surg, Paris, 11 November 1988

8. Benelli L: Round block technique. Am Acad Cosmet Surg 5th Ann Sci Mtng, Los Angeles, CA, 15 January 1989
9. Benelli L: Periareolar mammoplasty: técnica round block. Int Symp Recent Adv Plast Surg, São Paulo, Brazil, 3 March 1989
10. Benelli L: A new periareolar mammoplasty: round block technique. Xth Congr Int Soc Aesth Plast Surg, Zurich, Switzerland, 11–14 September 1989
11. Benelli L, Faivre J: Traitement chirurgical des lésions inesthétiques de l'aréole et du mamelon. Chirurgie Esthétique. City: Maloine Editeur, 1984
12. Faber C: Plastie mammaire: La technique Round Block réduit au minimum la cicatrice. Quot Méd No. 4082, p26, May 1988
13. Faber C: Plastie mammaire: le Round Block évite l'élargissement de l'aréole. Quot Méd January 1989
14. Faivre J, Carissimo A, Faivre JM: La voie périaréolaire dans le traitement des petites ptoses mammaires. Chirurgie Esthétique. Maloine Editeur, 1984
15. Felicio Y: Periareolar reduction mammoplasty: a single incision technique. Int Symp Recent Adv Plast Surg, São Paulo, Brazil, 3 March 1989
16. Toledo S: Periareolar mammoplasty with syringe liposuction. Int Symp Recent Adv Plast Surg, São Paulo, Brazil, 3 March 1989