

Management of Tuberous Breast

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Elements:

- Superiorly malpositioned inframammary fold
- Constricted lower pole skin envelope
- Nipple pseudoherniation
- Asymmetry** (Other breast might be enlarged, ptotic and disproportionate opposite breast with medially translocated yet showing some attributes of tuberous breast as high IMF resulting on exaggerated ptosis and large areola)

Elements:

- Constricted breast base
- Abnormal medial IMF contour
- High, tight IMF
- Varying degrees of areolar pseudoherniation
- Asymmetry.

Table 19-3. Characteristics of constricted lower pole breasts

Characteristic/Deformity	Modes of Correction
1. Narrow base width, especially in lower pole (narrow base of parenchyma)	Radial and/or concentric scoring of parenchyma at incremental, progressive depth from deep to superficial until complete release and parenchymal redistribution is achieved
2. Maldistribution of breast parenchyma, constricted, narrow transversely, sometimes tight and globular	Same as #1; once released, implant selection becomes critical to help maintain redistribution of parenchyma and apply controlled pressure to areas of lower envelope that need to be stretched
3. Inframammary fold (IMF) is "tight" (more fixed to deeper structures compared to normal)	Thorough release of all tight or banding soft tissue attachments at the preoperative fold that extend deep to the fold and attach to deeper structures. Also, vertical cuts across fold area internally to interrupt continuity of any transverse banding or dense fascial structures at the preoperative IMF
4. Existing IMF is short transversely (due to misdistribution of parenchyma and focal fixation of fold over short distance transversely)	After release of all fold attachments, create new fold, usually at lower level by selecting optimal base width and projection implant to apply pressure across entire lower pole, resulting in lower pole skin stretch and passive formation of wider new IMF
5. Inadequate expansion of breast lower pole skin over the entire width of an average breast	Create pocket dimensions to accommodate implant of desired new breast base width, release any constricting layers overlying implant, use textured surface implant to optimally control implant position, and select implant projection (moderate, not high) to spread stretch forces optimally across entire lower pole
6. Excessive expansion of narrow, focal area of skin in central lower pole of the breast, creating pseudoptosis or "tubular" configuration where narrow base width parenchyma has stretched only a narrow portion of lower pole skin	Same as (5) above
7. Downpointing nipple-areola complex (when lower pole is constricted and upper pole parenchyma continues to develop)	Assess nipple position intraoperatively with patient sitting after optimal release and placement of implant. If nipple remains downpointing, especially if overlying mobile parenchyma, reposition NAC with periareolar + vertical (not periareolar alone) technique
8. Pseudoherniation of subareolar tissue, creating areolar deformities and asymmetries	Obtain informed consent for possible nipple sensory loss and/or loss of ability to nurse; leaving NAC based opposite area of most pseudoherniation, excise at least a 2 cm thick wedge of the herniated parenchyma for most predictable correction
9. Nipple-areola complex malposition on breast mound	Reposition NAC with periareolar + vertical (not periareolar alone) technique. Isolated periareolar or "doughnut" designs are more prone to excessive postoperative stretch or areolar asymmetries because all tension is periareolar
10. Thickened deep subcutaneous fascia with or without thickening of pectoralis fascia deep to lower pole parenchyma	Radial and, if necessary, concentric scoring from NAC inferiorly to level of new inframammary fold to completely release all constricting fascia. Perform in increments, scoring to subdermis if necessary to obtain optimal, complete release. Assess at intervals by inserting fingers and pulling anteriorly on lower pole tissues to identify areas of remaining restriction

Shifmann

Von Heimburg Classification

A modified classification was reported by von Heimburg [1], which varied from the original article published in 1996 [2]. This classification consists of four types (Fig. 36.1):

Type I: Hypoplasia of the lower medial quadrant

Type II: Hypoplasia of the lower medial and lateral quadrants

Type III: Hypoplasia of the lower medial and lateral quadrants with deficiency of the skin in the subareolar region

Type IV: Severe breast constriction with minimal breast base

Grolleau Classification

Grolleau et al. [3] described three variations in the tuberous breast, which were derived from the von Heimburg classification (Fig. 36.2):

Type I: Hypoplasia of the lower medial quadrant

Type II: Hypoplasia of both lower quadrants

Type III: Hypoplasia of all four quadrants

Grolleau et al. proposed that the cause of the tuberous breast was from anomalies of the fascia superficialis that involve strong adherence between the dermis and the muscular plane, restricting peripheral expansion of the breast during breast development at puberty. Mammoplasty techniques that were used varied according to the type of deformity.

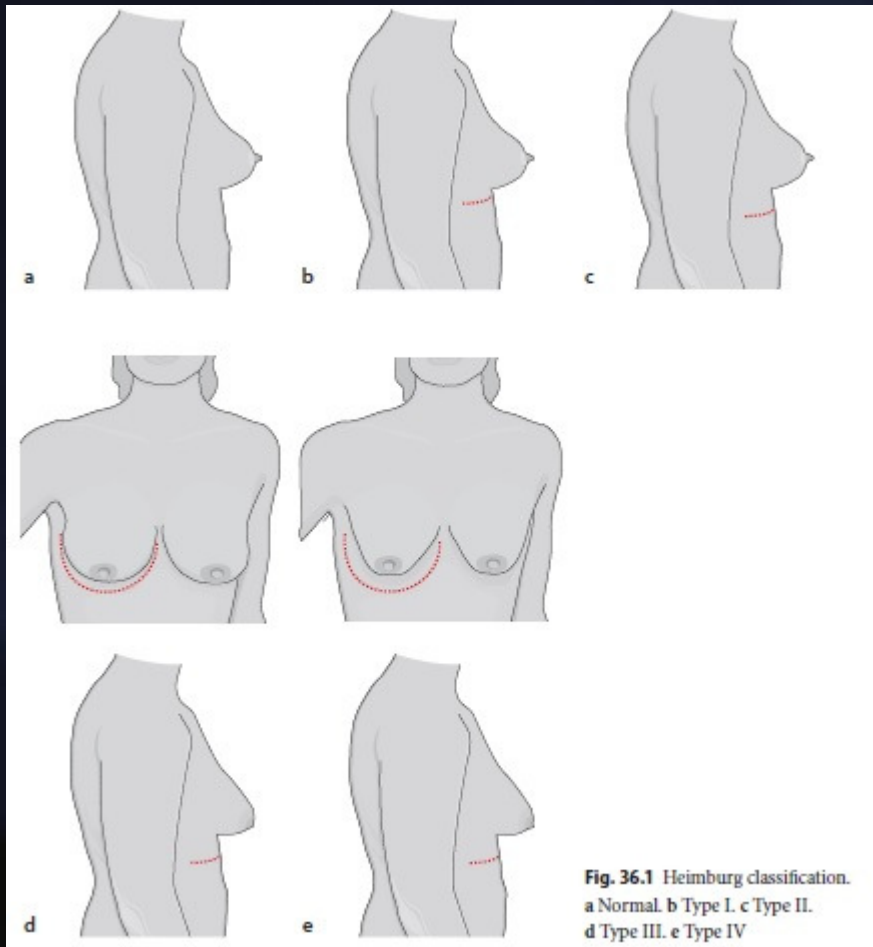
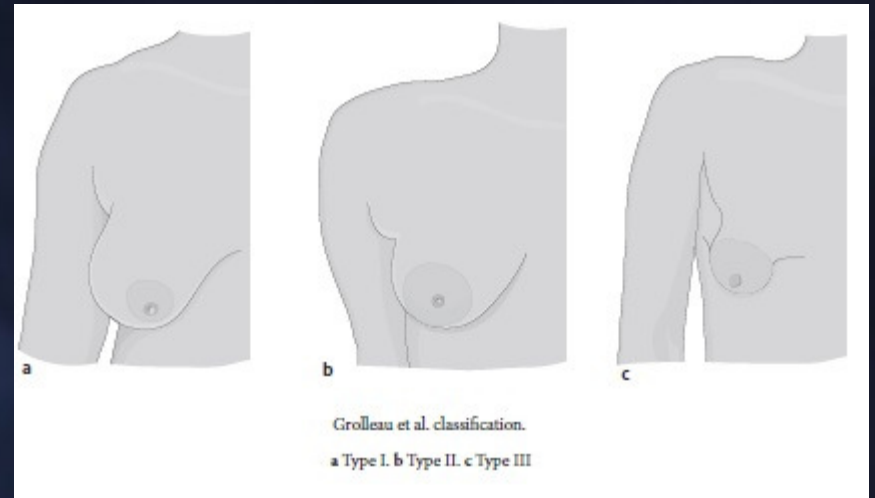


Fig. 36.1 Heimburg classification.
a Normal. **b** Type I. **c** Type II.
d Type III. **e** Type IV



Grolleau et al. classification.
a Type I. **b** Type II. **c** Type III

Diagnosis of Mild Forms:

Carefully observe the nature of the medial inframammary fold crease. If there is any convexity or superiorly oriented curving of the medial lower pole contour, a mild tuberous breast can be diagnosed

Corrections:

- Management of the Constricted Skin Envelope
- Management of Areolar Herniation/Enlarged
- Management of Breast Asymmetry

Soft Tissue Reconstruction (Implant / Expander)

Critical Decisions:

- whether or not the constricted inferior pole skin can be expanded enough to allow the primary placement of a breast implant to create a natural contour in the lower pole of the breast.

- Implant **vs** Staged expander/implant strategy

whether or not the crease created by the old inframammary fold (IMF) can be overcome by the implant. A persistent fold and a flattened and tight lower pole contour will very commonly persist despite aggressive release of the underlying soft tissue support structures. In these patients, better control of the lower pole and the location of the IMF can be afforded with the primary use of a tissue expander [Check laxity or adherence of skin envelope and free mobility of NAC in relation to the chest wall]

Also in young teens the other side is not well developed, it is better to insert the expander for some **YEARS** till complete maturity of other breast to achieve symmetry

Corrections:

periareolar incision [Inframammary if no herniation]

- **Subglandular Pocket HAMMOND** (Puts direct implant pressure on lower pole / Allows dissection of breast off fascia / Avoids pectoralis tethering effect)
- **DUAL Plane 2 or 3 TABBETT** (Best Coverage of implant and same adv of SG plane)
- **Radial Release** of horizontal fibrous bands upto radial division of entire lower half of the breast
- **Tethering bands that remain in the skin flap can be divided in a checkerboard type fashion to complete the release**

Corrections:

High *or* Medium Profile

Advantages of High (Maximal expansion of envelope)

Advantages of Medium (Focuses expansion on lower pole)

Round *or* Anatomical

A shaped implant that puts projection where it is needed in the lower pole, but not at the expense of excess weight (caused by a high profile, round implant). The shaped implant must be form stable, with no collapse of the upper shell when the implant is upright

A full height, moderate profile, shaped, textured, form stable implant

Corrections:

Position of NEW Inframammary Fold

First determine Implant base Width (Which will exceed breast base width, then if IMF needs lowering according to table, do it, if Original N:IMF distance is more than needed in table, work with it, no lowering of IMF is needed

Table 19-4 is excerpted from the High Five™ System.³ To determine optimal N:IMF for each base width, the surgeon locates the base width in the top row, and the optimal N:IMF for that width is located in the cell directly beneath that base width. If the preoperative base width is longer than the base width recommended in Table 19-4, the surgeon accepts the longer preoperative distance and places the incision in the existing inframammary fold.

Table 19-4. Appropriate nipple-to-fold distance for the base width of the breast when augmenting constricted lower pole breasts

Selected implant base width (cm)	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0
Set N:IMF to: (cm)	7.0	7.0	7.5	8	8	8.5	9.0	9.5

No Implant Management of Tuberous Breasts with Micromastia

Short scar Periareolar Inferior Pedicle Reduction (SPAIR) technique

Advantages

- No Inframammary fold scar.
- Minimal Bottoming out
- Minimal change of breast shape over time
- Can be applied to a wide variety of sizes and shapes making it particularly applicable to tuberous breasts with asymmetric macromastia
- Shape of the breast is aesthetic immediately, no need for trying to predict how breast shape will change over time, therefore breasts can be sculpted with confidence at the initial procedure and very aesthetic results can be obtained

TEBBET

Table 19-1. Requirements for correction of glandular ptotic and constricted lower pole breasts

Requirement for Correction	Reason(s) for the Requirement
1. Surgical correction of the anatomic layer(s) that produce the deformity	Glandular ptosis (GP): must <i>disrupt and convert the parenchyma–muscle interface</i> to a parenchyma–anterior capsule interface Constricted lower pole (CLP): Must <i>release constricting tissue layers</i> to allow subsequent stretch by implant forces
2. Selection of implant type and size that allows the surgeon to control distribution of fill and pressure that the implant exerts on adjacent tissues	GP: Requires full height, moderate projection implant selected using the High Five™ System in order to exert maximal pressure over the greatest surface area of the posterior parenchymal surface CLP: Same as GP; in addition, exert widest (not focal) pressure across the entire lower pole area of soft tissue constriction—all layers
3. Redistribution or repositioning of tissue relative to the implant	GP: Must redistribute parenchymal mass over the widest surface area to provide maximal opportunity for the posterior surface of the parenchyma to attach to the anterior capsule to provide support to minimize inferior descent CLP: Parenchyma, often constricted with minimal base width, needs to be redistributed more widely by radial and/or concentric scoring to redistribute the parenchymal mass over as wide an area of the implant as possible for coverage and for optimal aesthetics
4. Tissue layer interface control	GP: Disrupt existing parenchyma–muscle interface that allowed inferior migration of parenchyma; establish widest possible surface area for attachment of redistributed parenchyma to anterior capsule CLP: Release/disrupt attachments at the parenchyma–muscle interface to allow subsequent redistribution of narrow, constricted parenchymal mass; provide maximal surface area for implant to exert pressure on overlying constricted soft tissue layers to effect stretch to reform and reshape the lower pole
5. Precise intraoperative control of implant pocket dimensions	GP: Implant pocket dimensions control implant position; implant position is critical to exert pressure and provide controlled fill in specific areas CLP: Same as for GP
6. Precise positioning of the implant within the soft tissue pocket	GP: Implant position within the pocket is critical to exert pressure and provide controlled fill in specific areas for optimal correction. CLP: Same as for GP

Thank you