An Integrated Approach to the Repair of Inverted Nipples

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An Integrated Approach to the Repair of Inverted Nipples

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Background: *Many methods for the correction of the inverted nipple have been described, but no consensus has been reached as to which is the best approach.*

Objective: *We describe an integrated approach to the correction of nipple inversion that minimizes ductal disruption.*

Methods: *We performed initial nipple eversion using gentle traction with a skin hook. The nipple base was approached with the use of an inferior periareolar incision through the subcutaneous tissue. Blunt dissection parallel to the ducts restored varying degrees of projection. Selective ductal division was performed as necessary to obtain complete eversion with normal projection. To maintain the nipple in an overcorrected position, we placed a nylon traction suture through the center of the nipple and affixed to a stent consisting of a medicine cup and gauze padding.*

Results: *In a series of 21 patients, nipple eversion was maintained after at least 1 year's follow-up.*

Conclusions: *The technique for correction of nipple inversion reported here is focused on blunt dissection through vertical spreading parallel to the lactiferous ducts, with selective division of only those ducts that restrict nipple projection. The use of traction stenting helps ensure eversion and protects the repair. The technique produces excellent results without recurrence of nipple inversion.* (Aesthetic Surg J 2004;24:211-215)

Nipple inversion is a disfiguring condition, caused by hypoplasia of the lactiferous ducts, that affects approximately 2% of all women.[1] It is classified into 3 grades on the basis of the degree of hypoplasia.[2] A grade I nipple can be everted manually and maintains its projection without traction. In grade II, the nipple is more difficult to evert and returns to the inverted position without traction. Grade III nipples are severely retracted and inverted. Numerous techniques for correction of the inverted nipple have been described[1–16] and may be broadly categorized into those that divide the lactiferous ducts and those that do not. At the time of this writing no consensus exists as to the best method for treating this deformity. In this article, we present a new, integrated approach to the correction of nipple inversion (Figure 1).

Methods

Twenty-one of our female patients underwent repair of nipple inversion during the last 6 years; 17 presented with bilateral nipple inversion and 4 with unilateral inversion. Two patients presented with bilateral recurrence after undergoing a corrective procedure performed by another surgeon. All procedures were performed on an outpatient basis.

Initially we achieved nipple eversion using gentle traction with a skin hook (Figure 2). The nipple base was approached through an inferior periareolar incision (Figure 3). Blunt dissection achieved through the use of a vertical spreading technique parallel to the ducts restored varying degrees of projection (Figure 1, *A* and *B*). Ductal structures were easily visualized and preserved during the dissection (Figure 4). When necessary, selective ductal division was performed to achieve complete eversion with normal projection. This technique released tension by incrementally dividing the lactiferous ducts under direct vision.

Two internal (deep dermis to deep dermis) 4-0 vicryl sutures were placed, one from 12 o'clock to the 6 o'clock positions and one from the 3 o' clock to the 9 o'clock positions (Figure 1, *C* and *D*; Figure 5.). These internal sutures drew together the opposite walls of the nipple, providing further stability and reducing dead space under the nipple. An external 4-0 chromic purse-string suture was then run at the junction of the nipple-areola border (Figure 1, *E* and *F*; Figure 6). Last, a 4-0

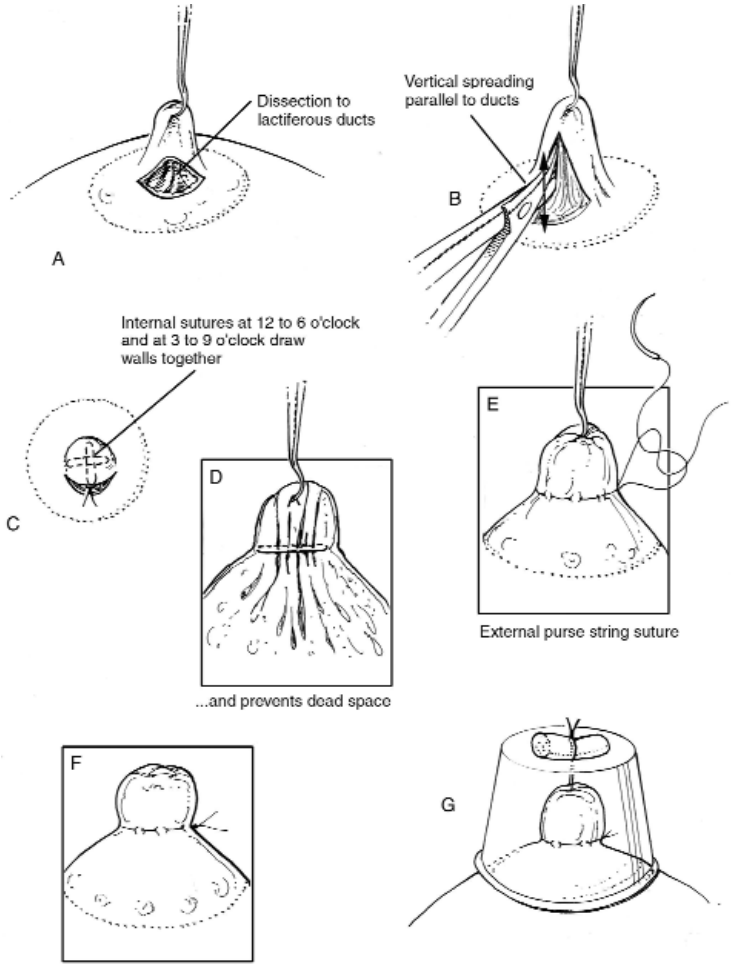

Figure 1. *Overview of the procedure.*

Figure 2. *Nipple eversion was initially achieved with the use of gentle traction applied with a skin hook.*

nylon traction suture was placed through the center of the nipple and affixed to a stent consisting of a medicine cup and gauze padding (Figure 1, *G*; Figure 7). This traction exerted an anteriorly directed force that maintained the nipple in an overcorrected position. Traction was maintained for 2 to 5 days. In follow-up evaluations we assessed maintenance of nipple eversion and subjective patient satisfaction.

Results

To date, after at least 1 year's follow-up in each case, we have found no recurrence of nipple inversion among the 21 patients. Nipple eversion has been consistently maintained (Figure 8), and patient satisfaction has been high. To date, no patients in our series have been known to attempt breastfeeding after the procedure. We will check patients at regular yearly intervals for 5 years after surgery.

Discussion

The nipple is of great importance as a visual, nutritive, and sexual focus of the female body. For some women,

Figure 3. *The nipple base was approached by way of an inferior periareolar incision made through the subcutaneous tissue to meet the lactiferous ducts.*

Figure 4. *Ductal structures were easily visualized and preserved during the dissection.*

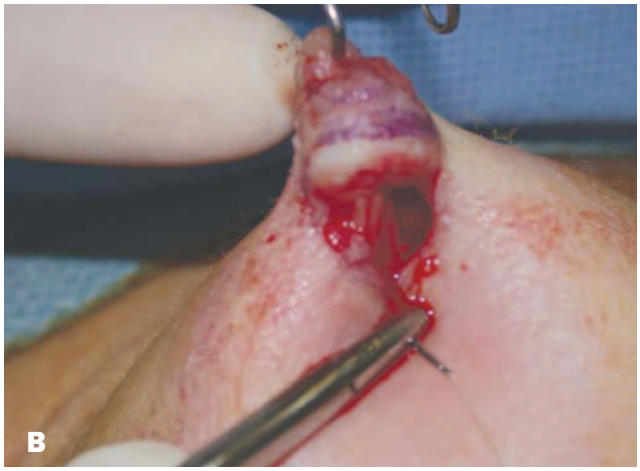

Figure 5. A, B, *Internal 4-0 chromic sutures were placed, one from the 12 o' clock to the 6 o'clock positions, and one from the 3 o'clock to the 9 o'clock positions to draw together the opposite walls of the nipple.*

Figure 6. *An external 4-0 nylon chromic purse-string suture was made at the junction of the nipple-areola border.*

issues of hygiene are important as well. Because breastfeeding, body image, and sexuality may be adversely affected by nipple inversion, women with this condition often choose to undergo surgical correction.

In the surgical approach described in this article, the structural principles of nipple inversion are applied to treat the disorder effectively. Instead of dividing all lactiferous ducts, it is possible to selectively divide only those that restrict nipple projection. This technique entails vertical spreading parallel to the ducts, centrally and peripherally, followed by strategic ductal division. This duct-sparing approach may allow some women to breast-

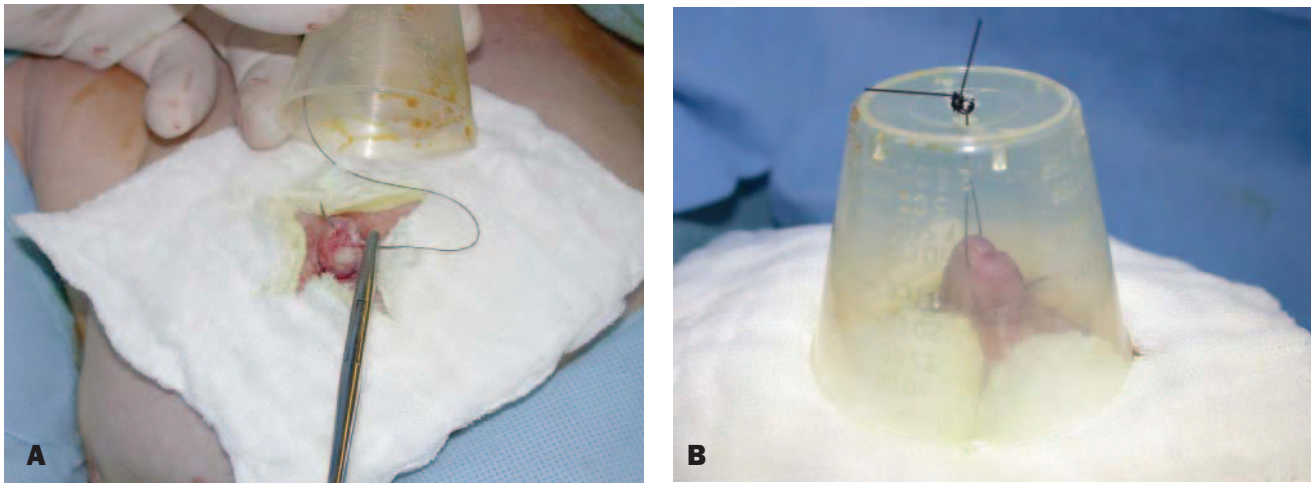

Figure 7. A, B, *To maintain the nipple in an overcorrected position, we placed a 4-0 nylon traction suture through the center of the nipple and affixed it to a stent consisting of a medicine cup and gauze padding.*

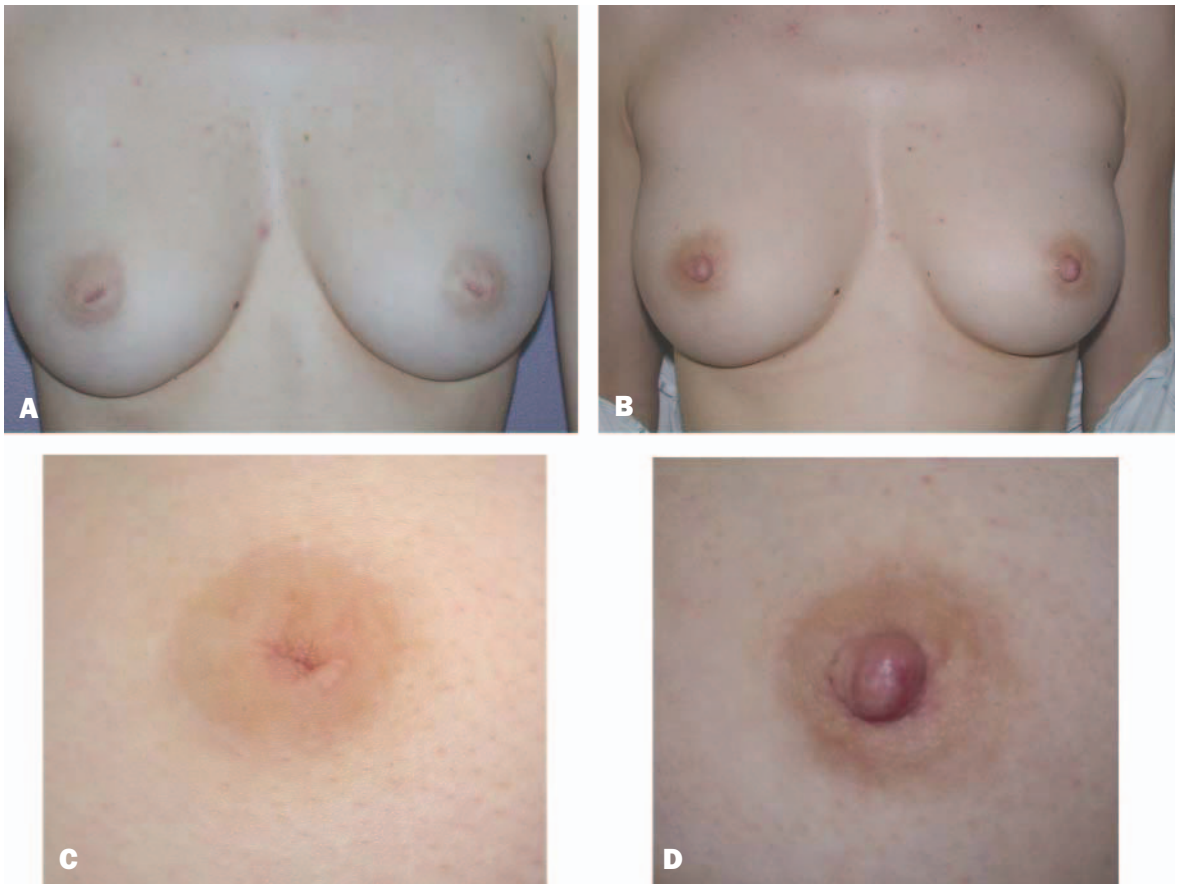

Figure 8. A, C, *Preoperative views of a 26-year-old patient.* **B, D,** *Postoperative views 1 year after correction of nipple inversion.*

feed after surgery. The elimination of dead space and increase in tissue bulk beneath the nipple contribute to lasting postoperative nipple projection. The placement of a purse-string suture at the nipple-areola border, as well as postoperative overcorrection with traction stenting, is critical during the healing phase in helping the nipple resist initial recurrent forces. This stent not only helps ensure eversion but also protects the repair while the projected position is maintained. This technique has yielded excellent results without recurrence of inversion and should be considered by the surgeon of any patient contemplating surgical correction of this disfiguring disorder.

Conclusion

Repair of inverted nipple deformities can be reliably performed with the use of an integrated surgical approach that minimizes ductal disruption and provides postoperative traction stenting. Eversion achieved with the use of this technique is maintained without recurrence of inversion. ■

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