Endoscopic Breast Augmentation

Minimally invasive surgical techniques based on video endoscopic technologies have become increasingly popular over the past several years. Although most commonly used in facial rejuvenation procedures, the endoscope has been a helpful adjunct for augmentation mammoplasty over the past 3 years. The rationale for using the endoscope in augmentation mammoplasty is based on the observation that it can provide clear visualization of soft tissue pockets through small incisions remote from the pocket itself. This visualization promotes precise dissection and hemostasis. Because visualization is most limited with the transaxillary augmentation, we have found endoscopic techniques most applicable through this route, and occasionally helpful with an inframammary approach.1,2 Others3,4 have described endoscopic techniques through circumareolar and transumbilical approaches.

In an endoscopically assisted transaxillary augmentation mammoplasty, a 1.5- to 3.0-cm incision allows access to the subpectoral pocket (Figure 1). An endoscopic retractor and a 10-mm, 30-degree Hopkins rod endoscope are inserted into this optical cavity, allowing visualization of the overlying pectoralis major muscle, its sternal and costal origins, and the underlying chest wall structures. Instead of blunt avulsion of the muscle origins, the inferomedial and inferior muscle origins are divided using electrocautery (Figures 1 and 2), extending the dissection through the prepectoral fascia as well. Hemostasis is facilitated by dividing the muscle about 1 cm above the bony attachments. When pocket dissection is completed, the endoscope is removed and the implant is prepared and inserted in a standard manner. If necessary, the implant can be removed and pocket adjustments made with endoscopic dissection.

Using such techniques, we have performed endoscopically assisted transaxillary augmentation in more than 100 patients since December 1992. Compared with a standard, blunt dissection technique, we believe that the endoscope has improved our control of postoperative inframammary fold position (Figure 3) and intraoperative hemostasis. Because of this additional element of control, we now feel comfortable offering transaxillary augmentation to women with mild ptosis or asymmetry, previously relative contraindications for the transaxillary approach in our practice. Although we had hoped that replacing blunt avulsion with electrocautery dissection might decrease postoperative pain, this has not proven a consistent finding. Postoperative ecchymosis and edema, however, do appear to have been consistently reduced. Complications have been rare. These have consisted of transient sensory changes in the breast, but we have had no cases of hematoma, seroma, infection or operative misadventure such as electrocautery burn or skin perforation.
Figure 2. Schematic representation of endoscopic view with the electrosurgery tip in place. The muscle is generally divided about 10 mm above the bony structures, leaving a small cuff of muscle on the chest wall. This prevents retraction of any divided perforators below the level of the external intercostal muscles, thus facilitating hemostasis. Reproduced with permission from Eaves FF III, Bostwick J III, Nahai F. Augmentation mammoplasty. In Bostwick J III, Eaves FF III, Nahai F (Eds). Endoscopic Plastic Surgery. St. Louis: Quality Medical Publishing, 1995:380.

Figure 3. A 32-year-old multiparous woman seen before (left, top and bottom) and 2 months after (right, top and bottom) endoscopic augmentation with 300-ml saline implants. The endoscope assisted in lowering the inframammary fold by 2 cm. Reproduced with permission from Eaves FF III, Bostwick J III, Nahai F. Augmentation mammoplasty. In Bostwick J III, Eaves FF III, Nahai F (Eds). Endoscopic plastic surgery. St. Louis: Quality Medical Publishing, 1995:388.

Is endoscopy necessary in all cases of augmentation mammoplasty? The answer is undoubtedly “no.” However, the endoscope can be a valuable tool in aesthetic surgery, allowing the surgeon excellent visualization and control where these elements may have been lacking. This is certainly the case with transaxillary augmentation, in which dissection is generally completed by blunt, blind avulsion and hemostasis is obtained through external pressure. By using the endoscope in transaxillary augmentation, this “closed” procedure in essence becomes an “open” procedure, and as such enjoys the same benefit of direct, controlled dissection as in a circumareolar or inframammary route. In addition, the transaxillary augmentation, a safe and proven procedure, is only modified, but not radically changed, by the incorporation of endoscopic techniques.

References

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