Roman II-X Platysmaplasty

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**Background:** Commonly used approaches for enhancement of the cervicomenatal angle by platysmaplasty may result in complications, such as ptosis of the submaxillary gland, unnatural tightness across the neck, subtle changes in swallowing, and residual skin laxity with fine wrinkling at the midline cervicomenatal angle.

**Objective:** This study examines the effectiveness of a technique for reducing and more narrowly focusing the forces on the platsyma at the area of the anterior midline cervicomenatal angle to smooth the vertical neck bands and enhance the chin-neck profile.

**Methods:** An inferiorly based strip of platsyma is raised below the mandibular margin at each side, 2.5 to 3 cm lateral to the midline, and crossed to form an X just at or slightly above the cervicomenatal angle, at about the level of the hyoid.

**Results:** During 15 years of practice, the procedure has been shown to be safe, reliable, and comfortable for patients.

**Conclusions:** The Roman II-X platysmaplasty is recommended as an effective way to achieve definition of the cervicomenatal angle with minimal disturbance of the integrity of the platysma muscle and underlying structures.

In many approaches for enhancement of the cervicomenatal angle, platysmaplasty is a component. These approaches include medial plication (ie, overlapping),\(^1\) Z-plasty,\(^2\) and medial imbrication (ie, sewing together).\(^3\) Also reported are long medial-to-lateral and mastoid-to-mastoid permanent suture techniques,\(^4,5\) as well as a variety of multi-component techniques, all with an emphasis on extended medial plication or imbrication.\(^6-9\)

A synthesis of these concepts, along with 25 years of personal observations, evokes the following considerations. We call the vertical folds in the anterior neck “platysmal bands,” but is this accurate? By having a patient simply lean the head and shoulders from side to side, these bands are seen to flow freely from one side to the other. Even after the platysma is paralyzed with Botox (Allergan, Irvine, CA), the vertical folds can still be seen if the skin is loose.\(^10,11\)

What is the magnitude of the forces that we are trying to overcome in flattening these unsightly folds? By taking the curled index finger and gently lifting the skin to support the “platysmal bands,” the surgeon will seldom sense a platysmal component but will be impressed with the minimal force required to flatten these folds.

Even after wide undermining of the neck, if a pair of 4-pronged hooks is used to pull the platysma toward the midline, mimicking the effect of multilayered midline plication, a subtle forward movement of the skin lateral and posterior to the area of undermining...
will be noted. This suggests that forceful anteromedial midline plication works in opposition to the superolateral lifting of the midline neck skin.

Is there a way to reduce and more narrowly focus the forces on the platysma at the area of the anterior midline cervicomental angle by wrapping strips of posterior platysma around the anterior platysma and pharynx? In the process of answering this question, the Roman II-X platysmaplasty was conceived.

The name of this technique refers to the manner in which 2 inferiorly based, vertical strips of platysma (resembling the Roman numeral II), are crossed at the midline (forming a Roman letter X) to smooth the vertical neck folds (the so-called “platysmal bands”) and enhance the chin-neck profile. In 15 years of use, the technique has proven safe and reliable, especially comfortable to the patient, and without the residual midline skin laxity sometimes seen with more extensive midline plication methods.

**Technique**

Although the Roman II-X platysmaplasty is usually accomplished through a 4-cm transverse submental incision in conjunction with a face lift, it has also worked well with a W-plasty technique in individuals, most often men, who perceive the neck folds as their only problem. In fact, the W-plasty/platysmaplasty combination is preferred to demonstrate the myoplasty details in vivo. The details of the W-plasty design and technique deserve some attention but are not the subject of this report.

Usually, the platysmaplasty is preceded by lipoplasty, but the submental incision may often be used for direct

**Figure 1.** Graphic design of surgical plan. A, Two 1-cm-wide strips of platysma (1.5 cm wide if the muscle is thin) are raised. B, The strips are decussated and sutured with 3-0 slow-absorbable sutures. C, The platysmal defects are closed, and if a face lift is performed concurrently, the lateral platysma is plicated over the sternocleidomastoid-cervicomental angle.
subcutaneous submental lipectomy, and—after inspection, of course—an opening along the midline offers an avenue for precise removal of subplatysmal fat. Often, as experience has shown, removal of just a small amount of subplatysmal fat—sometimes only 5 to 10 cc as a thin broad layer—is of greatest benefit.

An inferiorly based, 1-cm wide strip of platysma is raised, beginning approximately 2 cm below the mandibular margin on each side and 2.5 to 3 cm lateral to the midline, following the fibers of the platysma (Figure 1, A). These strips are dissected along the hollow between the sternocleidomastoid and the larynx, staying just deep to the muscle fibers. Bleeding is minimized by staying just under the muscle and avoiding any small nerves and vessels that are visualized. The portions of the strips raised below the cervicomental angle (or about at the level of the hyoid bone) should be of approximately the same length as the portion raised above the angle. The strips of muscle are then crossed to form an X just at or slightly above the cervicomental angle (Figure 1, B). Again, the hyoid is a good landmark. Apply only enough tension to take the stretch out of the muscle, but apply counter-tension with the forceps to the area to which the muscle strip is sewn so that the precise desired tension is maintained after the suture is tied.

As the procedure has evolved, there has been a shift toward creating the strips a little more laterally, making them shorter, and making the angle of the X a bit more than 90 degrees.

The donor site defects in the platysma are usually closed, particularly at and above the cervicomental angle (Figure 1, C). A few sutures can be placed in the platysma in the midline at and above the cervicomental angle as well; however, sutures are seldom placed below the level of the upper edge of the thyroid cartilage. Furthermore,
although figure-of-8 sutures are normally used, the bite is only enough to approximate the edges, unlike those in wide plication sutures. Usually, 3-0 absorbable sutures such as Dexon (Sherwood Medical, St. Louis, MO) or Vicryl (ETHICON, Inc., Somerville, NJ) are used; in my experience, nonabsorbable sutures are unnecessary and would only add spots of ongoing foreign body reaction and tenderness.

If a face lift is done concurrently with the platysmaplasty, the submental incision provides a convenient means of undermining across the neck. In this case, some plication of the lateral platysma (Figure 1, C) with heavier figure-of-8 sutures (2-0 Dexon, Vicryl, or something similar) is ordinarily done, along with superficial parotid fascial plication. It is important that the platysmal plication sutures be placed no farther posteriorly than midsternocleidomastoid. Furthermore, in this lateral area they should be placed in an oblique posterosuperior-to-anteroinferior orientation rather than in a straight posteroanterior direction; in this way, undesirable anterior traction on the posterior neck skin is avoided.

Postoperative care follows accepted plastic surgery principles. Support of the submental tissues is particularly beneficial. Consequently, the patient is urged to keep a chin strap in place around the clock for 1 or 2 weeks; the strap can consist simply of a lightly stretched single-layer band

Figure 3. A 54-year-old woman who underwent combination face lift, 4-lid blepharoplasty, and Roman II-X platysmaplasty. A, Preoperative view. B, Postoperative view 3.5 years after surgery.

Figure 5. A 63-year-old woman who underwent face lift, 4-lid blepharoplasty, Roman II-X platysmaplasty, and perioral dermabrasion. A, Preoperative view. B, Postoperative view 6 weeks after surgery.

Figure 4. A 54-year-old man who underwent face lift, 4-lid blepharoplasty, flap transposition, direct brow lift, and Roman II-X platysmaplasty. A, Preoperative view. B, Postoperative view 1 year after surgery.

Figure 6. A 54-year-old woman who underwent face lift, 4-lid blepharoplasty, Roman II-X platysmaplasty, and perioral dermabrasion. A, Preoperative view. B, Postoperative view 6 weeks after surgery.
of 3-inch Ace (Becton, Dickinson and Co., Franklin Lakes, NJ) or similar elastic bandage. The patient is informed that after this initial period, there may be some benefit to wearing the support as often as possible, even to bed, for approximately 1 month postoperatively.

Recently, we have used both intraoperative and postoperative external ultrasonic treatment. Although ultrasound is not indispensable, our experience with it has been similar to that reported by Silberg. It has certainly produced no apparent negative postoperative sequelae, and it seems to hasten resolution of swelling.

Results

Figure 2 shows a typical procedure and result obtained with W-plasty alone. Figures 3 through 6 show results achieved in combination with various facial procedures, as noted. Complaints of voice change or neck discomfort resolved in less than 2 or 3 months, and no patient exhibited any change in lower lip dynamics. Localized fine wrinkling at the midline of the cervicomental angle was also avoided.

Discussion

The design of the Roman II-X platysmaplasty evolved from various early concerns that developed in the course of my clinical experience. These included ptosis of the submaxillary gland, a subtle disturbance of the symmetry of lower lip movement that may sometimes follow transverse sectioning of the platysma, and the presence of residual skin laxity and fine wrinkling at the midline cervicomental angle, seen in some patients after platysmal plication. In a few patients, I also noted prolonged and sometimes seemingly permanent complaints of a feeling of constriction of the throat or a subtle change in phonation or swallowing after extended multilayer midline platysmal plication.

The procedure has a short learning curve and is recommended as an effective way to achieve definition of the cervicomental angle with minimal disturbance of the integrity of the platysma muscle and underlying structures.

References