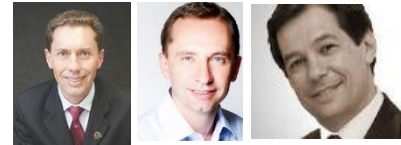


## Subplatysmal Necklift

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The neck is the primary concern for the majority of patients seeking facial rejuvenation (Auersvald, *in press*). Improving cervical contour is determinant for a successful outcome in these individuals.

Ellenbogen and Karlin's criteria of a youthful neck continue to guide surgeons. However, these principles were established for the neck in a neutral position (Frankfort horizontal position). When the neck is flexed, there is a more appropriate interpretation of the aging impact on platysma flaccidity, skin redundancy, and subplatysmal structures.

Changes in volume and position of these deep structures include hypertrophy of the digastric muscles (DMs), enlarged subplatysmal fat (SF) deposits, and hypertrophy of the submandibular salivary glands (SMSGs) (figure 1). Plication of the platysma alone - which is well



Figure 1

indicated for many thin patients - is usually not efficient for those with heavy necks, and may lead to early recurrence. Platysma is often seen as a weak muscle, lacking the necessary strength to hold up a large combined volume of SMSGs, DMs and SF.

Although some authors indicate the possibility of lifting deep structures - specially the SMSGs - through lateral platysma plication, subplatysmal necklift through a submental incision allows a direct treatment either by their reposition and/or resection. It demands specific training and a long, but rewarding, learning curve. Here is a summary of the most important steps of this surgery.

1. A thorough preoperative physical examination is necessary for an accurate diagnosis. Not all necks look the same. Individual anatomical conditions demand appropriate planning. The patient's weight, the amount of fat under the skin and under the platysma, the jaw width, the position of the hyoid (anterior vs posterior), the height of the neck, the position of the chin (retrognathic vs prognathic patients), the depth of the submental crease, and the volume of SMSGs are key factors in determining surgical strategies.

- Pre-operative photographs should include the following views: front, oblique, profile with neck in neutral position, profile with flexed neck, and upward view with flexed neck. The latter was introduced by the authors as a way to highlight the deep structures and to register the submental and mandibular ligaments (figure 2).

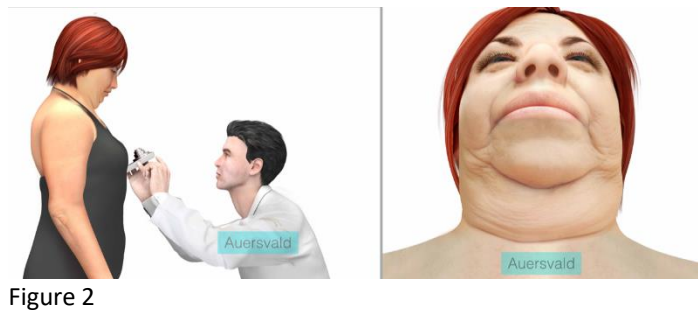


Figure 2

- General intravenous anesthesia with orotracheal or nasotracheal intubation is preferred. A tumescent local anesthetic solution with epinephrine (1:500.000) is also used.

- A submental incision is placed 1.0 to 1.5 cm anterior to the hyoid to facilitate access to the subplatysma (figure 3). The skin detachment should focus on releasing the lowest neck creases. Next, the interplatysmal and interdigastric fat should be assessed and eventually reshaped. Anterior jugular veins are often found in this area. The marginal mandibular nerve is located superiorly to the SMSG and outside its capsule. The facial artery runs laterally and posteriorly to the SMSG (figure 4).

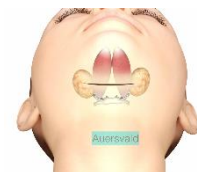


Figure 3



Figure 4

- Anterior bellies of the DMs are visualized. A stitch encompassing their pulleys approximates them, repositioning the hyoid superoposteriorly (figure 5).

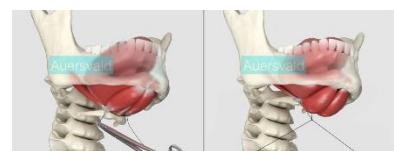


Figure 5

- DMs are evaluated and partial resection is eventually performed. A running suture plicates both DMs medially, reshaping the mouth floor (figure 6).

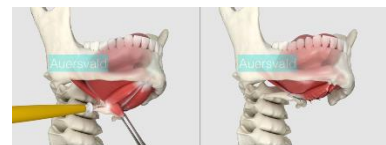


Figure 6

- The SMSG is predictably found lateral to the junction of the hyoid and DM. The capsule should be open and the gland, assessed. When hypertrophied, partial resection of the superficial lobe is indicated. Botulinum toxin is injected in the gland to prevent sialoma (7-10 units in each gland). The central artery is coagulated and a running suture totally obliterates the raw surface, preventing bleeding (figures 7 and 8)

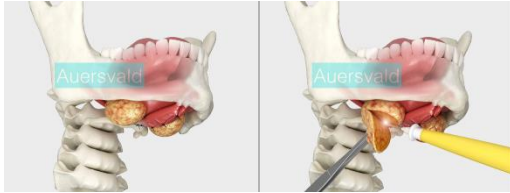


Figure 7

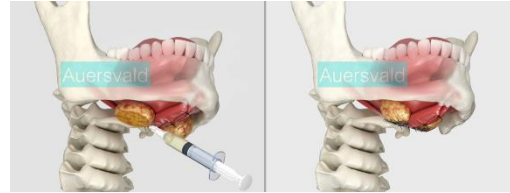


Figure 8

- Gland capsule is closed and a running suture brings the platysma in direct contact with the gland (figure 9).



Figure 9

- The retrograde dissection of the submental ligament is performed (figure 10). The platysma is plicated from the chin to the lower portion of the neck, avoiding its transection (figure 11).



Figure 10



Figure 11

- Hemostatic net is applied to prevent hematoma from occurring and to facilitate skin redraping (figure 12). It is removed 48 hours after surgery. Drains are not used.

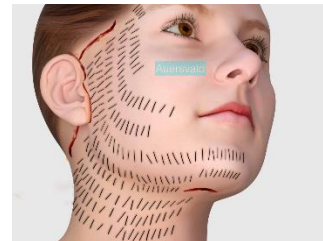


Figure 12

Postoperative pain is usually moderate to intense. The injection of corticosteroid in some of the treated areas as indicated by Dr. Ozan Sozer (personal recommendation) has improved the analgesic control.

Figure 13 illustrates a 52-year old patient who underwent subplatysmal necklift combined with facelift.



Figure 13

The most common complications in subplatysmal necklift are transient weakness of the lower lip depressor muscle (5.6% of patients) and sialoma of the SMSG (2%).

No major bleeding has been observed in a series of 814 subplatysmal necklift patients, 602 of which had partial resection of the SMSG.

Subplatysmal necklift is capable of restoring a pleasing cervical contour. Although it requires advanced surgical training, current techniques have ensured safety and reproducibility to the procedure.

*The authors have no financial interest in any product mentioned in this article.*

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