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Platysma-SMAS plication facelift☆

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Summary Whilst numerous facelifting techniques have been described there remains a continual drive towards minimal access and limited 'downtime' in order to maintain the effects of more aggressive procedures. The MACS (minimal access cranial suspension) lift is well-established, but has limitations, particularly with respect to its vectors and effect on the neck. Platysma-SMAS plication (PSP) represents an evolution that seeks to balance procedural invasiveness with recovery time and aesthetic outcome. The study reports the initial 117 consecutive patients who were followed prospectively. Using a 5-point assessment scale, the cosmetic outcome was graded 4.45 and 4.49 by patients and surgeon respectively at initial follow up. At final follow up 82.2% of scores had either improved or remained the same and overall grading was 4.43 and 4.45 respectively. Complications were seen in 15.4%:3.4% haematoma and 3.4% transient facial nerve motor dysfunction. There were no long-lasting or permanent motor palsies and all occurred in the initial 30th centile. We have found platysma-SMAS plication to give high satisfaction and reproducible results. With the SMAS being plicated rather than being raised as a flap, it is a quick procedure and is safe with regard to the facial nerve. The technique has furthermore been shown to be easily acquired by less experienced aesthetic surgeons.

Facelifting has evolved from relatively simple, skin-only procedures originating in the early 20th Century[1] through increasingly invasive superficial musculoaponeurotic system (SMAS) manipulations after the latter's importance was introduced by Skoog in the 1970s.[2] Amongst numerous options the SMAS may be simply elevated and advanced laterally,[3] dissected at various planes,[4,5] rolled upon itself with mesh to augment malar projection[6] or excised.[7] An understanding of the importance of multiple vectors of SMAS traction was provided by Mendelson.[8] Of late, a paradigm shift towards minimally-invasive techniques, to limit facial nerve complications and reduce recovery time, has reached an apogee in the form of Wu's 'Woffles lift' that employs percutaneous barbed threads and no incisions.[9] The MACS[10] was itself a derivation of Saylan's 'S-lift'[11] that sought to improve on the anatomical basis, suture anchoring position and skin excision. A modification

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of Baker's lateral SMAS-ectomy,[7] published during this study, echoes a similar philosophy vis-à-vis the emphasis on conjoint SMAS-platysma intervention below the angle of the mandible for an optimal result on the neck.[12]

Since its description in 2002, the MACS[10] has proven effective, particularly for younger patients concerned with early jowling, minimal neck ptosis and the desire for minimal downtime. Experience with the procedure, and some of its limitations, led to the evolutionary concept herein described: the new procedure being referred to as the 'platysma-SMAS plication' (PSP) lift. Chief modifications include multiple sutures for a dual-layer SMAS plication and resection of excess infra-auricular SMAS. There is also a different approach with respect to the skin incision and vectors of traction, which seeks to combine the advantages of SMAS dissection and suturing techniques whilst minimising complications and maximising the outcome: it may thus be regarded as an 'halfway house' and is particularly useful for the mid-face.

Patients and methods

Between August 2004 and May 2007 122 consecutive patients were followed prospectively. Standard general demographic information was collated, in addition to the specific assessment of outcome as shown by the standard proforma (Figure 1). Both patient and surgeon utilised the linear analogue scale (LAS) whereby poor and excellent results scored 1—5 respectively. All patients received informed consent and multiple-view photography pre- and post-operatively. The study was approved by the local ethics committee equivalent.

The surgical procedure is as follows: patients are prepared as for a standard facelift with tumescent infiltration (20 ml 0.5% bupivacaine and 1 ml 1:1000 adrenaline in 200 ml normal saline) into the subcutaneous plane. The incision extends from the temporal area anterior to the ear, passes post-tragal, and into the post-auricular sulcus. A posterior extension is used as required and subcutaneous dissection tailored to each patient sufficient for an acceptable vector of SMAS traction. The anterior SMAS is tractioned in a postero-superior direction to provide a satisfactory effect on the jowl (Figure 2). With 2/0 PDS

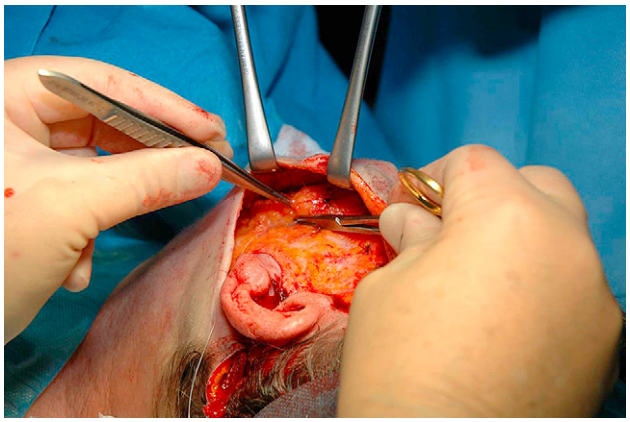

Figure 2 Key SMAS plication suture for the nasolabial fold.

(Johnson & Johnson Medical Ltd, Livingston, Scotland) this SMAS is then attached to the relatively immobile pre-auricular parotido-masseteric fascia. Further sutures complete the platysma plication below the mandibular angle and surface irregularities addressed by SMAS imbrication with 3/0 Vicryl (Johnson & Johnson). Excess SMAS in the infra-lobular region is excised (Figure 3), following hydrodissection, and closed with 3/0 Vicryl. Following meticulous haemostasis, excess skin is trimmed and the wound is closed over a suction drain with 4/0 and 6/0 nylon. A facelift dressing remains overnight and is removed with the drain the following morning. Sutures are removed at 4—6 days and the patients reviewed as outpatients at 6—12 weeks (termed 'initial') and 6—12 months ('final') where both patient and surgeon provide an outcome assessment.

Statistical analysis was performed with Kappa's correlation.

Results

General demographics

Of the original cohort, five had incomplete data and of the remaining 117, all bar eight were women (two male—female transgender patients being analysed as biologically

	Right	Left
Nerve damage		
Asymmetry		
Unevenness		
Scars		
Eye closure		
Subconjunctival		
Corneal symptoms		

Surgeon assessment				
5	4	3	2	1
very happy	happy	OK	unhappy	very unhappy

Patient assessment				
5	4	3	2	1
very happy	happy	OK	unhappy	very unhappy

Figure 1 Assessment proforma used to obtain satisfaction scores.