METHODS: A 3D surgical model was established by creating a 3D printed skull covered with elastic cloth. 10 plastic surgery residents enrolled in the study. CAD was performed for all cases based on 3D CT data. The surgical templates were designed and printed out for the experimental group. Experimental/control group (n=5 each) performed facial contour surgeries on the surgical model with/without 3D surgical templates. The effectiveness of the surgical model was evaluated by a trainee-reported questionnaire. The surgery time, symmetry, surgical accuracy, and learning curve were recorded and compared between two groups.

RESULTS: Trainees reported the training model to be very helpful (4.9). When using 3D surgical templates, the outcome symmetry and accuracy were significantly improved compared. The learning curve was also shortened in reduction genioplasty, reduction malarplasty and genioplasty.

CONCLUSION: Our training model may be considered as a plastic surgery educational tool for shortening the learning curve and improving outcomes in facial contour surgeries.

Pitfalls of Laser Liposuction

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INTRODUCTION: Laser liposuction was developed as an alternative to the manual method used in tumescent and traditional liposuction.

Laser liposuction, which is also known as liposculpture and laser lipolysis is somewhat different than traditional liposuction. In some techniques of laser liposuction, suction is used, while in others no actual suction is used. Instead of using the cannula to remove fatty deposits beneath the skin, the cannula houses a laser and the laser is used to literally melt the fat of the target area away.

The heat of the laser is responsible by contracting the tissues which causes the skin to tighten and become smoother.

PURPOSE: The purpose of this work is to present our results in 80 patients using two different laser liposuction devices which different wave lengths in one single probe. One device, the Palomar SlimLipo™ uses 924 nm and 975 nm wavelengths and the second, the Deka SmartLipo™ uses the 1064 nm wavelength, both aiming in the same target: shrink the skin!

METHODS: We evaluated the results obtained in these 80 patients who were treated with the SlimLipo™ and the SmartLipo™ Laser liposuction devices. All patients were operated from November 2010 to March 2013 and evaluated 90 days after the procedure. This is, according with the manufacturers, the “peak” moment of the “shrinking” of the skin.

RESULTS: The main complication of laser liposuction is the burn, which occurs from the inside to outside and is always a third-degree burn. The biggest difficulty is the early diagnosis if an area is being subjected to excessive heat.

In our series of 80 patients we had 4 burns (5.7%), all with the SlimLipo™ liposuction device (total of 42 patients). None with the SmartLipo™ liposuction device (total of 38 patients).

In our opinion the disposable probe of the SlimLipo™ device is responsible for the high risk of burns, once there is no security mechanism to avoid the probe to go through the dermis. The SmartLipo™ optic fiber goes through a non-disposable probe and, if it touches the dermis the tip goes back through the cannula.

CONCLUSION: We can say that both devices can achieve excellent results shrinking the skin, but the disposable probe of the SlimLipo™ device is responsible for a high risk of complications (burns).

Eyebrows Elevation – a New, Easy and Cheap Trick

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INTRODUCTION: Redeeming a technique published in 1967 by Dr. René Guillemain, “the Curl lift”, we find a very easy and a long-lasting result procedure to elevate the eyebrows, in a fast resolution ambulatory intervention.

PURPOSE: The “Curl lifting” technique for eyebrows elevation consists in soft tissues elevation using smooth threads tied up in the level of the hairline. The threads are inserted under the skin, in two different surgical plans in order to avoid the “undermining effect” when the threads are tied up.

METHODS: In all cases, local infiltrative anesthesia is used.

A 15’ blade scalpel is used to stab the skin in each corner of the preliminarily marked square contour. Then, a blunt Reverdin needle is inserted through the external superior orifice in a deep plan, until it goes out across the external inferior orifice and pick up the smooth thread. Then the needle returns bringing the thread. After this the needle is inserted, again, through the internal inferior orifice, in a superficial sub-dermal plan until goes out across the external inferior orifice and pick up again the smooth thread. Then these maneuvers are repeated till the square is completed and the thread’s ends are tied up, cut and buried under the skin, using a delicate hook. The last step is a bandage with Micropore at the forehead, for three days, to immobilize the region.

RESULTS: The routine operation is easy and quick to perform with a very short learning curve. The obtained outcome proves to remain for a long time.

We are using the Curl-lifting technique for eyebrows elevation, above described, since May 2003, in more than 800 patients from 35 to 82 years (average of 58.5 years).

CONCLUSION: The “Curl” lifting technique using smooth threads for eyebrows elevation is one more excellent tool in the therapeutic arsenal of ancillary procedures for the correction of facial aging. This is a minimal invasive ambulatory procedure which has as main advantages no visible scars and a short learning curve.

This technique has the advantage of no visible scars, like the Castañares technique and the forehead lifting, easy equilibration of both sides which is difficult with Aptos threads, has a very short learning curve and is a low-cost procedure, the opposite of the endoscopic techniques.

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A New Simplified Macs Lift

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INTRODUCTION: The MACS lift (minimal access cranial suspension lift) was described by Patrick Tonnard and Alexis Verpaele, from Belgium, in 2001.

The objective of this abstract is to present a new simplified version to be used in smoking patients, elderly patients and to retouching those patients that already have their face-lifting done, some years ago, or even the ones that, for physical reasons, can’t be submitted to a larger surgery.

METHODS: Like the MACS lift the incision is limited to the skin hairline junction above and anterior to the ear. There is no extension behind the ear.

The area of undermining, is very small so, the blood supply to the skin is much more robust and the technique is therefore safer in smokers. There is almost no risk of skin necrosis.

Permanent suspension sutures pass down from the temporal aponeurosis to the neck and jowls and then return to the starting point, making a circle (purse-string suture). When the threads are tied up the SMAS (superficial musculoaponeurotic system) is elevated in a vertical vector.

The operation is performed under local anesthesia and no hospitalization is required. The procedure generally takes about 1 hour and in nearly all cases should be combined with elevation of eyebrows with threads (Curl lifting) and liposuction of submentonian region, to remove the excess of fat.

During the first post operatory night, the patient is placed in a light bulky woolen bandage. The bandage is removed the following day. Following this, the patient usually looks fairly reasonable. In