



E-posters abstract book
PLASTIC SURGERY

PS-AF-01

Reconstructive Outcomes After Temporal Bone Resection for Squamous Carcinoma: Lessons Learnt

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Introduction & Aim: Squamous carcinoma (SCC) of the temporal bone, traditionally an aggressive disease with poor prognosis, has seen improved survival following advances in surgical resection, reconstruction and oncological therapy. Reconstruction facilitates dural seal, soft tissue coverage and facial reanimation. With the advent of microsurgery, free tissue transfer has become mainstay. The aim of this study is to share the lessons learnt from our experience of reconstruction after temporal bone resection for SCC over the last 30 years.

Method: Retrospective case study of immediate reconstruction after temporal bone resection for treatment of primary SSC at a regional skull base unit over a 30 year period (1982 – 2012). Patient demographics, tumour grade, neoadjuvant therapies, ablative and reconstructive operative details, operative times and complications were assessed. Surgical management was dictated by Pittsburgh tumour stage. Lateral temporal bone resection (LTBR) or extended temporal bone resection (ETBR) with or without facial nerve sacrifice was performed by a team of neuro-otologists. Immediate reconstruction with local or free tissue transfer and facial nerve work of varying complexity and combination was performed by plastic surgeons. Patients received post-operative radiotherapy at six weeks unless contraindicated. Complications were categorised as medical, ablative or reconstruction related.

Key results: Records identified sixty patients for which reconstructive notes were obtained in fifty eight. Eleven (18%) underwent LTBR and 49 ETBR (82%). Forty six (70%) had free flap reconstruction and eleven (20%) local/regional flap. Anteriolateral thigh (ALT) was the flap of choice; providing skin and fascia coverage, adequate bulk for defect fill and allowing for oncological resection and simultaneous flap harvest reducing operative time. Scalp rotation was the most common local/regional flap used for smaller defects where appropriate. Immediate facial nerve procedures were undertaken in thirty seven cases (62%). Neither greater theatre time or neo-adjuvant radiotherapy were associated with increased complication rates. Hematoma (12%) and flap breakdown (5%) were the most common reconstruction related complications. Twenty six (43%) patients had recurrence during follow up of which most had been stage T4.

Conclusion: Free flaps have become the mainstay of reconstruction for SCC temporal bone defects. The ALT is the favored flap given the choice of tissue compositions. There is still a role for local/regional flaps in smaller defects and where comorbidities of the patient restricts operative time.

PS-AF-02

USE OF SUBCUTICULAR VS. CONTINUOUS SUTURE IN THE PRIMARY CLOSURE OF SUPERIOR BLEPHAROPLASTY

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Von Graefe was the first physician to describe a case of palpebral reconstruction in 1818. At present, blepharoplasty plays a fundamental role in both functional and aesthetic facial surgery.

One of the most frequent changes related to aging is recognized in the redundancy and laxity of the upper eyelid skin with the appearance of wrinkles and “eyelid bags” that transform the facial appearance.

The objective of this study is to determine if the subcuticular suture gives a greater cosmetic score in the closure of superior blepharoplasty

A pilot study was carried out, adhering to the principles established in the Helsinki Declaration. We included 11 consecutive patients who underwent superior blepharoplasty and who had a complete photographic as well as a complete medical record. Patients who had received another facial aesthetic procedure were excluded.

Surgical Technique: Using a high-intensity radiofrequency (4MHz) in monopolar mode, a skin spindle is removed, orbicularis muscle strip is removed with scissors and fat bags are removed and cauterized with bipolar. Each patient was their control. On the right side we used subcuticular closure with nylon 5-0 and left side was closed in a continuous fashion with nylon 5-0. In both eyelids 2-octylcyanoacrylate was placed on surgical wounds.

A photographic record was made at 15 days, using Visual Analog Scale and Manchester’s Wound Classification.

We analyzed 11 patients (22 eyelids) were analyzed. 80% women and 20% men.

The Mann Whitney statistic was used. For the visual analogue scale we found a better aesthetic of the left eyelid with respect to the right one ($U = 30.5$ $p = 0.03$). Meanwhile with Manchester scale we did not find statistically significant difference between both eyelids. ($U = 39.5$, $p = 0.15$)

In conclusion, we believe that the subdermal suture should be the gold standard for primary closure in upper blepharoplasty as it is an effective and safe method. Despite not finding significant differences through the Manchester scale, we found a significant difference in the visual analogue scale, which could translate into a better perception of the patient towards a faster recovery.

PS-CR-01

Alternatives to animal testing in wound healing : a study focusing on in vitro and in vivo rat tissue

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The role of epidermal growth factor (EGF) has been studied in normal and pathological skin cicatrisation. It is involved in the migration and multiplication of keratinocytes and fibroblasts, the synthesis of collagen and the formation of granulation tissue. Our work consists in putting in place alternative tests to the animal experimentation to evaluate the effect of the cicatrizing molecules. In this alternative approach, we used EGF as a healing molecule using a mechanistic approach to the healing phenomenon to mount the in vitro tests. The results found were compared with those of in vivo in order to assess their productivity. The first part of our work was devoted to the evaluation of the role of EGF in vivo on the potentiation of fibroblast proliferation by the synthesis of collagenic hydroxyproline tissue (HP) (increase in the EGF-treated batch of 70 % And 30% relative to the control batch on day8 and day15 excisional station) by performing healing kinetics on an excisional wound model of 2 cm diameter on the dorso-cervical part developed in the laboratory rat (day4-8-15), Followed by a histological and biochemical study by analyzing HP in order to guide the in vitro study on cutaneous healing, we explored the state of oxidative stress and its involvement in the tissue repair process by measuring Parameters Catalase, MPO, NO in the scar tissue (day4-8-15). The histological study was carried out on the observation of the phenomena of fibroblasia and reepithelialization which is very elaborated after 15 days of treatment with EGF. The second part focused on the in vitro evaluation of the effect of EGF on reepithelialization and fibroblasty on a day primate culture by evaluating its influence on skin cell multiplication, epidermal keratinocytes, dermal fibroblasia And the synthesis of collagen by the latter by measuring the level of HP on cell culture (cell rate 2 x higher after addition of EGF to the cell suspension). Our results were conclusive and promising in the setting up of A battery of in vitro tests, alternatives to animal experiments as well as the implication of the oxidative stress in the process of cutaneous healing.

Key words: Wound healing, hydroxyproline, EGF, oxidative stress, in vitro test.

Application alternatives of turnover flaps in special cases of head and neck cancer

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The reconstruction of tissue defects in special anatomic localization (e.g. partial or total resection of the nose) or the surgical treatment of certain complications (e.g. orocutaneous or pharyngocutaneous fistula) occurring after the radical resection of malignant head and neck tumors is a complicated, challenging problem for the surgeon. In this presentation we discuss our favorable experience with turnover flaps in reconstructive surgery, which are skin flaps turned over by 180 degrees on their blood supplying pedicle. At our Department flaps have been used to restore the anatomical and physiological function without significant operative burden for the patient in some of our cases as the ultimate surgical alternative. These defects were the results of either the radical resection of head and neck tumors (skin tumors of the nose, carcinoma of the submandibular gland), or have developed as a postoperative complication after total or partial laryngectomy. Turnover flaps were used in such special cases, when the surgical field was surrounded by partially scarred, irradiated skin or tissue harvesting was limited due to the anatomical localization. The harvesting technique of these flaps is moderately complicated, blood supply is sufficient and they have provided a stable and strong basis for the complete reconstructive method.

Ascending Facial Necrotizing Fasciitis Secondary to Bisphosphonate-Related Osteonecrosis of the Jaw

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Purpose

Necrotizing fasciitis (NF) is defined as rapidly progressive necrosis of subcutaneous fat and fascia. NF is most commonly found in the extremities, trunk, and perineum; NF occurring in the head and neck is relatively rare. Facial NF is associated with a mortality rate approaching 30%, as well as devastating morbidity, including disfigurement and airway compromise. Usually, facial NF is associated with odontogenic infections, which have a tendency to descend into the neck along the cervical fascia. In this study, we report an unusual case of ascending facial NF in a patient who taking bisphosphonate.

Method

A 61-year-old male who had been a smoker for 42 years presented to our clinic with severe swelling, erythema, and a sensation of heat in his right cheek that developed 10 days previously. The patient had a medical history of rheumatoid arthritis (RA) and had been treated with corticosteroids and methotrexate for 7 years. In addition, he had been taking alendronate (Fosamax) for 6 months to treat osteoporosis. 5 months before the visit to our hospital, he received a dental implant in the right molar area.

On arrival, the patient had severe swelling and erythema in the right cheek and fluctuation in the right temporal area. An initial panoramic view and computed tomography (CT) scan revealed osteonecrosis in the mandible around the site of the dental implant, and extensive cellulitis and an abscess was noted in the right masseter muscle and in the right parieto-temporal area

Intraoperatively, a severe abscess in the buccal fat pad and masseter muscle was noted. Also, the superficial lobe of the parotid gland was necrotized and branches of the facial nerve were exposed

Result

After serial wound irrigation and curettage was performed, the defect was covered with a rotational fasciocutaneous flap and skin graft. There were no complications, such as skin necrosis, hematoma or infection.

Conclusion

Odontogenic infection and facial NF can develop secondary to BRONJ. To prevent this condition, patients with a history of bisphosphonate treatment who need dental operations should stop taking bisphosphonates for a sufficient period of time before the dental procedures. This is especially true for patients in immunocompromised states, as the risk of infection is significantly increased in those cases. If facial NF is suspected, prompt surgical interventions, broad-spectrum antibiotic treatment, and aggressive diagnostic tests such as MRI and CT are essential in order to minimize complications.

Double Forehead Flap (“sandwich technique”) for Nasal Reconstruction after an Extensive Squamous Cell Carcinoma Resection.

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Objective: The nose is a functionally complex organ implicated in breathing, olfaction, and phonation, with a critical role also in the aesthetic appearance of a person. This aspect should be carefully considered whenever a total or subtotal rhinectomy is performed for resection of locally advanced nasal cancer. Reconstruction of large nasal defects, is extremely difficult especially when local nasal lining flaps are not available. The aim of this report is to present the outcomes of a reconstruction of the nose after an extensive resection, using a double forehead flap (“sandwich” technique).

Material and Methods: A 82-year-old man presented with a large skin cancer of the nasal dorsum extending to the right cheek, which had been previously subjected to multiple incomplete surgical removals and radiotherapy. Preoperative computed tomographic scan showed an extensive lesion infiltrating the anterior aspect of the nasal septum, the triangular and alar cartilages bilaterally, and the nasal bones. The biopsy of the lesion indicated the diagnosis of squamous cell carcinoma moderately differentiated. Total body computed tomographic scan excluded a systemic dissemination of the disease. Under general anesthesia, a subtotal rhinectomy with preservation of the caudal portion of the alar cartilages and columella was performed. A first forehead flap was used for the internal nasal lining and nasal cartilaginous pyramid was reconstructed with grafts from the right auricular concha and the nasal septum. To restore the external skin coverage, a second forehead flap was used and a local advancement flap covered the cheek defect. The forehead donor site was covered with a split – thickness skin graft.

Results: No intra- or postoperative complications were encountered. Two weeks after the patient reported no major complaints but a mild right nasal obstruction because of swelling of the flap with bulky tissue vegetating intranasally. Flap division and thinning was performed after two months. After a 1-year follow-up, no local or distant recurrences and no bone displacement or resorption were observed. Moreover, the patient was satisfied in terms of nasal breathing and aesthetic outcomes.

Conclusion: Reconstruction of the nasal lining in subtotal rhinectomy defects remains a very difficult procedure. This case demonstrates a possible method of reconstruction using a “sandwich” double forehead flap. This flap is easy to harvest, has a long vascular pedicle, and possesses the necessary pliability and thinness to be easily folded without creating excessive bulk. Therefore, it can result in a good functional and aesthetic outcome.

PS-CR-05

Ear reconstruction after cutaneous tumor excision

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Purpose: Skin cancer is the most common form of malignant disease in Caucasians, with the head and neck being the sites most frequently involved. The approach of this lesions should always be multidisciplinary, with the ENT surgeon having a fundamental role.

The extent and aggressiveness of skin cancer should not be underestimated, otherwise inadequate treatment and local recurrence can lead to uncontrollable disease and consequent high morbidity and mortality.

Material and Methods: The authors present four consecutive cases, operated by the same surgeon, presenting with non-marginal/conchal ear tumors. The authors used two flaps, one pre auricular when the defect was only of the lateral surface of the ear, and one post auricular if the medial skin was involved. One case was reconstructed using pre and post auricular flap, and the three other only the pre auricular flap was used. These local flaps need precise pre operative planning for perfect closure without tension, and minimum morbidity from the donor-site. The schematic drawings for each flap are presented with photo documentation of pre, intra, and post-op of all cases.

Results: Complete excision of the tumor was confirmed by the histopathology, with three being basal cell carcinoma and one squamous cell carcinoma. No complications occurred. The follow-up ranged from 4 months to 18 months. Good aesthetic outcome was achieved in all patients.

Conclusions: Reconstruction of the auricular conchal cavity is relatively difficult because of its unique structure, shape, and location. Pre and post auricular flaps are a useful tool to have in our armamentarium for ear reconstruction. The two flaps can be used either alone or in combination.

Electronic cigarettes are as toxic to skin flap survival as tobacco cigarettes.

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Purpose:

Electronic cigarettes (e-cigarettes) have become increasingly popular. However, information about the health risks associated with vaping is sparse. Currently, no published studies examine the effects of chronic e-cigarette exposure on microcirculation or perfusion. Using a rat skin flap model, we examined the toxic effects on microcirculation and perfusion e-cigarettes may have in comparison with tobacco cigarettes.

Methods:

58 rats were divided into a room air, tobacco cigarette smoke, medium-nicotine content (1.2%) e-cigarette vapor, or group a high-nicotine content (2.4%) e-cigarette vapor exposure group. After 4 weeks of exposure, a random pattern, 3x9 cm skin flap was elevated on the dorsum of the rats. At 5 weeks, flap survival was evaluated digitally, and the rats were euthanized. Plasma was collected for nicotine and cotinine analysis, and flap tissues were harvested for histopathological analysis.

Results:

Digital evaluation of the dorsal skin flaps demonstrated significantly increased necrosis in the vapor and tobacco groups. The average necrosis within the groups was as follows: control 19.23%, high-dose vapor 28.61%, medium-dose vapor 35.93%, and tobacco cigarette 30.15%. While the e-cigarette and tobacco cigarette groups did not differ significantly, each individual group had significantly more necrosis than the control group ($p < 0.05$). These results were corroborated with histopathological analysis of hypoxic tissue.

Conclusions:

Both the medium and high-nicotine content e-cigarette exposure groups have similar amounts of flap necrosis and hypoxia when compared to the tobacco cigarette exposure group. Nicotine-containing e-cig vapor may be just as toxic to skin flap survival as tobacco cigarettes.

Facial Artery Perforator Flap: Anatomical Study and Clinical Application

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Background:

The concept of the facial artery perforator flap was developed to gain more freedom during the reconstruction of perioral and perinasal defects. This flap allows tailor-made reconstruction and shifting from the traditional two-stage procedure to a one-stage technique. In this cadaveric study the authors describe accurately the anatomical characteristic of facial artery perforators (FAP) in order to describe FAP flap for perioral and perinasal defect.

Methods:

The authors performed 20 dissections of facial arteries (FA). All FAPs greater than 0.5 mm were dissected to study number, length, and diameter of FAPs. In addition, the authors conducted a review of the literature concerning FAP anatomical studies in order to enhance their anatomical knowledge of FAP flaps. We also performed five cases of FAP flap for perinasal and perioral defect.

Results:

We identified a mean of 5,6 +/- 1,5 mm FAPs per hemiface. The average length of all FAP was 17.6 ± 1.9 mm, and the mean diameter of the FAP was 0.91 ± 0.2 . A pair of comitantes facial venae perforators was found lying along the sides of the FAPs in all cases. All patients received satisfactory single-stage reconstruction with five FAP flaps.

Conclusions:

The nasolabial skin is the donor site of choice for perinasal reconstruction. The facial artery lies medial to the nasolabial fold and provides reliable and consistent cutaneous perforators that can be useful for perforator flap reconstruction. This flap can be used as a treatment of small or medium defects of the perinasal region if a one-stage reconstruction protocol is planned. However, other clinical or comparative studies should be performed in order to define the exact indication of this flap as a first-line method for covering facial skin defect.

Lower Eyelid Reconstruction with Mustardé's Flap

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OBJECTIVES:To analyze the technique of reconstruction of the lower eyelid with the Mustardé flap or advancement flap.

METHODS:Four patients with neoplasia located in lower eyelid were analyzed. Tumors were confirmed after excision with histopathological examination, two basal cell carcinomas (CBC) and two squamous cell carcinomas (SCC). Patients were photographed preoperatively and postoperatively following the same pattern and with the same camera. All patients were referred for treatment at the Plastic Surgery Service of Sorocaba Polyclinic. Tumor resection was performed in all patients followed by a reconstruction of the region with the techniques described by Mustardé.

RESULTS: Four patients older than 50 years, three female and one male, two with basal cell carcinoma (BCC) and two with squamous cell carcinoma (SCC) were operated on. Among the cases operated on, three were located on the lower right eyelid. The remaining cases affected the middle portion of the lower left eyelid and presented with other ulcerated lesions in the malar region. All the patients who had had were submitted to the Mustardé flap. The four patients were cured of the tumors, the surgical margins were free to anatomopathological analysis. None of the patients presented recurrence until the present moment. They also did not present major complications during the post-operative period. They presented only edema of the palpebral with difficulty of the ocular opening and discreet hematoma in the first days after the surgery, that was resolved in a few days later. All patients were advised to rest with the head of the raised bed, in addition to a cold compress in the palpebral region so that the edema was reduced. Prophylactic antibiotic therapy was also performed. The stitches were removed about 21 days postoperatively. These patients were operated in the first half of 2016 and continue to be followed up at the Plastic Surgery of the Polyclinic of Sorocaba. Currently, they present good functional, anatomical and aesthetic results of the lower eyelid, and all are satisfied with the operative result.

CONCLUSION: There are several reconstructive techniques to repair palpebral defects. However, the choice of the best technique should be individualized according to the experience of the surgeon and according to the product of the tumor resection, always aiming at restoring the eyelid function and secondarily the aesthetic result. The technique of Mustardé was described during World War II and to this day is considered one of the best options for extensive lesions in the lower eyelid.

PS-CR-09

Nasal chondrocytes and dextran/pullulan scaffold for cartilage tissue engineering.

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The nose, because of its central location, is an essential element in anatomical facial harmony. Nasal amputations, whether secondary to a tumor resection surgery, traumatic or congenital represent an aesthetic trauma and carry heavy psychological and social consequences for patients.

The objective of this study is to investigate the association of human nasal chondrocytes to a composite biomaterial and evaluate histologically and biomechanically the formation of cartilage tissue.

MATERIEL :

Human nasal septum cartilage samples were obtained with informed consent from patients undergoing reconstructive rhinoplasty. The ability of constructs associating the biomaterial and human nasal chondrocyte (HNC) to form a cartilaginous tissue *in vivo* was investigated in a sub-cutaneous site in nude mice.

The compression module of the explants was determined by the technique of Dynamic Mechanical Analysis (DMA) on a dynamic mechanical spectrometer.

RESULT :

Our data indicate that HNC also express type II collagen and aggrecan and maintained their phenotype in three-dimensional culture. Maturation of the neocartilage was not reflected in the significant gain in mechanical stability between the 4 and 8 weeks groups and studies to improve the mechanical stability will be necessary.

CONCLUSION :

The constructs are biocompatible and show potential for *in vivo* maturation, and eventual clinical application.

Nasal Reconstruction : algorithm for management of nasal defects.

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Nasal reconstruction is always challenging for plastic surgeons. Nasal tissue defects can be caused by tumor removal, trauma or by any other insult to the nasal pyramid. Its midfacial localisation and the relationship between convexities and concavities of nasal subunits make impossible to hide any sort of deformity without a proper reconstruction. The goal of treatment is to appropriately define the defect and then to select the best reconstructive options. The plastic surgeon must reestablish all deficient layers of the nose (support, lining, and external cover). Due to the special characteristics of the nasal pyramid surface, the removal of the lesion or the debridement must be performed according to nasal subunits as introduced by Burget. An anatomical reconstruction must be completed as far as possible, trying to restore the nasal lining, the osteocartilaginous framework and the skin cover. Afterwards, the reconstructive technique or a combination of them must be selected according to the size and the localisation of the defect created, and tissue availability to fulfil the procedure. The aesthetic qualities of nasal reconstruction are reviewed and an algorithm that provides a basic plan of approach is presented. I present our algorithm for nasal reconstruction according to the size and localization of the defect, and donor tissue availability.

PS-CR-11

Our experience of total nasal reconstruction in a multi stage procedure with a radial forearm flap/ rib cartilage grafts and a paramedian forehead flap

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Introduction

Total nasal reconstruction is one of the most challenging surgical procedures in plastic surgery. The goal is to reconstruct a natural and inconspicuous appearance as well as a good functioning nose.

The reconstruction includes the restoration of the lining, the framework and the cover. This article will demonstrate our experience with a multistage reconstructive concept. Thereby the radial forearm flap is used in 21 cases to restore lining. For framework reconstruction rib cartilage/bone grafts are used. The cover is restored with the paramedian forehead flap with or with forehead expansion.

Material and Methods

We will demonstrate our philosophy for the design of the forearm flap. Actually we are using two different designs and the specific indications are discussed. Different aspects of framework reconstruction will be demonstrated and explained. This includes modifications of the central framework as well as the reconstruction of the sidewalls. Concerning the cover we will explain the advantages and disadvantages of expansion of the forehead.

We also will discuss the observed complications such as lining loss, framework infection and cover problems. Our salvage strategies are demonstrated.

Results

Our results will show that natural looking and sufficiently breathing noses can be reconstructed with autologous tissue. In general we had to perform 5-8 operations to achieve a satisfying result. None of our patients regretted the reconstruction, although in some cases the overall process took more than 6 months.

Conclusion

Total nasal reconstruction is a very challenging and sometimes frustrating surgical task. But it is the core idea of plastic surgery: to restore natural appearance as well as function. The thankfulness of the patients is the motor to keep on performing this demanding surgical procedure. On goal of the future must be to reduce complications rates and thereby gain more safety for the patients.

Paul Tessier facial reconstruction in 1970 Iran, a series of post-noma defects

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Aim:

Paul Tessier was a pioneering plastic surgeon who founded Craniofacial surgery and had an international influence in the field of reconstructive surgery. We reviewed his techniques in the reconstruction of post-noma defects in Iran in the late 70s.

Patients and Methods:

We studied a series of 23 patients operated on by Tessier from May 1974 to September 1978 in Iran (property of Association Française des Chirugiens de la Face). They all suffered from noma in childhood with major facial defects. Tessier described the clinics of defects and each surgical technique used for the facial reconstruction with very detailed notes and photos.

Results:

14 female and 9 male with mean age of 24 were operated on for reconstruction of post-noma defects. 10 suffered from simple lip and cheek defects, 9 also from nose defects and 4 from extensive facial defects. Abbe flaps were used in 15 patients to reconstruct the lips completed by commissuroplasty in 6 patients. Nose defect were almost always reconstructed with nasofrontal flaps (10 cases). The outer cheek was reconstructed with a cervical rotation flap (4 cases), or with a temporafrontal flap (6 cases). The inner cheek was reconstructed using a Barron-Tessier myocutaneous flap (10 cases). Of the 23 patients, flap necrosis occurred in only 5 cases (Barron-Tessier in 4 of those).

Conclusions:

Tessier was a pioneering plastic surgeon who used local flaps to reconstruct these important facial defects. He had a high rate of success except for the Barron-Tessier island flaps used to reconstruct the inner cheek, nowadays often replaced by free flaps. The study of his very methodical reasoning is also of interest as it emphasizes step-by-step planning to provide the best surgical procedure to the patient but also to improve one's own surgical technique.

POSTAURICULAR ISLAND FLAP OR "REVOLVING DOOR": TWO CLINICAL CASES.

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INTRODUCTION:

Postauricular island flap, also called "revolving door", is an ingenious reconstructive procedure for defects produced by atrial concha lesions excision. It allows an entire auricular shell excision including its external skin and cartilage, with magnificent aesthetic results.

MATERIAL AND METHODS

We present two cases of patients with atrial concha tumors in which the postauricular flap technique was used to reconstruct the defect created by the lesions excision.

Case 1

A 62-year-old man presented with a raised one-centimeter lesion in the left atrium with intermittent bleeding, pearly and shiny Biopsy showed a diagnosis of basal cell carcinoma. Excision of the basalioma with margins of at least 3 mm was performed, reconstructing through a flap on the post-operative island under local anesthesia. Intraoperative biopsies of the surgical field were done, and were free of tumor. The aesthetic result after 2 months was very good. No recurrence was found after 12 months.

Case 2

A 75-year-old man presented with a one-centimeter diameter crateriform lesion in the right atrial shell of one month of evolution. Biopsy of the lesion was performed showing a well-differentiated epidermoid carcinoma. CT scan of the head and neck showed no signs of metastatic disease. The lesion was excised under general anesthesia with margins of at least 6 mm (the entire atrial shell was included). Intraoperative biopsies of the margins were tumor free. It was reconstructed by means of flap technique on the postauricular island. The aesthetic result after 2 months was very good. No recurrence was found after 12 months.

DISCUSSION

Postauricular or "revolving door" flap is an ideal reconstruction method after removal of cutaneous lesions of the atrial concha. The greater the defect of the shell created the better, since this way the pedicle will be larger and the flap will be safer. After removal of the lesion along with the rest of the skin and shell cartilage, the skin of the posterior side of the pavilion is sectioned together with that of the mastoid region, creating an island of skin that is pulled forward and its margins are to the default created. Finally, the retroauricular fold area is sutured.

CONCLUSION

The flap on the postauricular island in "rotating door" is the ideal technique to reconstruct the defect produced by the excision of atrial concha lesions, with a very good esthetic result, being able to perform it under general or local anesthesia.

Reconstruction of a full thickness nasal alar defect following accident with a three-layer technique (mucosal, cartilage and skin): a case report

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BACKGROUND:

Nasal reconstruction presents a challenge due to the complex symmetric contours and central facial location of the nose. Nasal defects are usually defined as “partial” or “full” thickness. When reconstructing full-thickness nasal defects, options to replace the inner lining, cartilaginous framework and outer skin must be considered.

Among the cosmetic subunits of the nose, the delicate nasal ala has a particularly marked influence on breathing and cosmetic appearance. Therefore, reconstruction of defects of the nasal ala requires careful attention to preserve and restore function and cosmesis.

This report presents a case of a 67 year old male who’s full-thickness alar defect due to accident was reconstructed using a three-layer reconstruction (mucosal, cartilage and skin) and evaluates it’s functional and esthetic outcome.

METHODS: In this patient we use a three-layer reconstruction technique in two-stages.

First stage - The margins of the existing defect were excised, an exact template of the alar unit is made from the contralateral normal side and a mould of the defect was made and used to plan the harvest site of the flaps.

For the inner layer repair an endoscopic assisted septal mucoperichondrial flap was designed. The size of the flap equals the size of the defect plus the distance of the rotation area.

For the outer layer repair we use a rotational cheek skin flap, designed as a crescent-shaped skin island whose medial border lies in the melolabial crease. The flap was incised and elevated in the subcutaneous plane. The distal one third of the flap was thinned leaving 2 mm of subcutaneous fat on this portion of the flap. On reaching the superior aspect of the flap, the dissection was deepened to create the subcutaneous pedicle. The flap was turned toward the midline and sutured to the nasal defect using vertical mattress sutures

The middle layer was formed by a harvested auricular cartilage inserted into a pocket between the inner and outer layers.

Second stage – Septal mucoperichondrial and cheekflaps were detached at 5 weeks. The skin flap was thinned and the cheek wound margins were closed primarily.

RESULTS: An acceptable esthetical result was obtained with minimal donor site morbidity , no major complications and without the compromise of the nasal valve function.

CONCLUSIONS: The three-layer reconstruction (cheek flap, auricular cartilage, septal mucoperichondrial flap) is a good technique to full-thickness nasal alar defect with acceptable postoperative shape and good functional results.

Reconstructive surgery of the auricle after partial substance loss for cutaneous tumors: an overview of surgical guidelines

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Purpose of the study

Based on our surgical experience of head and neck cutaneous tumors, we propose a clear and simple technical guide for auricular reconstruction. Key surgical principles are clearly emphasized and reliable solutions are summarized in comprehensive diagnostic trees for each type of substance loss.

Materials and methods used

During a 7 years period, 170 skin tumors of the external ear were operated on with a wide variety of reconstructive surgical modalities. According to 4 facial esthetic sub units of the auricle, we have retrospectively analyzed, from the simplest to the most complex, the different treatments used to repair all partial substance loss of the auricle. Complete resections of the auricle were excluded.

Results

For peripheral defects, we have used reduction techniques like simple wedge excisions, or mobilization and rotation of the helical crus like Antia Buch technique. We have also used reconstructive techniques without auricular reduction including retroauricular flaps or 2 stage tubebipedicled flap. For anthelix and concha defects, skin graft or retroauricular flap were frequently used after anterior cutaneous and cartilage resection. Two stage mastoid cutaneous flap was used for wide medium transfixiant defects. Conchal defects were repaired by skin graft or flip-flop turnover flap or transposition flaps. Earlobe defects were repaired by the principle of Gavello bilobed flaps or anterior preauricular transposition flap.

Conclusion

According to a classification of external auricular defects in 4 sub units, we have retrospectively analyzed the various and numerous techniques for auricular repair. Our experience and the literature analysis lead us to define, throughout reconstructive surgery decisional trees, the treatment of choice to repair all partial substance loss of the auricle.

Salvage Surgery of the Exposed Cochlear Implant: A Case Report of a Novel Technique and Literature Review

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Purpose of the Study:

Flap complications are the most common negative sequelae of cochlear implantation. These complications can lead to exposed cochlear implants. Various techniques of soft tissue coverage have been described for coverage of the exposed cochlear implant. We report a novel two-layered reconstructive technique used for repair of an exposed cochlear implant.

Materials and methods used:

Herein, we present a case report and review the literature on the various techniques of soft tissue coverage for exposed cochlear implants.

Results:

A 66-year-old gentleman suffered from left post-auricular wound dehiscence and cochlear implant exposure. Clinical examination revealed a 3 x 2cm wound dehiscence with exposure of the receiver stimulator at the left post-auricular area. A single-stage two-layered technique using a temporoparietal fascia flap with overlying scalp rotation-advancement flap and full thickness skin graft, was employed for closure of the exposed cochlear implant. Postoperatively, our patient recovered well. His wound was fully healed and the cochlear implant was fully functional. Various techniques of soft tissue coverage, described in literature, were reviewed. These include: local muscle flaps, pericranial flaps, tissue expanders and free flaps.

Conclusion:

Wound dehiscence, albeit uncommon, can result in exposed cochlear implant and subsequent extrusion of the implant. This novel single-staged procedure has been shown to be successful in managing the exposed cochlear implant.

Study of epithelial defect repair in the auricle and auditory meatus by grafting with cultured ADSC sheet –ECM

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Purpose of the study: 1. Implanted a sheet of seeding adipose-derived stem cells (ADSCs) on the extracellular matrix (ECM) (ADSC sheet–ECM) into damaged skin wound of auricle and auditory meatus. 2. promote epithelium regeneration, which provides meaningful experimental basis for mastoid epithelium repair in succeeding clinical trials.

Materials and methods used: ADSC sheet-ECM were prepared using ADSCs isolated from the rabbit and applied to the auricle wound bed and auditory meatus wound bed of New Zealand White rabbit. Wound healing was assessed by general observations and hematoxylin and eosin staining(HE). Two other groups, namely, the ECM group and the normal control group were assessed with the same methods.

Results: ADSCs adhered tightly to the ECM and quickly formed cell sheet with less apoptosis. In ear auricle excisional wounds, rate for wound closure in ADSC sheet-ECM group, the ECM group and the control group was (0.69±0.03), (0.59±0.02), (0.44± 0.05) on week 2. Wound healing rate in ADSC sheet -ECM group and the ECM group was higher than that of the control group (p=0.0030, 0.0112). Meanwhile, wound healing of The ADSC sheet-ECM group was also faster than the ECM group (p=0.0231). In auditory meatus excisional wounds, general observations and HE staining indicated that re-epithelialization was complete in ADSC sheet -ECM group and the ECM group, whereas the wounds in control group healed incompletely on week 4.

Conclusion: These data suggest that ADSC sheet–ECM is an effective repair material for wound healing. This approach will provide meaningful experimental basis for mastoid epithelium repair in subsequent clinical trials.

The axial frontonasal flap , our surgical series.

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Skin defects of the nose sometimes pose a difficult challenge to facial plastic surgeons, as the nasal tip is a prominent landmark on the face, and irregularities in skin color, texture, thickness and contour are very visible. When considering reconstruction in this area, one has to keep in mind the nasal subunits, and one needs to obtain skin that matches the local tissues in both color and texture. Therefore, invasive surgery of the nose should be followed by a reconstructive procedure that should seek to respect its morphological and aesthetic features as much as possible. The purpose of this study is to describe our experience with the use of axial frontonasal flap for the reconstruction of nasal tip defect, , specify the indication of this flap and describes in details the surgical technique.

In all patients that underwent surgery in our surgical series , the surgical result was rated as good or excellent by the patients and surgeons. There was no distortion of nasal tip or alar rim.

The axial frontonasal flap is an excellent option for a single-stage reconstruction of nasal tip defect in the elderly patients that measure between 1.5 cm and 2,5cm in diameter. It can safely and easily be done under local anesthesia and the results are very satisfactory esthetically.

Vascular Supply of the Auricle: Anatomical Study and Applications to External Ear Reconstruction.

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AUTHORS

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ENGLISH

BACKGROUND: Reliable reconstructive flaps require convenient vascular supply. Thus, precise description of the vascular patterns of external ear is not completely elucidated. This anatomical study aims to provide comprehensive data of the arterial network of the auricular region, anastomosis, and patterns of arterial dependence regarding external ear subunits.

MATERIALS AND METHODS: After dyed latex injections in the external carotid artery, eleven auricles have been carefully dissected to examine the vascular network of the auricular region.

RESULTS: In all cases, the posterior auricular artery (PAA) supplied the cranial side of the auricle, as well as the concha on the lateral side through consistent perforating branches. The superficial temporal artery (STA) network supplied the upper third of the lateral aspect of the auricle. The authors' dissections showed a clear dominance of the PAA supply. However, the two arteries consistently developed anastomoses particularly in the cranial upper third of the auricle.

CONCLUSION: Consistent branches and anastomoses between the PAA and the STA network provide reliable pedicles for auricular and facial reconstruction.

FRANCAIS

OBJET DE LA PRÉSENTATION : Un lambeau de reconstruction fiable nécessite une vascularisation de qualité. Pourtant, la description précise de la vascularisation de l'oreille externe n'est pas parfaitement élucidée. Cette étude anatomique a pour objectif de documenter la vascularisation de la région auriculaire, les anastomoses existantes et les territoires vasculaires des différentes sous-unités de l'oreille externe.

MATERIEL ET METHODES : après injection de latex coloré dans les artères carotides externes, onze auricules ont été soigneusement disséquées pour analyser le réseau artériel de la région auriculaire.

RESULTATS : Dans tous les échantillons, l'artère auriculaire postérieure (AAP) vascularisait la face médiale de l'auricule, ainsi que la conque sur la face latérale par le biais de branches perforantes constantes. L'artère temporale superficielle (ATS) vascularise le tiers supérieur de la face latérale de l'auricule. Nos dissections montrent une nette prédominance de la vascularisation issue de l'AAP. Toutefois, ces deux artères développent systématiquement des anastomoses dans le sillon sus-auriculaire.

CONCLUSION : Les branches constantes et les anastomoses issues de l'AAP et de l'ATS constituent des pédicules fiables pour la reconstruction de pertes de substance auriculaire et faciale.

RECONSTRUCTION DES BLESSES DE LA GRANDE GUERRE PAR HIPPOLYTE MORESTIN (1869-1919) CHIRURGIEN DU VAL-DE-GRÂCE

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Introduction : Au cours de la grande guerre de 1914-1918 des progrès spectaculaires se sont produits dans le domaine de la reconstruction faciale. En effet le nombre et la gravité des lésions de la face amènent les chirurgiens français et allemands à s'intéresser de près au traitement de ces blessés. L'un d'entre eux, Hippolyte Morestin est le chef de la Vème division des blessés de la face de l'hôpital du Val-de-Grâce, il s'agit d'un des plus grand service de prise en charge des blessés de la face à cette époque.

L'objectif principal de notre étude est de présenter ses techniques chirurgicales et d'évaluer leurs résultats esthétiques et fonctionnels.

Méthodes : Il s'agit d'une étude descriptive historique. Nos recherches ont été faite à partir du fond documentaire disponible au musée et aux archives du service de santé des armées du Val-de-Grâce (rapport d'activité hospitalière, photographies de patients pré et post-opératoire, découpe de journaux, rapport d'infirmière du service, cires anatomiques). 34 cas cliniques publiés par Hippolyte Morestin traitant de la reconstruction faciale durant la grande guerre ont été étudiés.

Résultats :

La prise en charge des blessés de guerre a été bien codifiée par les médecins militaires, permettant ainsi d'optimiser la prise en charge entre le front et l'hôpital du Val-de-Grâce.

La technique d' « autoplastie en jeu de patience » qu'il a développé a permis de minimiser les cicatrices et de préparer les prochains temps chirurgicaux.

Hippolyte Morestin a su développer l'utilisation de greffes cartilagineuses en rhinopoièse mais également dans les pertes de substances faciales. La greffe graisseuse est également une technique qu'il utilise couramment contrairement à ces contemporains. La graisse permet le comblement des pertes de substance ainsi que l'amélioration des cicatrices avant même que les propriétés régénératrices des cellules souches présentent dans la graisse ne soient découvertes.

Conclusion :

Hippolyte Morestin est un des pionniers de la reconstruction faciale. Il est intéressant d'avoir une vision rétrospective de son travail car même s'il n'est pas l'inventeur de certaines de ces techniques, il a su expérimenter, reproduire, innover et améliorer sa pratique chirurgicale grâce au nombre important de patients qu'il a du traiter.

Grâce à ses 634 publications et communications, il a su partager ses résultats et ses opinions en matière de reconstruction faciale et esthétique permettant de convaincre et d'influencer la communauté internationale.

Place de la tuberculose dans le profil étiologique des adénopathies cervicales des immunocompétents au cours de l'année 2013 : série de 110 cas

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L'objectif du présent travail est d'étudier les particularités épidémiocliniques et le profil étiologique des adénopathies cervicales prise en charge dans notre structure hospitalière ainsi que la place de la tuberculose ganglionnaire et ses formes cliniques et histologiques.

Matériel et méthodes : Nous avons mené une étude transversale à visée descriptive au service d'ORL et de chirurgie cervico-faciale au cours de l'année 2013 sur 110 cas d'adénopathies cervicales.

Résultats : Nous avons retenu 110 patients. La moyenne d'âge est de 31 ans avec des extrêmes entre 1 an et 79 ans. Une rhinoscopie prélabiale est faite dans 90 cas. Le siège des adénopathies est jugulocarotidien dans 66 cas. Le geste chirurgical est fait sous anesthésie locale dans 68 cas alors que 43 cas sont faites sous anesthésie générale chez des enfants ou en cas d'indication de curage fonctionnel. Les adénectomies et les biopsies ganglionnaires représentent 89 cas. Le curage ganglionnaire fonctionnel est fait dans 21 cas. L'évolution est bonne chez tous les cas. Le profil histologique est dominé par la tuberculose dans 26 cas confirmée et 16 cas douteux tuberculoïde non nécrosante (une sarcoïdose dans 14 cas et une toxoplasmose et tuberculose dans un cas chacun). Une adénite réactionnelle est notée dans 20 cas. Un lymphome dans 9 cas. Une localisation ganglionnaire d'un carcinome épidermoïde dans 11 cas et d'un adénocarcinome dans 5 cas. Un carcinome papillaire est noté dans 10 cas. Un kyste branchial est noté 5 cas et un lymphangiome dans 2 cas. Deux cas de cavum confirmé par biopsie ganglionnaire et non précisé dans 2 cas.

Conclusion : Le profil étiologique des adénopathies cervicales permet de comprendre l'épidémiologie locale et d'adapter les mesures prises aux pathologies prédominantes notamment la tuberculose ganglionnaire.

ETUDE CLINIQUE RANDOMISEE DE NON-INFERIORITE : ALGOSTERIL® vs LA THERAPIE PAR PRESSION NEGATIVE

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OBJET DE LA PRESENTATION : Le but de l'étude était de comparer ALGOSTERIL et la thérapie par pression négative (TPN) dans la cicatrisation des exérèses chirurgicales.

MATERIELS ET METHODES : 95 patients majeurs avec exérèse chirurgicale étaient traités par ALGOSTERIL ou TPN jusqu'à l'obtention d'un tissu de bourgeonnement greffable. Le critère de jugement principal, validé en aveugle, était le délai entre l'exérèse et l'obtention du tissu greffable (marge de non-infériorité = 4 jours). Les critères secondaires étaient la survenue d'évènements indésirables (EI) et le coût de prise en charge.

RESULTATS : Les caractéristiques des patients sont comparables à l'inclusion. Le délai d'obtention du tissu de bourgeonnement greffable est de 19.98 jours \pm 7.76 pour ALGOSTERIL vs 20.54 jours \pm 10.03 pour TPN (différence : - 0,56 jour \pm 1,84 ; IC à 95% : [-4,22 ; 3,10]). Aucun événement indésirable imputable à ALGOSTERIL n'a été rapporté vs 13 EI imputables au TPN : hémorragies, infection, douleurs... L'économie générée lors d'une prise en charge avec ALGOSTERIL est de 1460 € par patient, hors coût des produits.

CONCLUSION : Cette étude démontre qu'ALGOSTERIL permet de réaliser une greffe de peau mince dans un délai similaire au TPN, sans EI et avec un coût de prise en charge moindre.

ETUDE CLINIQUE DE SUPERIORITE RANDOMISEE EN CROSS-OVER : TRAITEMENT PAR PRESSION NEGATIVE + ALGOSTERIL EN INTERFACE VS TRAITEMENT PAR PRESSION NEGATIVE

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OBJET DE LA PRESENTATION : L'objectif de l'étude était de démontrer l'intérêt d'utiliser Algostéril (compresses et/ou mèches plates) entre la mousse du traitement par pression négative (TPN) et la plaie.

MATERIELS ET METHODES : Les patients majeurs avec une perte de substance sous TPN depuis 7 jours étaient inclus et traités 48h avec mousse + Algostéril en interface entre la mousse et la plaie puis 48h avec mousse seule, ou inversement selon la randomisation. Le critère principal était la douleur au retrait du TPN, évaluée par le patient à l'aide d'une échelle visuelle analogique de 0 à 100 mm. Les critères secondaires étaient les saignements au retrait, la survenue d'évènements indésirables et la quantité d'exsudat recueillie dans le réservoir du TPN après 48h d'aspiration.

RESULTATS : 31 patients ont été analysés. La douleur au retrait était significativement moindre avec Algostéril en interface entre la mousse et la plaie :

15,2 mm ± 18,6 vs 38,5 mm ± 27,8 avec mousse seule (p<0,001). Les saignements étaient significativement moindres avec Algostéril en interface : 8 patients vs 16 avec mousse seule (p=0,02). Aucun évènement indésirable imputable à Algostéril n'a été rapporté vs 2 évènements susceptibles d'être liés au TPN (saignement abondant, macération). La quantité d'exsudat recueillie était similaire dans les 2 groupes.

CONCLUSION : Cette étude démontre que placer Algostéril en interface entre la mousse et la plaie diminue significativement la douleur et les saignements au retrait du TPN et ce, sans évènement indésirable. L'étude démontre également qu'Algostéril n'est pas un obstacle au drainage de l'exsudat.

PRISE EN CHARGE DES TRAUMATISMES BALISTIQUES DE LA FACE: A PROPOS DE 15 CAS

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Objet de la présentation: Les traumatismes balistiques de la face sont une urgence maxillo-faciale redoutée, dont la gravité peut mettre en jeu le pronostic vital. Leur fréquence a considérablement augmenté en Tunisie durant les six dernières années. Les lésions de la face sont responsables de séquelles fonctionnelles, esthétiques et psychologiques. le but de notre travail est de présenter les différentes modalités de prise en charge des traumatismes balistiques en phase aigu et à distance.

METHODES : Il s'agit d'une étude rétrospective colligeant les patients victimes de traumatismes balistiques de la face, colligés au service d'ORL et de chirurgie maxillo-faciale de l'Hôpital Militaire de Tunis durant la période janvier 2011 – Juillet 2016.

RESULTATS : Nos 15 patients étaient tous de sexe masculin, d'âge moyen de 28 ans. Le traumatisme était direct chez 9 patients et indirect chez 7 patients. Le délai moyen de prise en charge était de 24 heures.

Une trachéotomie de sauvetage était nécessaire sur le lieu de l'accident dans deux cas et dès l'arrivée à l'hôpital dans quatre cas. L'évacuation était assurée par transport aérien pour 7 patients.

Tous les patients ont été explorés par un scanner du massif facial avec reconstruction 3D. Les lésions siégeaient au niveau de l'étage supérieur de la face dans 6 cas, moyen dans 9 cas et inférieur (avec fracture mandibulaire) dans 8 cas avec perte de substance pharyngée importante dans un cas. Il s'agissait d'un polytraumatisme dans 14 cas.

En phase aigu et après parage-extraction des corps étrangers, on a eu recours à un blocage maxillo-mandibulaire par fils d'acier chez trois patients et par fixateur externe dans un cas. L'alimentation était assurée par sonde naso-gastrique ou par voie parentérale.

Un lambeau loco-régional était nécessaire dans un cas. Après stabilisation des foyers infectieux locaux une ostéosynthèse par plaque était pratiquée dans deux cas et avec péroné libre dans un cas.

Ultérieurement une commissuroplastie était pratiquée dans un cas . Le résultat anatomique était jugé satisfaisant dans la majorité des cas. Cependant, des séquelles esthétiques ont été notées dans 3 cas.

CONCLUSION : La prise en charge des traumatismes balistiques de la face doit être stéréotypée. Il faut assurer la liberté des voies aériennes, gérer une hémorragie et assurer la stabilisation et la reconstruction des différentes lésions osseuses. Vu les particularités de la localisation, la prise en charge des séquelles esthétiques doit être préconisée chez ces patients souvent jeunes.

PS-FR-06

DERMATOFIBROME CUTANE MULTINODULAIRE DE LA JOUE : UNE LOCALISATION RARE

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RESUME

Les auteurs rapportent le cas d'une dame de 58 ans qui a présenté une tuméfaction multinodulaire de la joue droite en plusieurs séquences. L'histopathologie de la pièce opératoire a décrit un histiocytofibrome bénin. La localisation faciale rare, la modalité évolutive récidivante et le caractère multinodulaire sont discutés. La différenciation avec le dermatofibrome atypique et le dermatofibrosarcome sont aussi évoqués.

MOTS CLES : Histiocytome fibreux bénin – Histiocytofibrome – Dermatofibrome- tumeur bénigne- Joue.

ABSTRACT

Authors described the case of a woman of 58 years who presented a multinodular swelling of the right cheek in several sequences. Histopathology of the lesion describes a benign fibrous histiocytofibroma . It's rare facial localization, multinodular localisation and evolution with recidive are discussed. Differentiation with atypical dermatofibroma and dermatofibrosarcoma are also mentioned.

KEY WORDS : Benin fibrous histiocytoma – histiocytofibroma – Dermatofibroma – Benign tumor cheek.

RESUME

Les auteurs rapportent le cas d'une dame de 58 ans qui a présenté une tuméfaction multinodulaire de la joue droite en plusieurs séquences. L'histopathologie de la pièce opératoire a décrit un histiocytofibrome bénin. La localisation faciale rare, la modalité évolutive récidivante et le caractère multinodulaire sont discutés. La différenciation avec le dermatofibrome atypique et le dermatofibrosarcome sont aussi évoqués.

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KEY WORDS : Benin fibrous histiocytoma – histiocytofibroma – Dermatofibroma – Benign tumor cheek.

PS-FR-07

RHINOPLASTIE : INTERET DE LA TECHNIQUE OUVERTE

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RHINOPLASTIE : INTERET DE LA TECHNIQUE OUVERTE

RHINOPLASTY - BENEFIT OF THE OPEN WAY

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INTRODUCTION : La rhinoplastie est une des interventions les plus demandées au monde en chirurgie esthétique de la face, Si elle a longtemps été réalisée par voie dissimulée ou fermée pour éviter toute rançon cicatricielle, l'abord en technique ouverte est devenu de plus en plus populaire ces dernières années. Certains chirurgiens proposent une voie externe pour toutes les rhinoplasties mais cette attitude est très controversée. Les indications respectives de l'abord externe et de la voie dissimulée ne sont pas bien codifiées et les grandes séries publiées sont peu nombreuses.

OBJECTIF : démontrer les avantages de la rhinoplastie en technique ouverte face à la technique fermée en donnant des iconographies de malades ayant bénéficié de cette voie avant et après la chirurgie.

DISCUSSION : On a longtemps pensé qu'une rhinoplastie était une intervention ne nécessitant aucune incision externe, donc ne laissant aucune trace. Pourtant, les demandes liées aux défauts modérés ou au manque d'harmonie sont en augmentation sensible, et une approche externe peut mieux y répondre.

La technique ouverte ou dite « externe » Permet d'obtenir une harmonisation des visages, une chirurgie plus conservatrice, un nez plus naturel, une plus grande précision, tant pour les modifications des cartilages que pour le positionnement et la fixation des greffes cartilagineuses. L'exposition « à ciel ouvert » des déformations dans toutes leurs variantes possibles permet par ailleurs un enseignement plus efficace en établissant la corrélation directe entre l'anatomie réelle des structures sous-jacentes et l'anatomie observée en surface.

Cette technique est préconisée lorsque les orifices nasaires sont étroits ou lorsqu'un segment columello-apical long rend difficile l'éversion des cartilages ou l'extériorisation en anse de seau. La méthode est aussi intéressante pour les asymétries de la pointe du nez (séquelles de fentes naso-labiales) et pour les déviations importantes, est également parfaitement adaptée pour les rhinoplasties secondaires.

CONCLUSION : Que vous cherchiez à rectifier un septum de travers ou un défaut esthétique qui vous gêne, avoir recours à une rhinoplastie ouverte ou externe constitue une solution efficace et durable à votre problème, autorisent un contrôle très précis du résultat et une fiabilité bien supérieure à la technique classique dite « fermée »

PS-FR-08

Le lambeau frontal en trois temps dans les reconstructions nasales complexes

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La région nasale est une région complexe à reconstruire de part ses nombreux reliefs et sa situation centrale.

Le défi du chirurgien est d'assurer à la fois une reconstruction esthétique et fonctionnelle.

D'un point de vu esthétique, la reconstruction en sous unité esthétique permet d'obtenir des résultats

intéressants en dissimulant les cicatrices au niveau des zones de jonctions des différentes sous unité esthétique . L'utilisation du lambeau frontal pour les larges pertes de substances de la région

nasale est le lambeau de référence. Bien que nécessitant une anesthésie générale supplémentaire, un temps intermédiaire de dégraissage, permet d'obtenir une reconstruction plus fine.

D'un point de vue fonctionnel, il est important d'assurer une bonne ventilation nasale.

Lorsque les pertes de substances du nez sont transfixiantes, il est indispensable de reconstruire les

trois plans de l'épaisseur nasale.

Les techniques classiques de reconstruction des pertes de substances transfixiantes par greffes et

lambeaux muqueux peuvent parfois se compliquer de rétraction et de souffrance vasculaire.La reconstruction par plicature cutanée avec greffe cartilagineuse de conque décrite par Menick est une technique qui offre des résultats stables dans le temps sans obstruction nasale.

Cette reconstruction permet par ailleurs de restaurer une anatomie de l'aile du nez plus proche de la normale puisque le plan endonarinaire de l'aile du nez n'est pas constitué de muqueuse mais de peau.

PS-FRP-01

Association of quantitative and qualitative stimuli for early facial reanimation

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Purpose:

In case of acute unilateral facial palsy, if the proximal stump of the injured facial nerve is not available, another motor source is essential to reactivate the mimic muscle movements. The use of the masseteric nerve is nowadays a solid technique, but in order to improve the strength of the new neural input, the authors used both the masseteric nerve to give the neural stimulus to the upper branches of the injured facial nerve and the 30% of fibres of the hypoglossal nerve to reactivate the lower branches of the ipsilateral facial nerve. The aim of this work was to assess the effectiveness of the association of masseteric and hypoglossal nerve stimulus for early facial reanimation.

Materials and Methods:

Between 2013 and 2016, 23 patients affected by House-Brackmann Grade VI facial nerve dysfunction underwent surgical treatment in the Maxillofacial Surgery Department of the San Paolo Hospital of Milan (Italy) to restore the symmetry of the face at rest and the mimic muscle movements. Electromyography revealed mimetic muscle fibrillations in all the patients.

In all patients, both a neural anastomosis between the masseteric nerve and the temporal-facial branch of the injured facial nerve and a neural anastomosis between the 30% of fibres of the hypoglossal nerve and the cervical-facial branch of the ipsilateral facial nerve were performed. In all cases, a double cross face nerve graft was performed to achieve the restoration of spontaneous blinking and smiling.

Twelve months after the onset of postoperative facial nerve reactivation, each patient underwent a clinical examination using the modified House-Brackmann grading scale.

Results:

A significant improvement of facial movement was achieved in all evaluated patients. Facial recovery began within 2 and 12 months after surgery with the restoration of facial symmetry at rest. All patients had to clench their teeth while smiling in the beginning. After 2 to 4 months of exercising with a physiotherapist, the patients had to think about smiling if they wanted to do it, but clenching was no longer necessary. From 6 to 12 months after the onset of paralysis, smiling became automatic. Spontaneous smile and blinking were restored through the use of the contralateral facial nerve.

Conclusions:

This technique seems to be efficient for the early treatment of facial paralysis and results in very little morbidity.

Availability of subclavian and axillary vessels as recipient vessel site in reconstructive microvascular surgery of the head and neck.

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Introduction

Reconstructive surgery following ablative surgery for head and neck cancer is widely performed using microvascular free flap. The recipient vessels in the neck area are mostly used. In patients with a history of radiotherapy and surgery, reconstruction can be a challenging problem, especially if vessels in the neck area are not available for microvascular surgery. In this study, we reported patients for whom subclavian or axillary vessels were used for reconstructive microvascular surgery of the head and neck.

Material and methodes

This study was a retrospective analysis of patients who underwent head and neck reconstruction using free flap with subclavian or axillary recipient vessels with or without a by-pass. Clinical and surgical procedure-related factors were studied.

Results

Of the 1130 free flaps between 1990 and 2015, 59 patients were included in this study. The mean age of the population was 57 years, 80% of male. Most of the patients had a past history of radiotherapy (85% of cases) and previous head and neck surgery (more than 2 surgeries in the neck). Free flap procedure was related to tissue defects. The forearm free flap was the most used for pharyngeal reconstruction. Direct anastomoses were done in majority of cases and a by-pass was needed in 25% of cases. Microvascular free flap transfer was performed as a 2-stage procedure in 3 patients. The success rate of free flap was 95%.

Conclusion

Head and neck reconstruction using free flap remains a big challenge in patients with a past history of radiotherapy and surgery that lead to tissue fibrosis. Nevertheless, even if vessels of the neck are not available, free flaps are still reliable with extra-cervical recipient vessels. The use of axillary vessels provides a good option for microvascular anastomoses with a high success rate.

Contralateral reinnervation in severe facial nerve palsy Can we predict it?

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Although frequently reported, contralateral reinnervation after severe facial palsy (FP) is rather ignored by clinicians. Retrospective case review in patients whose severe facial nerve palsy was proven to be recovered from the unaffected side.

Method

Between January 2015 and December 2016 a total of 42 patients with severe unilateral FP quoted grade V /VI on the House-Brackmann scale were referred to our department for functional assessment by Electroneuronography (ENoG). In 19 subjects (7W and 12M range 7 to 81yrs old) (45.2%) responses to electrical stimulation of the unaffected facial nerve were detected contralateral while ENoG was extremely poor or flat on the affected side. The FP etiologies in these patients were: idiopathic “a frigore” in 12 patients, post traumatic (petrous bone fracture) in 3 patients, post-surgery (cochlear implantation and surgery for the first brachial arch pathology) 2 patient, petrous bone cholesteatoma in 1 patient and vestibular schwannoma in 1 patient.

Results

Transfacial reinnervation was reported by other authors to occur approximately 3 months after onset. In our series similar signs were observed earlier then 3 weeks. All patients except one (a 68 yrs old woman operated for a left acoustic schwannoma) recovered to a grade II/III according to the classification House- Brackmann. Furthermore, in 6 (31.6%) of these patients ipsi lateral ENoG recovery of the impaired side was observed later. To the best of our knowledge this type of neural recovery with initially only contralateral ENoG responses followed by ipsilateral ENoG normalization was never reported in case of severe facial palsy.

Conclusion

Spontaneous recovery in severe facial palsy patients could be predicted by a specific ENoG pattern using contralateral stimulation to the affected side. Routine repetitive examination of motor action potential by contralateral stimulation ENoG should be performed before any surgical decision, especially when a Hypoglossal-Facial nerve anastomosis is proposed in order to avoid inutile hemi-lingual atrophy.

Emotion processing in Bell's Palsy.

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Facial palsy is a common occurrence. Oro-facial functions and the ability to convey emotional facial information are seriously affected by facial palsy, thereby reducing patients' quality of life. The main purpose of the present study was to determine whether peripheral facial deficit is involved in processing emotion, especially facial emotional expression production and recognition. According to the embodied theory, are there any difficulties of emotion perception? The second aim was to understand the influence of the facial palsy side on emotion processing.

To this end, 35 patients suffering from peripheral facial palsy and 133 control participants were recruited. All the participants performed a computerized emotional facial expression recognition task. Facial motor skills, severity grades were estimated. The range of the smile was measured as well. The mirror-effect was tested and specific questionnaires were proposed. Control participants empaneled a naïve jury by completing the same protocol.

Facial emotional expressions of paralyzed patients were not identified as well as actors' by the control participants. Patients' expressions were appraised as less intense and more ambiguous ($p < .0001$). Therefore, these expressions required a lengthened processing time.

Laterality effect was observed for 37,5% of patients' smiles : smiles are significantly considered more intense when the facial palsy is left-sided. Facial motor deficit hinders facial emotional recognition on dynamic modality ($p = .0245$), what strengthens the facial feedback hypotheses. Moreover, perception scores are influenced by the duration of the facial palsy: the longer the palsy is, the worse the emotional perception is.

Facial rehabilitation, inspired by Neuromuscular retraining, could be completed by a specific therapy based on the production and the perception of emotional expressions in order to improve nonverbal communication skills of paralyzed patients.

english

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Some results of the surgical treatment of lesions of nervous facialis.

The rational of our study is to study the cases of the canalis facialis lesion, combined injuries of temporal bone and base bone and middle ear disorder, occurred relatively more in our country.

Materials and methods: The 2013–2016 study involves 12 patients who have facial nerve paralysis because of different types of reasons and doesn't involve patients who have had facial nerve paralysis for over 6 months. They were examined through CT and MRI examinations to locate the areas of the canalis facialis lesion.

Results: We selected 5 patients with temporal bone fracture, 2 patients with combined horizontal and cross fractures, e study, and 4 patients with the canalis facialis lesion after middle ear operations and 1 patient with Bell's syndrome.

The table of House-Brackmann was used to clarify the level of paralysis and all patients are noted to be 4th level.

We have conducted surgeries on dispensing facial nerve for 10 patients and on joining facial nerve for 2 patients. The surgeries were done with three steps.

Within 18 days after the surgery done, the facial paralysis of 6 patients was completely treated. After 30 days, the facial paralysis of 2 patients was treated and after 45 days the facial paralysis of 1 patient was treated.

1 patient had the the canalis facialis lesion on the pars tympanic due to the surgery on middle ear surgery and had a connection using Auricularis magnium during the surgery.

Conclusion:

1.

It would be more effective if the surgery of the facial nerve paralysis because of the temporal bone fractures is performed within 3 months after patients have injuries.

2.

After the rehabilitative surgery on the facial nerve, the combined application of hormone treatment, needle therapy is reducing the duration of treatment.

Evolution of osseointegrated implant systems for craniofacial prostheses – experience with 674 implants in 273 patients

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Purpose of the study: Forty years ago, the Brånemark titanium fixtures were used for the first time for extraoral percutaneous bone anchorage. However, in areas with low bone availability or quality such as the orbital and nasal region, implant placement is difficult. Evolving from the classical screw type fixture, this has led to a search for different implants designs and surfaces. The IMZ® system by Friatec used a rough surface cone without screw threads. As opposed to these solitary implants, a titanium grid structure (Epitec® by Leibinger) and titanium miniplates derived from osteosynthesis plates (Epiplating® by Medicon) have been conceived as grouped implant systems. Under the name of Vistafix® by Cochlear, the Brånemark fixtures have currently adopted a moderately rough surface from the field of dental implantology in order to accelerate osseointegration. This study aims at reviewing our experience with the use and outcome of various implant systems in all areas of the head & neck.

Material and Methods: This study is a retrospective review of 273 patients treated 1989-2016 with bone anchored craniofacial prostheses. Bone-conduction implant patients have been excluded from this study. The age at implant surgery ranged from 5 to 96 years with a median of 58 years. The cause of the defect was ablative tumor surgery 178, malformation 74, trauma 20, and inflammatory disease in 2 patients.

Results: The regions implanted were: ear 139 patients, nose 60, orbit 57, and large combined midface defects 17. A total of 674 implants were used. The Brånemark system was used in 126 patients with 392 fixtures (all generations), the IMZ system in 18 patients with 51 implants, the Epitec® (Leibinger) system in 24 patients with 31 grids, and the Epiplating® (Medicon) system in 128 patients with 197 plates. The overall failure rates for these systems were Brånemark 8.2%, IMZ 5.8%, Epitec® 9.6%, and Epiplating® 5.1%.

Conclusions: The Brånemark system has evolved from non-self-tapping screws to fixtures with a modified surface for faster osseointegration. The IMZ® and Epitec® systems are no longer marketed. The miniplate-derived Epiplating® system proved to allow for excellent bone anchorage of craniofacial prostheses especially in areas with low bone quality or availability. With this evolution of extraoral implants, today in all defects rehabilitation can be offered by state-of-the-art implant-retained craniofacial prostheses.

HOW I DO IT: MANDIBULAR RECONSTRUCTION USING A COMPRESSED AUTOGENOUS CANCELLOUS BONE GRAFT

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Abstract

Objective/Hypothesis: Mandibular and maxillary defects affect patients' functional and esthetic abilities, but cannot be treated with free or pediculated flaps in some cases. Reconstruction using a compressed autogenous cancellous bone graft (by special compactor) may be an alternative option for maxillary and mandibular bone reconstruction.

Study Design: Case series.

Methods: Six patients underwent reconstruction using a compressed autogenous cancellous bone graft, which involved three phases: i) Harvesting cancellous bone from the iliac crest. ii) Compaction of cancellous bone materials by means of a compactor. iii) Application of the graft at the defect site to restore the continuity of the mandibular or maxillary bone.

Results: One patient had undergone reconstructive surgery after excision of a destructive coronal cyst of the left maxillary bone, four patients underwent primary surgery for squamous cell carcinoma of the pharynx, tongue, and floor of the mouth, while one patient was operated for mucoepidermoid carcinoma of the parotid gland.

Except for the patient who was operated for a coronal cyst of the left maxillary bone, all patients had undergone radiotherapy treatment after the prior primary surgery, which involved pediculated or free flap reconstruction. Among these patients, two had undergone secondary reconstructive surgery after failure of the primary reconstruction, or because of osteoradionecrosis of the horizontal mandibular segment. Three patients required more than one reconstructive surgery after free flap necrosis to overcome the mandibular defect caused by radionecrosis.

All patients were satisfied with functional and esthetic outcomes. One patient had surgical site infection managed by incision and drainage. Mean length of bony defects was 6 cm (3-9 cm). Patients mean follow up was 7 years (1-13 years).

Conclusions: Reconstruction using a compressed autogenous cancellous bone graft (by special compactor) is an optional reconstructive modality useful for challenging cases with multiple flap necrosis caused by osteoradionecrosis, and for restoring limited maxillary bone defects, and demonstrates encouraging functional and esthetic outcomes. The main advantages of this technique are that it allows the use of autografts, facile reshaping and modeling, and the graft has high osteogenic and osteoconductive characteristics. On the other hand, it is challenging, requiring a prolonged learning curve for surgeons.

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i-Siks (intratympanic steroid injection and keeping head specified position) therapy for poor prognostic Bell's palsy and Hunt's syndrome

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Introduction

Facial palsy such as Bell's palsy and Hunt's syndrome is thought to be caused by reactivation of occult infectious virus in geniculate ganglion of the facial nerve. The facial nerve edema leads to compression of the facial nerve and feeding vessels within the narrow fallopian canal. Consequently, degeneration of the facial nerve causes facial palsy.

Classical medical therapy with systemic steroids and antiviral agents is effective to some extent. There is no other treatment to enhance outcomes at present. In addition, systemic steroids are contraindications such as diabetes mellitus and severe gastrointestinal side effects, hepatitis type B and so on.

There are poor prognostic cases in 10% of Bell's palsy and 25-70% of Hunt's syndrome. The most reliable examination for prognosis is Electroneuronography (ENoG). ENoG is performed at 2-3 weeks from onset in order to help determine whether surgical intervention is recommended and to determine the probable prognosis with regards to the clinical presentation and case history. The case of ENoG<10% is thought to be poor prognosis.

We developed the new treatment of intratympanic steroid injection and keeping head specified position (i-Siks) for Bell's palsy and Hunt's syndrome. There are 2 reports that intratympanic steroid injection was effective for Bell's palsy. In this study, we intended the patient of poor prognostic facial palsy whose ENoG was under 10% and House-Blackman (H-B) grading was grade VI at the 2-3 weeks from onset after systemic steroid tapering therapy and administration of antiviral agents.

Patients

20 patients (Age: 22-80, Bell's palsy n=15, Hunt's syndrome n=5)

Method and Procedure

Dexamethasone (0.5ml/ 1 time/ day) was injected to the tympanic cavity through the tympanic membrane 7 successive days. After steroid injection, the patients were ordered keeping lateral position on the affected side and their head rotating to antero-inferior position in 20 minutes. During in this position speaking and swallowing were prohibited.

Estimation

Six months after, the final estimation was performed by ENoG, H-B grading and adverse events.

Results

In 70 % of the patients (n=14), ENoG and H-B grading were recovered up to over 70% and grade I, respectively. Five patients (25%) within the remaining 6 patients were recovered up to over 40% and grade II, respectively. One patient (5%) was recovered up to 30% and grade III. No severe adverse events were observed in all patients.

Conclusions

i-Siks is a safe and useful treatment for poor prognostic facial palsy.

PS-FRP-09

Long-term outcomes of combined upper eyelid platinum implant and lateral tarsal strip for correction of paralytic lagophthalmos.

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PURPOSE :

To evaluate long-term surgical outcome of the periorbital rehabilitation: upper eyelid platinum implantation with lateral tarsal strip for correction of paralytic lagophthalmos. We have focused on function, cosmetic, health-related quality and morbidity.

MATERIALS and METHODS :

A retrospective study, in Hospital Edouard Herriot in Lyon, from September 2009 to October 2016. Twenty seven patients had a validated questionnaire of health-related quality of life (Glasgow Benefit Inventory) to evaluate the effect of the surgery. Scores can range from -100 (maximal adverse effect), through 0 (no effect), to 100 (maximal positive effect). Furthermore, questionnaires were also employed to determine satisfaction, improvements, and complaints.

RESULTS :

The study included 27 patients, the mean follow-up time was 42 months. The mean age of the patients was 53 years with a female predominance in 15 cases (55,5%). Acoustic neuroma resection was the most common reason for the facial palsy. Four patients had post-operative radiation therapy. The mean weight of the implant was 1,2 grams.

There was no extrusion or allergic reaction. The median total Glasgow Benefit Inventory score was 28.7 ($p < 0.002$). The aesthetical result was qualified as excellent in 60% of the patients, 95 % had a high level of satisfaction. Night eye care was no used after the surgery in 80%. One patient had a paradoxical effect: the eye is open after lying down, 95% of patients would have their implant surgery again.

CONCLUSION: Upper eyelid platinum implant and tarsal strip is an effective and reliable technique for paralytic lagophthalmos. Patients are very satisfied. This surgery improves significantly and durably the health-related quality of life.

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PS-FRP-10

Prospective study of masseteric-to-facial nerve anastomosis for reanimation of the facial palsy.

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Purpose of the study:

Assessment of the masseteric-to-facial anastomosis as an alternative to hypoglosso-facial anastomosis for management of permanent facial palsy.

Materials and methods used:

Prospective study concerning 8 patients with unilateral peripheral facial palsy, following an injury of the proximal stump of the facial nerve.

Surgical procedures for reanimation of the face were performed between May 2014 and November 2015.

An electrophysiological record of the facial nerve was done to confirm that the facial palsy was definitive.

The mean time between the onset of the facial palsy and the surgery was 11 months.

The theoretical proposal for these patients is a hypoglosso-facial nerve anastomosis, which is a procedure that sacrifices the motor nerve of half-a-tongue. We decided to realise the masseteric-to-facial anastomosis, after clinical checking of the fonctionnal integrity of the trigeminus nerve.

Patients underwent an end-to-end anastomosis between the masseteric nerve and the trunk of the facial nerve. Only one patient need the use of interpositionnal nerve graft, harvested from a cervical cutaneous nerve.

Only patients with a House and Brackmann scale grade VI were included in the study. We used the House and Brackmann modified scale to assess the outcomes of surgery, with a delay of at least one year, and a mean time of 20 months between surgery and assessment.

Results:

All patients showed a clinical reinnervation of the mimetic musculature postoperatively. The mean time between surgery and the onset of the movement was 4 months.

Patients start to smile and to shut the eyes while clenching their teeth at the beginning. After 6 months of exercices, 4 of the 8 patients were able to smile or shut the eyes without clenching their teeth. 2 of the 8 patients reached spontaneous smile after 1 year.

All patients yield grade III of the modified House and Brackmann scale, with complete closure of the eye, and very good nasolabial fold and smile.

Synkinesis were very slight.

None of the patients complain about difficulties with chewing, and we don't describe any morbidity on the donor site and the masseter muscle.

Conclusion:

The masseter-to-facial nerve anastomosis is an efficient surgical procedure for complete facial palsy, with improvement of eye closure and smile, and very low morbidity.

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Reanimation of the facial nerve using the masseteric nerve. Our experience with two cases.

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1. Purpose of the study

Nowadays we treat different pathologies involving the facial nerve, sometimes with a surgical approach that damages the nerve. In those cases the best option is the direct reconstruction, but it is not always possible and we have to find other solutions. One of them is the masseteric-facial nerve neuroorrhaphy. In this study we would like to share our experience with this technique

2. Materials and methods used

We present two patients in which this technique has been practiced. The first one is a 70-years-old female, diagnosed with a T4 middle ear epidermoid carcinoma, in which a radical exeresis was performed, destroying de facial nerve at that level. After that, in the same surgical act, the masseteric nerve was connected end-to-end to the cigomatic and bucal branches of the facial nerve.

The second one is a patient who had been operated of acoustic neurinoma in other centre with interruption of the facial nerve. 3 months later we perform a masseteric-facial reparation using a great auricular nerve graft. We performed an end-to-end microsuture of the masseteric nerve with the great auricular graft, and the graft with the facial nerve.

3. Results

In the first case, 4 months post-surgery, the patient has a good rest tone and movements start to show up. The second case presents also good evolution, with rest symmetry and the first movements

4. Conclusion

The masseteric nerve is an interesting option with good potential to reanimate the facial nerve, not just improving rest tone but also active movements. As it is said in the literature, movements start to show up quickly, faster than with other techniques. The use of a nerve graft is controverted, but in our experience has good results.

Relevance of a software rehabilitation in peripheral facial palsy

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Early management of facial palsy is essential to increase recovery and prevent hemifacial spasm or synkinesis. Within the context of e-health, we wondered about the relevance of a virtual rehabilitation for peripheral facial palsy. To this end, we studied the relevance of a specific rehabilitation software. The main purpose of the present study was to compare classical rehabilitation and software rehabilitation.

First, 391 therapists and 81 patients answered questionnaires about their expectations and needs. This data helped us design a DVD which was provided to ten therapists and ten patients. A survey was then conducted in order to assess its relevance as a rehabilitation tool.

Afterward, we led a 6-months-monocentric nonparametric therapeutic studies. 2 groups of patients (n=10) were included : 5 patients benefit from a classic rehabilitation in the ENT department of Pitié-Salpêtrière hospital, whereas 5 patients followed a virtual rehabilitation with the DVD. Their facial motor skills, severity grades and quality of life were estimated. The range of the smile was measured with the ENS scale and the MEEI face-gram program.

The study reveals that the implementation of a software as a rehabilitation tool is well-appreciated for the visual feedback it delivers as well as for its pedagogic content which meets patients' expectations (9,1/10 ; 0,74Ds). Furthermore, it seems to motivate patients by involving them in the rehabilitation process (average increase of the motivation after the DVD display: +1,7 pt.). The findings clearly reveal that this DVD is a promising and relevant tool that may improve the treatment of Bell's palsy.

Facial motor skills of patients included in this therapeutic study increase significantly from the third month post-inclusion. The findings are not significantly different between both groups in term of motor skills, range of smile or quality of life. In common with classical rehabilitation, software rehabilitation could increase functional facial expression recovery.

Considering diagnosis errors and the wandering path of patients to find a specialized therapist, software rehabilitation can be crucial regarding patients' quality of life and professional practices.

Scapular Tip and Latissimus Dorsi Osteomyogenous Chimeric Free Flap for Reconstruction of Maxillectomy Defect: A Minimally Invasive Trans-axillary Approach

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Purpose of the study: To propose novel, minimally invasive trans-axillary approach for harvesting the scapular tip and latissimus dorsi osteomyogenous chimeric free flap for reconstruction of maxillectomy defect.

Materials and Methods: A retrospective review of 4 patients who underwent maxillectomy and reconstructed using scapular tip chimeric free flap using trans-axillary approach was done. The analysis of the data including age, sex, pathology, previous treatment, adjuvant treatment was collected. Also total operation time, hospital days, cosmetic and functional outcome of reconstruction was analyzed.

Results: Two male and two female patients were enrolled in this report. Patient age ranged from 52 to 59 years-old. All the patients underwent maxillectomy resulting at least Okay type II defects, and were successfully reconstructed using scapular tip chimeric free flap under minimally invasive trans-axillary approach. The entire operation time for primary tumor surgery and reconstruction ranged from 6.2 hours to 12.1 hours (mean, 11.1 hours). The average period of hospital stay was 13 days (range, 10-16 days). No major donor site morbidity was observed and there was no graft failure which required revision or exploration surgery.

Conclusion: The minimally invasive trans-axillary approach harvest of scapular tip and latissimus dorsi osteomyogenous free flap for the reconstruction of Okay type II maxillectomy defect is a promising approach in terms of functional outcome and also esthetic outcome compared to not only the other bone containing free flaps but also the classic approach for harvesting STLD free flap.

Smile reanimation after Unilateral Facial Palsy by Lengthening Temporalis Myoplasty : Objective and Subjective Evaluation on 25 cases

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Introduction and purpose: For the last 15 years, Lengthening Temporalis Myoplasty (LTM) has been a popular surgery for facial rehabilitation. Currently, subjective methods are used to assess the results of this surgery. This study aimed at implementing an objective evaluation that was simple, suitable, reproducible and correlated with the subjective evaluation of the smile symmetrisation results after LTM.

Patients and methods: We retrospectively studied 25 patients suffering from unilateral facial palsy after they had an LTM surgery. The evaluation was conducted in 3 steps: first we used objective measurements on preoperative and postoperative pictures. Then we asked a jury for their opinion (4 experts and 4 naïve people). Finally, we asked the patient's own opinion. The objective measurements were: delta H and delta V, which reflect the horizontal and vertical symmetry of the smile, CS and CP, which reflect the smile's width on the healthy and pathological side and VALcp which is the commissural ascension on the pathological side. The subjective scales were a numeric scale (NS) and the Terzis and Noah's subjective scale. Each assessment was conducted using 3 examination conditions: face at rest, intermediate or maximum smile.

Results: The comparison of objective measurements of pathological sides showed a significant difference in postoperative phase, whatever the examination condition was. The reproducibility of the NS was light (ICC <0.3) in the evaluation at rest and intermediate in the evaluation of the maximum smile (ICC = 0.57). The Terzis and Noah's scale was not reproducible (kappa<0.3). No connection between the objective and subjective evaluations to rest and intermediate smile was observed. However, there was a correlation between the measurement of the variation of delta V and delta H on one hand, and the expert's evaluation using NS in the examination condition of maximum smile on the other. We also highlighted a correlation between the change of delta V and delta H and the patient's opinion.

Conclusion: Variations of delta V and delta H in the examination of the maximum smile seem to indicate a better postoperative facial symmetry. It reflects the patient's satisfaction as well as the outcome evaluation by professionals with the NS.

The atrophy is it inevitable after hypoglosso-facial anastomosis? Interest of a specific tongue's rehabilitation

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Classic hypoglossal-facial nerve anastomosis (AHF tt) is a traditional technic for rehabilitation of facial palsy. The sacrifice of the hypoglossal nerve generates a paralysis and an atrophy of the tongue which is held to be responsible for disorders of the articulation, the chewing and swallowing. After having shown that there were not disorders of the articulation in the AHF tt, we propose a comparative study of the verbal communication with patients having a specific and early lingual rehabilitation versus patient not having been dealt with.

Objects : The aim of this study was to address the efficiency of specific rehabilitation of the tongue after hypoglossal facial anastomosis.

Patients and Methods :We conducted a retrospective study of 95 patients after end to end anastomosis. Two groups of patients were comparated with a battery of tests including motor possibilities, articulation , facial and lingual electromyography's. Group A is made up of patients rehabilitated at J + 1, Group B patients never having rehabilitation or reeducated 2 years after surgery.

Results: This study brings to light the interest of a premature rehabilitation of the tongue and put in evidence that premature rehabilitation (from J+1 post surgery) allows the decrease of the lingual atrophy and the improvement of the tongue 's mobility.

Conclusion: This study brings to light the interest of a premature care($p<0.001$) of the tongue from the first postoperative days. The rehabilitation is above all a functional rehabilitation, main results with a better and faster reinnervation of the face , less hypertonia and synkinesis.

PS-Ms-01

Design of 3D cutting devices during scapular flap harvesting for reconstruction of the maxilla.

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Introduction

Maxillary reconstruction remains a challenge when dealing with the anatomical, functional and aesthetic imperatives. Precision is required in these indications to obtain satisfactory results.

We propose to describe the CAD-CAM-assisted scapular flap harvesting technique for maxillary reconstructions.

Material and method

We present our first 9 cases of maxillary reconstruction by scapular flap with CAD-CAM cutting device.

We reviewed retrospectively the operative times, the duration of flap ischemia and the advantages of this technique.

Results

Of 9 cases, 8 were performed in primary surgery and one secondary. The mean number of pallets taken in addition to the vascularized bone segment was 1, 3. The mean operating time was 564.9 minutes for an ischaemia time of 78.3 minutes.

The bone segment removed, depending on the case and the type of bone loss, was the tip of the scapula or its lateral border.

Discussion

This reconstruction technique offers a new tool to adapt the bone sample to the type of loss of substance.

The geometry and type of guide has evolved significantly according to our experience, taking into account the secondary discomfort related to the soft tissues surrounding the scapula.

Scapular thickness is often a brake on dental rehabilitation by osteo-integrated implant, but CAD-CAM helps to accurately select the thickest bone areas for implantation of osteo-integrated implants.

Conclusion

The results obtained after this preliminary study encourage us to continue this technique.

This method makes it possible to preserve the reliability of the scapular flap while giving it the precision offered by the new technologies hitherto unexploited from this donor site.

Developing Guidelines for Venous Thromboembolism Prophylaxis in Head and Neck Patients Undergoing Microvascular Reconstruction

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Abstract

Background: Evidence about risk (i.e., bleeding), cost, and the efficacy of chemoprophylaxis for the prevention of venous thromboembolism in patients undergoing microvascular reconstruction of the head and neck is lacking. As previously shown by the senior author of this study, there is wide variation in practice, ranging from only mechanical compression to varying frequencies, doses, and durations of unfractionated heparin and low molecular weight heparins. Consensus guidelines are needed. The purpose of this study was to investigate the incidence of symptomatic and asymptomatic deep venous thrombosis (DVT) in patients undergoing harvest of a free flap from the lower extremity who were receiving standard chemoprophylaxis while hospitalized.

Methods: A retrospective review of 65 consecutive patients undergoing surgery between 2011 and 2013 was performed to determine the incidence of symptomatic DVT. These patients were screened for DVT based on development of symptoms. Prospective evaluation of a similar consecutive population of 37 patients between 2014 and 2015 was then performed to determine the incidence of asymptomatic and symptomatic DVT. These patients underwent routine duplex ultrasonography of both legs at postoperative weeks 1 and 4.

Results: All patients were very high risk for DVT (mean Caprini score: 11.5). Symptomatic DVT occurred in 2.9% of all patients. In the prospective cohort, 8.1% of the patients were found to have an acute DVT by postoperative week 1. At postoperative week 4, an additional 16.7% of the patients developed a new DVT. The estimated cost of screening and treating DVT in the retrospective and the prospective group was respectively \$222 and \$2,259. The cost of routine chemoprophylaxis without Duplex screening for an additional 14 days after discharge was \$125 per patient.

Conclusions: The rate of asymptomatic DVT may be much higher than previously appreciated in this population of very high-risk patients, especially during the 2 weeks after discharge. Extending the duration of chemoprophylaxis to 4 weeks following surgery may be warranted.

Dynamic control of head and neck free flaps perfusion using fluorescence imaging: How important is the quantification?

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Purpose of the study:

Definitive reconstructions of composite tissue defects in the head and neck region present unique challenges and may require multiple perforator or chimeric flap procedures. These advanced techniques can have serious repercussions, which can be devastating with a total necrosis between 2-8% of all free flaps.

Indocyanine green angiography (ICGA) has an important emerging role in reconstructive surgery by free flaps since 2009.

Several uses of this pioneering technique have been described in recent medical publications e.g. perioperative control of micro vascular anastomosis, identification of cutaneous perforator vessels, free flaps blood perfusion, flaps follow up, etc.

We hereby report our experience using ICGA techniques in head and neck reconstruction.

Materials and Methods:

We performed intraoperative ICGA on 25 patients who underwent head and neck free flap reconstruction using perforator/chimeric flaps between 2014-2016. We included: one latissimus dorsi, six thoraco dorsal artery perforator, thirteen anterolateral thigh, two para-scapular/scapular, one jejunum and two fibular flaps.

Follow up was between 3-12 months. First ICGA was done in situ after harvesting the flap, then a second ICGA to assess the micro vascular anastomosis.

Different paddles perfusion and vascular anastomosis evaluations were realized by an infra red camera after intravenous ICG injection of 0.1 mg/Kg.

Results:

ICG image helped in modifying the harvested flap and remodeling it in nine cases i.e. eight partial and one complete paddle resection.

No total flap necrosis was observed. There was one partial necrosis in the jejunum flap 15 days after surgery. One orostoma without flap necrosis appeared 12 days after surgery.

Nevertheless, we had a discordance in two cases between ICGA image and clinical impression. Flaps in these two cases were not modified and survived without secondary necrosis.

Conclusion:

Intraoperative ICGA is a reliable method aiding in pedicle localization, angiosomal assessment, anastomotic flow visualization, and flap perfusion evaluation in head and neck free flap reconstruction. This objective non invasive tool can assist the reconstructive surgeon in avoiding perfusion-related complications and total and partial flap losses, thus improving patient outcomes.

MICROSURGERY OVER AGE 75 FOR ADVANCED CUTANEOUS TUMORS VERSUS UPPER AERO DIGESTIVE TRACT DEFECTS: SHORT TERM OUTCOMES

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Purpose

Microsurgical outcomes are known to be satisfying in the elderly, but data on the impact of defect types on the global postoperative outcomes of head and neck microsurgical reconstructions are lacking. The purpose of this study was to define and compare the short term outcomes after free flap reconstructions performed for upper aero digestive tract defects (UADT) to those performed for head and neck advanced cutaneous tumors in patients over age 75.

Methods

The medical and surgical data of 63 patients aged over 75 were retrospectively analyzed. Two groups have been defined according to the type of defects: the “superficial defects” groups, when the reconstruction was performed for advanced cutaneous tumors (n=17) and the “deep defects”, when the reconstruction was performed for upper aero digestive tract defects (n = 46). The pre-operative evaluation consisted of an anesthetic consultation, an onco-geriatric consultation and a nutritional evaluation. Charlson’s comorbidity index has been used to summarize patients’ comorbidities. The short-term outcomes evaluated were safety and functional results. Safety was measured by the occurrence of severe adverse events (SAE), defined as grade 3 or more adverse events (AE), according to the common terminology criteria of adverse events (CTCAE v4.0) [2], and by the 30-day mortality rate. Functional results were measured by the free flap failure rate.

Results

Severe adverse events (SAE) occurred significantly less after reconstruction for advanced cutaneous tumors versus UADT defects (17.6% VS 52.2% respectively, $p = 0.02$). An increased Charlson score was predictive of SAE occurring after reconstruction for UADT defects ($p < 0.0001$) but not for advanced cutaneous tumors. The 30-day mortality rate was 0%. Primary flap success rates were 100% and 82.6 % in the “superficial” and “deep” defects groups respectively, this difference not being significant ($p=0.09$).

Conclusion

The excellent tolerance of microsurgical reconstructions for advanced cutaneous tumors should be admitted by the surgeons, anesthesiologists, oncogeriatricians, dermatologist and oncologists and such reconstructions should be seriously considered each time necessary even in the elderly patients with elevated Charlson scores. As regards the patients treated for UADT defects, the Charlson score may be a useful decision-making tool in patients aged 75 or more, and alternative therapeutic options should be considered in the patients with elevated scores.

PS-Ms-05

Microsurgical reconstruction of facial skeleton with osteo-musculo-cutaneous flaps

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Purpose of the study: to improve rehabilitation results and outcomes in patients with carcinomas of maxillofacial area.

Materials and methods: The prospective study included 2 steps: cadaveric (step I) and clinical steps (II). I step included investigation of angioarchitecture characteristics of 32 osteo-musculo-cutaneous flaps, which were formed by rib and one of the following muscles: latissimus dorsi, serratus anterior, greater pectoral, rectus abdominis. Anthropomorphic characteristics assessment, selective post-mortal angiography and micro anatomical preparation/dissection with coloring material of these flaps and intervascular collateral connection between internal thoracic artery, thoracodorsal artery, thoracoacromial artery, deep inferior epigastric artery and intercostal arteries, were made. II step included 130 patients with carcinomas of maxilla fascial area, who were treated surgically with reconstruction step (osteo-musculo-cutaneous flaps).

Results: 5 patients(3,8%) had a total flap necrosis, 8 patients (6,1%) had a partial flap necrosis. Mortality rate was 2,2%. Nutrition per os was restored in 83,3%. Dental prosthetics were made in 5 cases (16,6%) from 5 to 32 months after reconstructive operation. 88,6% of patients were rehabilitated. 31,8% of patients came back to work.

Conclusion: Osteo-musculo-cutaneous flaps, which are formed by rib and latissimus dorsi, serratus anterior, greater pectoral, rectus abdominis muscles are reliable material, which can be used in management of patients with carcinomas of maxillofacial area.

Negative pressure wound therapy : effectiveness donor site healing of radial forearm flap in patients with head and neck cancer. A prospective randomised monocentric study

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Background : Radialforearm free flap remains the most commonly used free flap in reconstruction of soft tissue defects in head and neck cancer. Patients presenting head and neck cancer have often risk factors for delayed healing such as malnutrition or smoking and donor site healing can be long. Negative pressure wound therapy (NPWT) has been shown to improve healing and graft acceptance rate compared to conventional bolster dressing.

Purpose of the study : Evaluation of the effectiveness of NPWT in the management of radial forearm flap donor site skin graft healing in patients with head and neck cancer.

Materials and methods : We conducted a prospective randomised monocentric study comparing NPWT to standard (bolster) dressing in donor site skin graft of radial forearm flap in head and neck cancer patients. All patients who had radial forearm flap reconstruction for head and neck cancer (or sequelae of cancer treatment) between March 2016 and January 2017 were randomly assigned to the group NPWT or to the group of standard dressing. Dressing were removed in the two arms at day 5 after surgery. For each patient, clinical data and peri-operative data were noted. Pictures of radial forearm donor site were done at Day 0 of surgery (before and after thin skin graft), at Day 5 (at dressing removal) and at Day 15 and at complete healing. The main study outcome was the time for complete healing of radial forearm donor site. Secondary outcomes were fonctional and aesthetic results on the donnor site, by auto- and double blind hetero-evaluation at complete healing.

Results : Twenty two patients were included. 45% of them were women, median age was 60 years old (21- 83). Forty two percent of the patients had severe or moderate malnutrition. There was no significant differences between standard dressing and NPWT groups regarding to the median age, sex and risk factor for delayed healing. The healing time of the donor site was not significantly different between the two groups. Nevertheless healing delay tended to be associated with anatomical characteristics such as deepness between brachioradialis and flexor carpi radialis muscles and malnutrition.

Conclusion : NPWT did not show any significant advantage compared to standard dressing for complete healing time of thin skin graft on radial forearm flap donor site.

SURGICAL MANAGEMENT OF THE NASAL SEPTUM PERFORATION

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Purpose of the study. Nasal septal perforations present a distinct challenge to the facial plastic surgeon. The literature describes several methods for septal perforation repair; each has its technical challenges because of the tenuous nature of the tissues and limited surgical exposure of the area. A clearcut causal factor must be established from a long, diverse list of potential causes. Surgical repair presents a complex technical challenge, because a septal perforation is a hole in three distinct contiguous layers composed of both right and left septal mucoperichondrial flaps and the intervening cartilage, all three of which must be separated from each other and repaired individually.

Materials and methods. In the period from 2011 to 2016 under our supervision there were 15 patients with nasal septum perforations of different localization and defect size, the perforations ranged from 0.4 to 2 cm. Nasoseptal perforations have traditionally been closed using 2 superiorly based flaps or 2 inferiorly based flaps. We use bilateral mucosal flaps with cartilage graft between the flaps to provide structural integrity to the septum.

That had been closed using bilateral mucosal advancement flaps (one inferiorly based flap advanced from the floor of the nose and another superiorly based flap advanced from the lateral nasal wall). This technique combining both flaps for closure of moderate-sized of nasal septum perforations.

Results. The single-stage nature of the procedure is advantageous. The flaps which is well vascularized make this a hardy flap, with minimal possibility for flap failure due to necrosis. Finally, the main advantage of this technique is the bilateral closure with non opposing suture lines, decreasing the risk for failure of the repair with recurrence of the nasoseptal perforation. 11 patients had excellent outcomes, with resolution of symptoms and no recurrence.

4 patient who septal defect was about 2 cm, were observed residual perforation approximately 2 mm, which were closed through reoperation.

Conclusion. It should be noted that this procedure decreases the risk for recurrence of the perforation, necrosis of the flaps, and development of a new perforation. An advantage of this technique is that the natural respiratory mucosa is not disrupted.

Thin anterolateral thigh perforator flap harvested in the superficialis fascia plane: technical note and clinical applications

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Introduction

The perforator flaps occupy a ever growing position in reconstructive surgery. The surgical techniques, as they are classically described, usually involve a supra or sub-fascial harvesting. In certain indications, a flap refinement can be necessary and different degreasing methods, primary or secondary, exist. However, these methods may be responsible for vascular issues and a lack of homogeneity in respect of the flap surface. Recently, a new technique of flap harvesting in the plane of the fascia superficialis has been described. This technique, based on a better comprehension of the sub cutaneous distribution of perforator vessels, allows for a straight-forward harvest in this superficial plane, thus obtaining a thin and homogeneous flap from the start of the procedure. The donor site morbidity is all the more reduced. We present the principles and the outcomes of this surgical technique

Materials and methods:

For 10 clinical cases (Scalp, tongue, pharynx and head and neck region) a thin anterolateral thigh perforator flap was harvested on the fascia superficialis plane for finesse and conformation reasons. In 3 of these cases, the flap was harvested with two distinct palettes.

Results:

No matter the thickness of the donor site, this method allowed to harvest flaps as thin as 4 mm in a homogeneous way without the necessity of a secondary degreasing. No complete necrosis was reported. The harvesting was based on the superficial branches of the perforator vessel leaving therefore superficial nerves and profound fat in site.

Conclusion:

The method we propose seems reliable and has the advantage of a thin and homogeneous harvesting around one or more perforator vessels. This technique allows to extend the indications of ALT free flap, since it solves the usual issue of the excessive thickness of regular ALT flaps. This type of harvesting, which is performed on the superficialis fascia plane, seems accessible for every plastic surgeon who takes the superficial vascularization into account.

Total Nasal Reconstruction with 3D custom made porous titanium prosthesis and free perforator flap.

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Introduction:

During nasal reconstruction, reconstruction of the nasal framework is done by means of autologous cartilage. The problem of the cartilage remains its conformation, its solidity and its stability in time which creates a hazard in the definitive form. The aim of this work is to present the feasibility of 3D printing of fine porous Titanium for the reconstruction of the osteocartilaginous framework in nasal reconstruction. We present the method of computer design, clinical implementation and results at 18 months.

Material and methods :

This method of reconstruction has been proposed in 2 patients. The first patient consulted after 2 failures of nasal reconstruction. The 3D prosthesis was designed using the nasal amputation scanner. It was then subcutaneously fed to the patient's back and 2 months later a perforator flap including the prosthesis was transferred to the face. For the second patient, it was a primary reconstruction of the nose with, at the same time, a fine anterolateral free flap to reconstruct the mucosal plane, placement of the customized 3D prosthesis and coverage by a frontal flap.

Results and discussion :

The surgery was simple for both patients. The results required retouching for degreasing like all conventional nasal reconstruction techniques. There was no infection or intolerance of the 3D prosthesis at 18 months in both patients. The 2 patients are satisfied with the functional and aesthetic result with stability of the nasal framework over time.

Conclusion:

Technological advances make it possible to obtain biocompatible materials combining fineness and strength. These advances now make it possible to design the use of fine porous 3D titanium for nasal reconstruction. The first results are satisfactory and open the way to new possibilities in nasal reconstruction solving the problem of conformation and cartilage resistance in these indications.

Diagnostic strategy in patients with maxillofacial trauma including pre- and postoperative multi-slice and cone-beam computed tomography

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Purpose of the study. Pre- and postoperative multi-slice computed tomography (MSCT) and cone-beam computed tomography (CBCT) were compared to establish the best diagnostic strategy in patients with maxillofacial trauma.

Materials and methods used. Sixty one patients with maxillofacial trauma were admitted to the hospital on the 1-2 day after the injury. Preoperative MSCT and CBCT scans were performed during the first 3 days of admission. Postoperative MSCT and CBCT images were obtained within 7-10 days after the surgery.

Results. Preoperative MSCT revealed herniation of orbital contents (n=13, 21%), globe trauma (n=3, 5%), injured optic nerve (n=11, 18%) and deformation of oculomotor muscles (n=20, 32%). As well as fractures of the orbital floor (n=60, 98%), lateral (n=55, 90%), medial (n=13, 21%) and superior (n=3, 5%) orbital walls. MSCT assessed multiply fractures of zygomatic bone and arch (n=39, 64%), anterior and lateral maxillary sinus walls (n=46, 75%).

Preoperative CBCT also managed to reveal fractures of the orbital floor (n=60, 98%), lateral (n=55, 90%), medial (n=13, 21%) and superior (n=3, 5%) orbital walls, multiply fractures of zygomatic bone and arch (n=39, 64%), anterior and lateral maxillary sinus walls (n=46, 75%). However, CBCT couldn't provide detailed diagnostic information about soft tissue trauma, so the extent of orbital content's herniation was estimated indirectly.

Postoperative MSCT revealed the remaining herniation in the posterior part of orbital cavity (n=5, 8%), globe trauma (n=3, 5%), deformations of optic nerve (n=6, 10%) and oculomotor muscles (n=3, 5%).

Postoperative CBCT assessed the bone defects in the posterior part of orbital cavity in 5 cases (8%) without diagnostic information about orbital content's herniation. Absence of significant metal artifacts in CBCT facilitated evaluation of implants, osteosynthesis elements and condition of surrounding bone tissue as compared to MSCT, where in 15 (25%) cases the visualization was more difficult.

Conclusion. MSCT is the modality of choice in preoperative and early postoperative periods in patients with maxillofacial trauma since CBCT doesn't provide enough information about soft tissue structures. CBCT could be performed in late postoperative period for the evaluation of implants' position and surrounding bone tissue due to the absence of significant metal artifacts.

INVOLVEMENT OF THE NASOMAXILLARY BUTTRESS IN FACIAL TRAUMA- DIAGNOSIS AND TREATMENT ISSUES

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Purpose of the study

We aim to evaluate the unique characteristics of fractures located at the level of the medial maxillary bone regarding accurate diagnosis and treatment.

Materials and methods used

We reviewed 12 patients with fractures of the nasomaxillary buttress treated by open reduction and internal fixation. All patients presented with hypoesthesia in the territory of the infraorbital nerve and 3 patients presented diplopia. Clinical examination revealed discontinuity in the medial part of the inferior orbital rim and widening of the nasal dorsum on the affected side. All patients were investigated using conventional radiographs and CT. Isolated fractures were encountered in 4 cases, an associated fracture of the orbital floor in 3 patients, nasal bone fracture in 2 patients and associated naso-orbito-etmoidal fracture in 3 cases. The approaches used were the transconjunctival approach (7), mediopalpebral (5), associated with intraoral approach (12). Fixation plates were used at the lateral pyriform aperture and medial aspect of the inferior orbital rim. A titanium mesh was used in 3 cases and PDS meshes in 2 cases for the reconstruction of the inferior orbital wall.

Results

Accurate fixation was achieved in all cases with good morphological outcomes. There were no infectious complications related to the fixation material. All patients presented residual infraorbital hypoesthesia at follow-up. Diplopia resolved in all cases postoperative, faster when surgery was performed earlier. No obvious scars were noted in the mediopalpebral incision and there were no cases of postoperative ectropion.

Conclusion

Fractures of the nasomaxillary buttress can be clinically mistaken for fractures of the nasal bone or zygoma fractures due to the discontinuity in the inferior orbital rim. CT examination provides the proper diagnosis of the fracture location and associated lesions. The 3D reconstruction is a useful tool guiding proper reduction and fixation of the fragments for best morphological results.

Medial and inferior orbital wall fractures: purely endoscopic endonasal repair with polyethylene implants

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INTRODUCTION: Medial and infero-medial orbital wall fractures (OWF) are extremely common. Although classic transfacial approaches still retain their value today, several transnasal endoscopic approaches have been already proposed. Given the superior stability given by non resorbable implants and the chances provided by modern biocompatible materials, we introduced a new purely endoscopic technique employing a porous polyethylene implant.

MATERIAL AND METHODS: 18 patients with medial OWF and 3 patients with inferomedial OWF underwent purely endoscopic treatment with porous polyethylene implant. The procedure requires an endoscopic anteroposterior ethmoidectomy and, in case of infero-medial wall fracture, middle antrostomy to grant access to the fracture side. Fractured bones are removed and orbital content herniation in the sinonasal tract is reduced. According to the anatomy of the patient a Medpor sheet is cut and modeled in a convex shape roughly mimicking the desired periobital curvature, with extension towards the orbital floor whenever required. The medpor sheet is held in place by the residual solid bony structures of the lamina papyracea and nasal packs preventing bleeding and are kept in place until postoperative day 2.

RESULTS: All patients showed complete enophthalmos reduction and no complications were reported. At the 1-week and 1-month control there were no signs of local infection. The results remained stable without any late complication 6 months after the procedure.

DISCUSSION AND CONCLUSIONS: Despite needing further validation, our technique showed preliminary excellent results, coupling the stronger support granted by non resorbable materials and the minimal invasiveness of the endoscopic approach without need for long term nasal packing.

Multi-slice computed tomography in pre- and postoperative assessment of oculomotor muscles injury

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Purpose of the study: to identify the main radiological features with multi-slice computed tomography (MSCT) of oculomotor muscles injury in pre- and postoperative period.

Methods and materials used: a total of 63 patients with orbital trauma were admitted to the hospital 24-48 hours after the injury (55 males and 8 females, age range from 18 to 59 years). All MSCT scans were performed on 640-slice volume scanner. Preoperative MSCT scans were obtained right after the admission. Postoperative MSCT were obtained within 7-10 days after the surgery.

Results: preoperative MSCT revealed oculomotor muscles injury in 30 patients (48%). Muscles injuries were presented with herniation into the maxillary sinus (n=9, 14%), damaged lateral, inferior and medial muscles by small bone fragments (n=12, 19%), unilateral thickening of muscles in 13 patients (21%), foreign body within inferior oculomotor muscle occurred in 1 case (2%). Thirty-three patients didn't have any oculomotor muscles trauma (52%).

Postoperative MSCT managed to reveal oculomotor muscle damage caused by the incorrectly implanted prostheses of inferior orbital wall in 6 cases (9%).

Conclusion: MSCT is the modality of choice in pre- and postoperative diagnostics in patients with oculomotor muscles injury. MSCT provides the effective diagnostic solution in prevention of possible ocular movement impairment.

PS-MT-06

PENETRATING FACE FOREIGN BODY – TREE BRANCH : A UNUSUAL SURGICAL APPROACH.

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Objectives :

Facial trauma by penetrating foreign body is unusual and need multidisciplinary surgical approach. This case report concerns at a 20 -year-old patient who had suffered a penetrating foreign body injury to the face, and the surgical approach taken to remove the tree branch and to correct the damage caused. Having fallen while driving a bike, this patient suffered multiple fractures of the maxillofacial region caused by the tree branch penetration in the face.

Methods :

This embedded foreign body required a creative surgical approach. It was necessary to remove it involving gaining access to the internal carotid via a cervical approach and cautiously following the tree branch from its entry, all the way to the infra-temporal fossa, until its outlet point under the right eye. A radiologist, vascular surgeon and ophthalmologist were required due to the proximity of the internal carotid and the eye, particularly when removing the tree branch from the face in one piece. Secondly, we reduced his maxillofacial fractures.

Results and conclusion: The patient recovered well and the internal carotid didn't suffer any damage during the tree branch extraction. The tree branch fractured the orbit floor but didn't touch the eye. He did not have any sequelae of his facial trauma.

The ethmoidal arteries and the validity of the 24/12/6 rule

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Introduction:

Precise knowledge of the location of the ethmoidal arteries is crucial for safe orbital and sinus surgery. The distances from the anterior lacrimal crest (ALC) to the ethmoidal arteries and optic nerve are traditionally described as 24/12/6 mm. We hypothesize that the distances to the arteries are positively correlated to the length of the orbit.

Outcome Objectives:

1. Measure distances to the anterior and posterior ethmoidal arteries in human cadavers using a direct technique as well as CT-images.
2. Correlate these distances to the length of the orbit

Methods:

- **Subjects Studied:** Fifty orbits from 25 Caucasian cadavers were exenterated and examined. Furthermore, high-resolution CT-scans of 48 orbits from 24 other Caucasian cadavers were also examined.
- **Outcome Measurements:** Distances from the nasion (the intersection of the frontal bone and the two nasal bones), the intersection of the frontomaxillary and nasomaxillary suture (IFNS), the ALC and posterior lacrimal crest (PLC), to the anterior and posterior ethmoidal foramen (AEF and PEF) and the optic canal (OC) were measured.
- **Results:** The distances from the nasion, IFNS, ALC and PLC to the AEF and PEF were all positively correlated with the distances from the nasion, IFNS, ALC and PLC to the OC (all P-values < 0.01).
- **Conclusion:** The distance to the ethmoidal arteries is positively correlated to the length of the orbit. Thus, absolute values such as the 24/12/6 mm rule are best avoided.

PS-MT-08

Theme: Reconstruction of 1/3 part of upper auricular with graft from nasal septum in two stages. (Skin Flap Pocket Technique)

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Abstract

Background: The choice of technique is based on the missing ear components and the availability of tissue for defect coverage.

The goal is to obtain an aesthetically acceptable ear.

Patient and Method: We present two cases of partial traumatic ear amputation due to bite from another human being. Graft from the nasal septum is taken in both cases after performing a septoplasty. After taking cartilaginous graft from septum, an refreshments of the edges of amputation is performed and fixation of the graft with the cartilage of auricle in the place of amputation and then its insertion with auricle cartilage in amputation location and insertion in subcutan retroauricular pocket

Both cases underwent to a second intervention after three months, where dislocation from retroauricular region, is performed dislocation of auricle and its modeling.

Results: On the first period there was not noticed any infection or graft reabsorption. During follow up 1 year, and 5 years for the second patient we had satisfying esthetical results. Cartilaginous graft and the covering skin had thickness, size and color of other auricle. Esthetical defect is visibly decreased.

Summary: The technique used in these cases provided acceptable results in reconstructing the size and shape of the partially amputated ears. Septal cartilage grafts implanted in the pockets retained their shape with no infection or absorption.

Keywords: Ear amputation, partial ear amputation, pocketing technique, men-bite to the ear, septal graft

PS-Ot-01

Basal cell carcinoma of the nose extended to the maxillary : flaps reconstruction and outcome

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Purpose:basal cells carcinomas of the nose are frequent in the elderly. But their extension to the maxillary adds difficulties in the surgical management of these cancers. More efforts needs to be done in terms of prevention.

Methods: we report 3 cases of basal cell carcinoma of the nose extended to the maxillary. 3 patients underwent face CT scans that showed massive extension to the maxillary and the maxillary sinus and the upper homolateral vestibular mucosa. The orbit was invaded slightly in one case with no visual nor functional impairment .

All 3 patients had surgery with large resection of the tumor.

Reconstruction was realized with a frontal pediculed flap in the order to close the loss of skin due to cancer resection.

All 3 patients had no cervical lymph nodes, therefore no lymph node cervical dissection was performed nor indicated.

The flap autonomization was realized 2 weeks after the first surgery.

Upon cicatrization the patients were sent to radiotherapy with a irradiation of 50 to 60 Grey.

Conclusion: basal cell carcinomas of the face remain frequent despite all the efforts in terms of prevention. When they extend to the maxillary they require a longer surgery with at least 2 steps followed by radiotherapy.

Does Chemical Suture work in non-immediate acute facial nerve cut-severance?

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PURPOSE OF THE STUDY

Recent studies involving crawfish, sea urchins, earthworms, starfish, squids, bovine retinal cells and rats revealed that early plasmalemmal resealing is the main factor predicting survival and regeneration of neurons after severance. In turn, plasmalemmal restoration is regulated by Ca^{+2} exocytosis. Bittner et al, interfering with Ca^{+2} exocytosis and treating neural stumps with methylene blue and microsutures, accomplished a 70-80% return to normal neural function after 12 weeks of crush or cut-severance of rat sciatic nerves, in a process named chemical suture. Therefore, chemical suture may have great potential in facial nerve lesions, especially of the traumatic kind. However, in a real case scenario, there is generally a time lapse of several hours between nerve lesion and repair, reason why facial nerve regeneration was evaluated after chemical suture done at 24 and 72 hours after neurotmesis.

METHODS

Fifty-four male Wistar rats were divided into 4 groups. Groups A and C were submitted to facial nerve cut severance and, after 24 and 72h, respectively, neural stumps were reopened and apposed with microsutures. Groups B and D received similar treatments, plus chemical suture. This process involves bathing of axonal ends with Ca^{+2} -free saline solution containing methylene blue (100 μ M) for 3 min, previous to the microsutures. Afterwards, a hypotonic solution of polyethylene glycol was applied to the closely apposed ends. Finally, an isotonic Krebs solution containing Ca^{+2} was applied. Compound muscle action potentials (CMAPs) were registered immediately before the surgery, and 3 and 6 weeks afterwards, and yielded amplitude, latency and duration values. Six weeks after surgery all animals were sacrificed and the mandibular branch of the facial nerve was submitted to histological analyses.

RESULTS

The CMAP results obtained previous to surgery (Kruskal-Wallis; $p \geq 0.615$) and three weeks after (Mann-Whitney; $p \geq 0.488$) did not differ among groups. At 6 weeks there was no difference between groups A x B (Mann-Whitney; $p \geq 0.200$), C x D (Mann-Whitney; $p \geq 0.488$) and A x C (Mann-Whitney; $p \geq 0.549$). Histology studies showed no sign of cellular rejection or malignant transformation.

CONCLUSION

There is no electrophysiological difference between suturing the rat facial nerve at 24 and 72 hours after a cut severance. Despite being promising for acute axonal cut lesions, chemical suture did not yield results in rat facial nerve regeneration when axonal ends were apposed 24 and 72 hours post-trauma.

Human bone marrow mesenchymal stem cells regenerate rat facial nerve from isolated stumps

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PURPOSE OF THE STUDY: Severe lesions in the facial nerve may have extensive axonal loss leaving isolated stumps that impose technical difficulties for nerve grafting. Animal-derived mesenchymal stem cells have been successfully employed to achieve nerve regeneration in a variety of animal models. Bone marrow mesenchymal stem cells (BMSCs) may differentiate in vitro into Schwann-like cells, and have disclosed favorable outcomes when associated to the gold-standard surgical procedure of nerve gap tubulization to align isolated stumps. We previously employed rat BMSC (rBMSC) aiming at the rat facial nerve regeneration from isolated stumps. Superior functional outcome has been observed for undifferentiated cells (uBMSC). The application of human cells in animal models of nerve injury is an essential aspect before considering clinical trials.

METHODS: Here, we evaluated uBMSC of human origin (huBMSC) in the former rat facial nerve model. HuBMSC were analyzed by flow cytometry. Cells embedded in Matrigel® were applied within a silicone conduit communicating isolated stumps of the rat facial nerve. Three and six weeks later, compound muscle action potentials (CMAP) were compared to previously reported groups. Immunofluorescence assays were performed to evaluate the presence of HuBMSC in the nerve section distal to the grafting six weeks following surgery.

RESULTS: HuBMSC (>90%) expressed adhesion marker CD29 and mesenchymal markers CD73, CD90, CD105 and CD166; whereas negative labeling (0.05), whereas huBMSC presented significantly better functional results ($p < 0.05$) than the control groups. HuBMSC were not detected in the distal segment of the repaired nerve.

CONCLUSION: In the rat model of acutely injured facial nerve leading to isolated stumps, favorable results observed for ruBMSC are similar to those reported here for huBMSC.

PS-Ot-04

Near total mandibular reconstruction with 3D custom made porous titanium prosthesis including dental implants

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Cas report

A 54 years old had a squamous cell carcinoma of the right part of the mandible. Two years ago he underwent surgical resection with bilateral neck dissection and reconstruction with a splint and major pectoralis flap. A fibular flap was contraindicated and the other donor sites were too small to cover the large mandibular defect. Two years after postoperative external radiotherapy he developed osteoradionecrosis of the symphysis and the left body of the mandible.

As the bony free flaps were not feasible and the titanium splint was too fragile, it has been decided to reconstruct with 3D custom made porous titanium prosthesis and an anterolateral thigh flap wrapping around the prosthesis. It includes slots for future dental implants.

During the early postoperative period, a quick resumption of oral intake was acquired and the phonation hasn't been modified. These outcomes remain stable during a 3 years follow-up. The patient could benefit from dental crown inserted in consultation into the prosthesis implants.

Conclusion

The use of 3D custom made porous titanium prosthesis can be used in extreme cases with limited reconstruction possibilities. It is a safe and efficient method with fast oral rehabilitation period thanks to an easy dental implantation.

PS-Ot-05

Ortho-surgical management of open bite skeletal class III malocclusion with severe maxillary endognathie

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INTRODUCTION :

It is known that one of the most challenging problems that confront the practicing is the treatment of skeletal Class III malocclusion in adult patients. In severe cases with important transversal discrepancy , ortho-surgical treatment in two times is the only guarantor of successful result both functionally and aesthetically.

Case report :

This case report presents the treatment of a female patient with open bite skeletal Class III malocclusion and severe maxillary endognathie. at first a surgery of the maxilla have been realised in the aim to correct the endognathie, the second phase is jaw surgery. Bilateral sagittal split osteotomy was performed to setback the mandible by 5 mm. LeFort I surgical procedure was carried out as decided and the maxilla was repositioned 3 mm superiorly. In the aim to stabilize the mandibular, a rigid fixation was used.

Discussion :

Bimaxillary surgery demure a stable procedure, however relapse may be due to faculty planning, faulty or postsurgical growth which is avoided in adult patients. In terms of stability , in 2-jaw surgery, there is better control of ramus inclination and less relapse related to this, but upward movement of the maxilla that allows the chin to rotate upward and forward brings its total forward movement to about the same level as with mandonly surgery. In adult with a severe discrepancy, combined ortho-surgical approaches is the only way to achieve successful results.

conclusion: After combined orthodontic-surgical treatment the result was complete with positive overbite and acceptable occlusion, using a combination of fixed orthodontic appliance treatment as well as the orthognathic surgical management. The patient was satisfied with her new appearance and function.

Key words: Class III malocclusion, open bite, Orthognathic Surgery, bimaxillary osteotomy, orthodontics, endognathy.

Plastic surgery as part of the Otolaryngology training program: A survey among Greek Otolaryngology trainees and a proposed curriculum

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Purpose of the study

Based on the UEMS (European Union Medical Specialties) and ISCP (Intercollegiate Surgical Curriculum) for Otolaryngology, specialty training includes acquisition of essential skills in Plastic Surgery(1,2). In Greece, a 6 -month Plastic surgery rotation is a prerequisite, in order to acquire the specialty of Otolaryngology, since the early 80s, but unfortunately there is no specific curriculum for the Otolaryngology trainee who rotates in Plastic Surgery. The lack of experience in Facial Plastic Surgery has been noted since 1994, when a survey was conducted among American Otolaryngology residents(3).

Materials and Methods

Having identified the same problem among Greek Otolaryngology trainees, we launched an effort to introduce a learner-centered curriculum, which has been proven beneficial in the implementation of the educational programme(4). An online survey, designed to probe views of trainees on this issue, was conducted among Greek Otolaryngology trainees of different stages. 55 questionnaires with 10 questions concentrated on this issue were sent, and we received 48 responses.

Results

According to the 48 responses we received, facial flaps, rhinoplasty, pinnoplasty skin lesions excision and skin biopsies were the five most popular procedures (90%, 84%, 84%, 41% and 29%, accordingly). Craniofacial trauma management, blepharoplasty and microvascular anastomoses are equally important and should be included in the curriculum (23%, 19% and 19%, accordingly). It is worth mentioning that 100% of the Otolaryngology trainees feel that theatre time is of great importance, and only 35% opted for outpatient clinics. 43% of the participants believe that Plastic surgery is essential for their career progress, as they will be able to enhance their skills. Interestingly, a significant number (44%) would not like to attend the 6-month placement in Plastics, as that would reduce their training opportunities in Otolaryngology. As an alternative to Plastics, 75% of the responses favored Oral & Maxillofacial surgery.

Conclusions

To conclude, we believe that a well structured surgical curriculum is extremely important in order to gain maximum benefit during the Plastics rotation. This curriculum should include all the above surgical procedures, because we strongly believe that the Otolaryngologist should be familiar with them, always in balance with exposure to outpatients' clinics. Regular feedback is of paramount importance in order to identify any weaknesses of the curriculum and also make it suitable for the trainees' needs.

PS-Ot-07

Rhinophyma - Management Evolution through to the Current State of the Art

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Surgical management of rhinophyma historically has ranged from the barbaric and unsuccessful, to the elegant and refined. The author has evolved his surgical approach through various modalities for management of rhinophyma over the last 31 years, with modifications developed and pushed by not only a high number of gratifying results but also some less than desirable outcomes. Macroscopic dermabrasion evolved from 1980 to 1989, only to be supplanted by state of the art laser treatments and sophisticated, complex post-operative dressing care from 1990 to 1995. The era of cold steel debulking with suction electrocautery fine contouring replaced the two previous methods, providing outstanding reproducible aesthetic results, while minimizing complications from 1996 to present. A review of 113 patients treated over the last 31 years with Facial Plastic Surgeon peer reviewed results – clearly indicates what really works to provide the best possible outcome for individuals suffering from this physically debilitating malady. A new classification to rate the state of an individual's rhinophyma involvement is also presented and discussed to provide a better way to assess the status of disease and outcomes of treatment. Complications and a detailed approach to current cold steel debulking management will be provided, to not only allow neophytes and accomplished experts the background to improve their outcomes, but also to avoid serious complications.

PS-Ot-08

septal perforation repair

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New technique for Septal Perforation Repair with height Success rate

WITH OR WITHOUT RHINOPLASTY (MY OWN EXPERIENCE)

author: (and presenter) Maj.Gen/Dr.Saud Alsaif

introduction

a Serious of cases representing my own experience of septal perforation repair during the period from 2002 till 2015 total no of cases done is 59 cases 38 male 21 females

Mean age 36 (ranging from 25-49y) The sizes of perforations ranged from 0.7×1 cm to 2.5×3.5

surgical procedure

the procedure starts with Harvesting of an auricular choncal cartilage with bilaterally intact perichondrium according to the size of the perforation through a post auricular incision .

interposition of the obtained auricular choncal cartilage by inserting it in between the Bilaterally elevated septal mucosal Flaps is used for repairing all our series of cases with unilateral or bilateral intranasal mucosal flaps advancement with or without releasing incisions according to the mucosal flaps and septum conditions. .

results

the most common causes of perforation in this series was iatrogenic 42 cases out of the 59 cases is post septoplasty , 6 cases post cauterization as a part of epistaxis management ,8 cases post traumatic RTA, and 3 cases as an induced septal perforation (nose picking) .

55 cases out of 59 healed completely

6 cases only failed

2 post op cases disappears

4 cases reviewed 3 out of 4 healed completely

1 case failed after revision

Total success is 56 out 59 cases

the success rate is 94,9 % depending on the site, size and patient care .

follow up for one year every 3 m

Maj.Gen/Dr Saud Saleh Alsaif

Consultant ORL-H&N surgery

Head of ORL-H&N Surgery Dep.

King fahad military medical complex

Dharan Saudi Arabia

Surgical treatment of the nasal basal cell carcinoma- past, present, future

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Keywords basal cell carcinoma, nose lesions, surgery treatment

Purpose of the study: Basal cell carcinomas (BCCs) are locally destructive malignancies of the skin. They are the most common type of cancer in Europe, Australia and the U.S.A. The lifetime incidence may be up to 39%. UV exposure is the most common risk factor. The majority of these tumours occur on the head and neck. Despite BCCs being relatively indolent the high incidence means that their treatment now contributes a significant and increasing workload for the health service. A good understanding of the options available is important.

Materials and methods used: We present a series of 50 cases that received surgical removal with local flap reconstruction for advanced basal cell carcinoma of the nose. The goal of surgical treatment of basal cell carcinoma (BCC) is to destroy or remove the tumor so that no malignant tissue is allowed to proliferate further. Factors to consider when choosing therapy include the histologic subtype of BCC, the location and size of tumors, the age of the patient, the patient's ability to tolerate surgery, and the expense.

Results: Recurrent tumors are generally more aggressive than primary lesions, and subclinical extension also tends to be increased. Tumors that are aggressive and those occurring near vital or cosmetically sensitive structures are best treated with methods that allow for an examination of the tissue margins. Therefore an initial more aggressive surgical excision proves proficient on long term quality of life and survival preventing further need of excision. We illustrate various types of local and regional flaps.

Conclusion: Knowledge of the behavior of the different clinical and pathologic types of BCC is essential in choosing the appropriate therapy. The most common surgical methods of treating BCC are curettage, excision with margin examination, and Mohs micrographic surgery. Radiotherapy is another common BCC treatment, and cryotherapy is sometimes used. BCC recurrence after irradiation makes surgery mandatory. Esthetic outcome is important mostly in younger patients for social inclusion and quality of life.

PS-Ot-11

The use of 3D custom made Porous Titanium prosthesis for mandibular body reconstruction

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The use of 3D custom made Porous Titanium prosthesis for mandibular body reconstruction.

Background: Today, the problem of patients presenting a contraindication to microsurgery but needing extensive bone reconstruction remains. For these patients who cannot benefit from vascularized bone grafts, surgeons have to find alternative solutions aiming at maintaining best function and esthetics.

Methods: We report the cases of three patients ineligible to a bone free flap but needing large mandibular reconstruction. We used an original method for the mandibular body replacement with custom made porous titanium prostheses. These 3D-printed prostheses were based on patient's 3D tomodensitometric images. Using an endobuccal approach, the lesional and peri-lesional mandibular body was resected after mucosal detachment and sections of the masseter and pterygoid muscles. Then, the prosthesis was fixed with screws, which number and location were pre-determined. Because of the lower height of the prosthesis, no flap was required to suture the oral mucosa without tension.

Results: This solution has been used for two patients with intraoral approach allowing no visible scars together with short and simple postoperative cares. After respectively 24, 18 months and 10 months, the three patients had a normal function without pain and with no visible scar.

Conclusion: This innovative solution of 3D custom made porous titanium prosthesis brings an additional option for the care of complexes mandibular reconstructions. Frail patients can particularly benefit from this simple and efficient technique.

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PS-Ot-12

Use of Gore-Tex as an interposition material in treatment of temporomandibular joint ankylosis

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Objectives:

To study the long term results of Gore-Tex used as interposition material in temporomandibular joint Ankylosis

Methods:

All patients with ankylosis temporomandibular joint visiting our hospital were included. Diagnosis was reached on basis of history, clinical examination, X ray TM Joint and OPG. In select cases 3 D CAT scan reconstruction was done.

Consent for preoperative tracheotomy was obtained .In all patients either blind nasal intubation was attempted or were intubated after opening mouth was achieved after administration of ketamine or a preoperative Tracheostomy was done .

Joint was approached by preauricular incision, gap arthroplasty was done and Gore-Tex was interposed. In select cases bilateral procedure was done and coronoidectomy was done where adequate opening was not achieved by the procedure .Vigorous physiotherapy was done in immediate post operative period.

Results:

In series of 20 patients with TM Joint Ankylosis, 12 were males and 8 were females with average of twenty years .Trauma in form of injury over chin leading to damage to joint capsule and haemarthrosis was commonest etiology except two who had congenital malformation. All patients except five had bilateral ankylosis. No gross complications were observed except facial palsy in one which recovered in two weeks and bleeding in one which was controlled immediately. Patients returned to normal chewing mastication and diet the next day and postoperative mouth opening was maintained for period of four years

Conclusions

We found that Gore-Tex is good material for interposition arthroplasty with hardly any foreign body reaction and rejection with good long term results.

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P.S.MEDICAL COLLEGE, KARAMSAD GUJARAT INDIA**

PS-Ot-13

Use of Gore-Tex as an interposition material in treatment of temporomandibular joint ankylosis:

G.Mishra*(1)

(1)P.S.MEDICAL COLLEGE, , India

Objectives: To study the long term results of Gore-Tex used as interposition material in temporomandibular joint Ankylosis

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We found that Gore-Tex is good material for interposition arthroplasty with hardly any foreign body reaction and rejection with good long term results.

Author: Dr. Girish Mishra Professor Otolaryngology & Head & Neck Service, P.S.Medical College, Karamsad. Gujarat India

Use of resorbable mesh for contour reconstruction after complete parotidectomy

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Purpose of the study: Total parotidectomy can lead to a significant hollow contour around the angle of mandible. The subsequent facial deformity can become a major aesthetic and mental-health problem for the patient. There are many techniques described to prevent this aesthetic complication, but all have drawbacks. We present the use of a resorbable mesh for reconstructing the contour as an easy and satisfying solution.

Methods: In a prospective Study 11 patients undergoing complete parotidectomy because of benign or malignant tumor of the parotid gland were included. After removal of the parotid gland, plastic reconstruction was performed. A resorbable mesh of polyglatin (Vicryl®) was used between the angle of the mandible and the sternocleidomastoid muscle. The gap between the structures was filled with gelatine sponge. Postoperative complications, aesthetic result and patient satisfaction were documented.

Results: all patients were satisfied with the aesthetic result. The contour difference between the two sides was between 2-4mm long. 3 patients had a seroma which had to be treated and one patient had a fistula.

Discussion: The plastic reconstruction of the mandible contour after complete parotidectomy can be challenging for the surgeon. Methods such as sternocleidomastoid muscle flap, temporoparietal fascia flap, free abdominal fat transfer or even deepithelialised free flap reconstruction have been described. Some of them have insufficient aesthetic results other are very complicated. The reconstructive technique we present in this study using a resorbable mesh and gelatine sponge is a fast, cheap and satisfying method with low rate of complications.

PS-Rh-01

A modification in tongue in groove technique to relife of tip stiffness

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Tip plasty in rhinoplasty is one of the main steps of procedure there are a lot of techniques to control tip rotation and projection tongue in groove technique is one of the most usefull technique of this aim but the most restriction of this technique is stiffness of tip and immobility of tip because of omitting the role of membranous septum in tip motility

For relief of this problem we change the routine tongue in groove to a comination of colmellar strut and TIG as well to preseve the tip motility

In 52 patients from 2010 to 2016 with 6 to 48 month follow up by open approach we open the nose find the caudal septum after septoplasty and straitening of septum from ANS to 3-4 mm to anterior septal angle we cut the caudal septum but it hinges upward by small adhesion to remaining of septum now we made a pocket between two medial cruses of lower lateral cartilages and put this semi mobile piece of caudal septum in this pocket as a colmellar strut and fix it by two 5-0 pds sutures over there

By this trick we have controled tip rotation and projection as in routine TIG technique as well as saving the mobility of tip

Most of our patients was satisfied of feeling of their tip mobility and sensation

We cant find siginificant tip droop and colmellar hanging after this technique

Result and conclusion

It seems a safe modification of tongue in groove technique to preserve mobility of tip and better sensation of feeling of patients after rhinoplasty procedures

Alolateropexy for management of droopy nose

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Introduction

The surgical management of droopy nose remains problematic. Corrective techniques described in the literature may be difficult to perform or sometimes lead to unsatisfactory results. In our department, we perform a technique we called alolateropexy that reduces and rotates the droopy tip. The purpose of this study is to describe how we perform this alolateropexy technique in droopy nose management and to evaluate our results.

Methods

The 3-step procedure is performed as follow: After cephalic lateral crura excision and resection of the caudal portion of the upper lateral cartilage, we suture the free edge of the lower lateral cartilage (cephalic portion of lateral crura) to the upper lateral cartilage.

We analyzed XX patients who underwent alolateropexy between 1925 et 1928 in our department. Main criteria to evaluate results was the mesure of the NLA on photographic records and the evaluation of the Tip projection.

Results

We performed alolateropexy in patients with a droopy nose defined by a nasolabial angle less than 90° for men and 100° for women. In our experience, the mean opening of the nasolabial angle using alolateropexy was 22° (range: 11° to 35°). This technique reduces and rotates the droopy tip. Alolateropexy should be preferred when there are inferiorly-oriented alar cartilages and/or overdeveloped scrolls of upper lateral cartilages. It should be performed when seeking to increase tip rotation without modifying tip projection.

Conclusion

Alolateropexy ensures satisfying long-term results in the management of droopy noses. This easy-to-use technique should be known to all rhinoplasty surgeons.

Asian Short Nose Lengthening

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Short nose is defined as being less than 1/3 of the facial length and is quite common in Asians. Short nose is not just short in length, usually is characterized by low radix and flat nasal dorsum. Moreover, for patient with upward-rotated nasal tip that will make the nose look even shorter. To correct short nose, nasal dorsum or radix might be augmented, nasal starting point should be elevated, retracted columella should be corrected and the nasal tip defining point probably should be downward rotated.

By using the dorsal onlay graft, the radix and nasal dorsum are augmented then the nasal starting point will be elevated higher; by using the caudal extension graft, the lower third of nose and columella will be lengthened; by using the shield graft or tip graft, the tip defining point could be re-defined for correcting the upward-rotated nasal tip that the distance between radix and tip will be elongated. For Asians, alloplastic materials are frequently used for dorsal or radix augmentation since harvestable cartilage amount is usually not sufficient. During the nasal lengthening procedure, the skin soft tissue envelope should be dissected extensively for prevention of tension in wound closure.

Short nose lengthening is a challenge for Asian rhinoplasty surgeon. Compared to Caucasians, the Asian skins are thicker and the cartilages are weaker and thinner, that make the short nose correction more complex and difficult.

Assessment of Nasal Resistance before and after Rhinoplasty

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Purpose of the study: The nose is the most prominent, eye catching feature of the human face, rhinoplasty is the most commonly performed facial plastic surgery procedure which aims at correcting nasal shape. Aesthetic rhinoplasty aims at correcting nasal measurements and appearance; but in the process if the surgeon is able to achieve or at least maintain good nasal functions. The Aim of this study was to evaluate the effect of aesthetic rhinoplasty on nasal resistance to air flow both subjectively and objectively in healthy individuals undergoing cosmetic rhinoplasty. **Materials and methods:** A total of fourty three adult patients who underwent aesthetic rhinoplasty were included in this study. their nasal patency and resistance to air flow was assessed both subjectively and objectively using the visual analogue score and anterior active rhinomanometry respectively; both preoperatively and at 3 & 6 months postoperatively **Results:** Our study showed that the mean preoperative visual analogue score for the right and left nasal cavities were 4 +/- 3.05 & 3.35 +/- 2.96, respectively. Three months mean postoperative visual analogue score for the right and left nasal cavities were 2.95 +/- 2.17 & 2.25 +/- 1.82, respectively. Six months mean postoperative visual analogue score for the right and left nasal cavities were 2.34 +/- 1.54 & 1.82 +/- 1.86, respectively. Active anterior rhinomanometry was done for all patients and showed that the mean preoperative nasal resistance was 0.25 Pa/cm³/second +/- 0.09, and at three months postoperatively was 0.27 Pa/cm³/second +/- 0.13, and at six months postoperatively was 0.27 Pa/cm³/second +/- 0.14. There were no statistically significant differences between the pre and postoperative active anterior rhinomanometry readings **Conclusion:** it was concluded that aesthetic rhinoplasty does not affect nasal patency or increase nasal resistance to air flow.

DR: Ussama abdel nasser (professor of otolaryngology cairo university)

DR: Hazem Dwedar (professor of otolaryngology cairo university)

DR: Hassan el Hoshy (professor of otolaryngology cairo university)

DR: Badawy Khalifa(Assist. professor of otolaryngology cairo university)

DR:Ahmed Nassar (Assist. professor of otolaryngology cairo university)

DR: Sherif Tatoushy (Ph.D. cairo university)

AUGMENTATION RHINOPLASTY USING AUTOLOGOUS INFERIOR TURBINATE BONE

I.Ullah*(1)

(1)SAIDU MEDICAL COLLEGE SAIDU TEACHING HOSPITAL SAIDU SHARIF SWAT KPK PAKISTAN, Saidu sharif swat kpk, Pakistan

Abstract:

Objectives:

To document the long-term advantages and disadvantages of inferior turbinate grafts used to correct saddle nose deformity. Additionally, to evaluate functional improvement and cosmetic satisfaction with the use of inferior turbinate bone as a new graft material.

Study Design:

Retrospective chart review and prospective follow up.

Place and Duration of Study:

Department of Otorhinolaryngology and Head & Neck Surgery, Saidu Group of Teaching Hospitals Saidu Sharif Swat and Hayat Medical Complex Peshawar from July 2005 to July 2013.

Methodology:

Data was collected of all patients who underwent closed augmentation rhinoplasty for saddle nose deformity. Data was reviewed for age and gender of the patient, aesthetic assessment from patient as well as surgeon perspective and the complications of the surgery. An autologous demucosalized inferior turbinate bone graft was used as a graft material. Photo documentation were obtained before surgery, during surgery and after two weeks, three months, six months and one year.

Results:

Out of 30 patients, 19 (63%) were male and 11 (37%) were female. Twenty one (70%) were in age group 20-29, 8 (26%) in age group 30-39 & one (3%) were in age group 40 -49. Only 2 of the 30 patients were dissatisfied with the overall outcome. Twenty Three (77%) were extremely satisfied, 05 (16%) were satisfied. In terms of function, ten (34%) experienced excellent relief in nasal obstruction, 9 (10%) moderate relief, 7(24%) mild relief, and four (13%) noted no difference. Regarding cosmesis, twenty (67%) noted excellent improvement, four (13%) moderate improvement, four (13%) mild improvement, and two (6 %) noted no significant change. One (3%) patient reported cyst formation at the dorsum 6 year after the operation. He was explored and managed via open rhinoplasty approach.

The indication of augmentation rhinoplasty was nasal deformity along with nasal obstruction in 21 (70%) patients whereas 09 (30%) patients requested for cosmetic reasons only.

Conclusion:

The inferior turbinate bone is a viable graft for augmenting saddle nose deformity. Moreover, it maintains dorsum shape and needs little remodeling. The graft is easy to harvest, prepare, and place and can be used without requiring a second operative site.

PS-Rh-06

Cingi Steps for Preoperative Computer Assisted Image Editing Before Reduction Rhinoplasty

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(1)Eskişehir Osmangazi University, Medical Faculty, ENT Department, , Turkey

The aim of this presentation is to provide a stepwise systematic guide for a preoperative photo-editing procedure for rhinoplasty cases involving the cooperation of a graphic artist and a surgeon.

One hundred female subjects who planned to undergo a reduction rhinoplasty operation were included in this study. The Cingi Steps for Preoperative Computer Imaging (CS-PCI) program, a stepwise systematic guide for image editing using Adobe PhotoShop's "liquify" effect, was applied to the rhinoplasty candidates.

The stages of CS-PCI are as follows: (1) lowering the hump; (2) shortening the nose; (3) adjusting the tip projection, (4) perfecting the nasal dorsum, (5) creating a supratip break, and (6) exaggerating the tip projection and/or dorsal slope.

Performing the Cingi Steps allows the patient to see what will happen during the operation and observe the final appearance of his or her nose.

The preoperative evaluation and patient-surgeon communication are very important in facial plastic procedures. Although we use the word "patient," these subjects do not have any illness; rather, they usually wish to improve their appearance. Therefore, the surgery candidates may be particularly demanding.

The main benefits of using this method is that it decreases the time needed by the surgeon to perform a graphic analysis, and it reduces the time required for the patient to reach a decision about the procedure. It is an easy and reliable method that will provide improved physician-patient communication, increased patient confidence, and enhanced surgical planning while limiting the time needed for planning.

PS-Rh-07

Crushed Cartilage Tip Graft in Rhinoplasty

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(1)University of Dammam, Dhahran, Saudi Arabia

Purpose of the study:

Nasal tip surgery has become significantly more complex after the revival of open rhinoplasty, leading to the introduction of tip grafts and different suture designs.

One of the most challenging steps in rhinoplasty is to achieve a smooth natural nasal tip.

Tip grafts carry different degree of risk of later visibility, distortion, and resorption.

I will present my experience in using crushed cartilage tip graft in rhinoplasty with its long term results.

Materials and Methods:

Patients whom underwent open rhinoplasty with crushed cartilage tip graft at our institution between 2001 and 2016 were reviewed, 264 open Septorhinoplasty surgery preformed of whom 120 patients had crushed cartilage tip grafts. Patient satisfaction, aesthetic results and resorption rate was analyzed.

Results:

Crushed cartilage tip graft where used in rhinoplasty surgery with asymmetry of the nasal domes or other tip deformities, covering the reconstructed domes with a thin veneer of crushed cartilage. The tip will retain the corrected contour, with no signs of cartilaginous deformity. With a very acceptable long term result.

Conclusion:

Crushed cartilage tip graft should be considered in nasal tip surgery to achieve a natural smooth contour of the tip with a satisfactory long term result. Crushed cartilage is an excellent method to treat tip deformities, especially in revision cases. Crushed cartilage can be applied over nasal dorsum, for contouring and camouflage

PS-Rh-08

Dorsal grafting with crushed cartilage sandwich

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Dorsal grafting with crushed cartilage sandwich

Introduction

A new easy and simple technique of on lay grafting of nasal dorsum to cover the irregularity happened after dorsal nasal hump resection or to fill the defects due to over correction of the hump which may leads to saddling of the nose or to correct nasal saddling due to any other causes aiming to improve the nasal profile and proportions

Aims

augmentation of the nasal dorsum and nasofrontal angle by using a modified technique to ensure good and long lasting results and simple insertion .

Method

by inserting an on lay dorsal graft of crushed cartilage taken from the nasal septum or chonchal cartilage after removing bone or perichondriume warped by totoplast with closed edges using using monocryle suture to give the shape of the cushion , its size contolled by the amount of crushed cartilage according to the requirement to cover an irregularity or small saddling defect but not for a big defects , a guide sutre used to introduce the graft in place by passing the suture transcutenously and the ends fixed by using setri strips adjusting suture could be used from the other end of the filler to get the end of the suture from the nasal tip trans cuteness fixed with steri strips and kept for one week covered with nasal splent

i did 55 cases using this technique ,the mean age is 36 y (18 Y-56 Y)

32 females and 23 males

auther Maj.Gen.Dr Saud Saleh Alsaif

Head ofORL-H&N Surgery Department

Saudi arabia

Effect of minimally invasive endoscope-assisted rhino-septoplasty and related diagnostic methods

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Purpose: We looked to improve traditional rhino-septoplasty by developing a minimally invasive technique: tension-relaxing method rhino-septoplasty with endoscopy assistance. In this study, we introduced the utility of the tension-relaxing method rhino-septoplasty on patients with all types of crooked noses. The diagnostic methods used to assess whether to use endonasal or external approach technique are described.

Methods: Two nasal deformities were diagnosed: a lower two-thirds nasal deformity (group one, n=55) and a whole nasal bridge deformity (group two, n=12). Hand-touching and computer tomography images were used for diagnosis. An endonasal tension-relaxing method rhino-septoplasty was performed on patients in group one, while the external approach tension-relaxing method rhino-septoplasty was used on patients in group two. The results were analyzed in subjective and quantitative methods (6-67 months postoperative). Aesthetic effects were estimated by electronic meter measurements and the visual analogue scale (VAS). Nasal obstruction was evaluated by measuring nasal airway resistance with active anterior rhinomanometry and by using the Nasal Obstruction Symptom Evaluation (NOSE) scale.

Results: In both group one and group two, the rate of success in correction of I-shaped noses (n=34) had 29.4% of patients in the excellent category, 44.1% in the good category, 23.5% in the moderate category, and 2.9% in the bad category. For the rate of success in correction of C-shaped noses (n=33), 48.5% of patients were in the excellent category, 39.4% were in the good category, 9% were in the moderate category, and 3% were in the bad category. Postoperative subjective satisfaction, evaluated by the VAS, was excellent in 53 cases and good in 13 cases. There was a significant improvement from preoperative to postoperative NOSE scores ($p < 0.001$, $\alpha = .95$). No complications, including saddle nose, occurred in any cases during the follow-up period.

Conclusion: Tension-relaxing method rhino-septoplasty is an effective, versatile, minimally invasive technique in rhinoplasty. Its utility was shown in both group one and group two, by its ability to treat any crooked nose. Our accurate diagnostic methods allowed us to assess which treatment was most appropriate. Keystone region collapse and other complications were not seen in any of our operations.

PS-Rh-10

Fixation of diced and solid cartilage in rhinoplasty - a 10 years experience with the use of human fibrinogen-thrombine sponge (TachoSil®)

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Fixation of diced (DC) and solid cartilage transplants is being discussed for long, and multiple solutions have been offered to surgeons. Many are using fascia, some prefer Surgicel® or similar, and lately liquid fibrin glue has been recommended. For solid grafts, sutures may be used.

As all of these methods have disadvantages - like instability, uncomfortable handling, harvesting procedure -, more than 10 years ago the author started to use a dry sponge of fibrinogen and thrombin (TachoSil®) for this purpose. The material is in wide spread use, e.g. for control of bleeding in liver surgery and closure of csf leaks in cranial base surgery. It is a ready to use dry sponge that needs no deep freezing or cooling, handling is easy.

DC and grafts can be enveloped or covered by one or two layers of the material. Put in place, rinsing by water or blood will glue the transplants in place, while the material itself becomes paper thin. After a few weeks, the gluing layers are completely absorbed, while the cartilage maintains its shape and position. Thus, the dry fibrinogen sponge ((TachoSil®) in appropriate situations may be a very helpful tool in rhinoplasty.

The author will show handling of the material, and give an overview of the results in more than 100 cases

PS-Rh-11

Functional and Aesthetic Surgery in the Mestizo Nose

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The objective of this instructional course is to demonstrate the benefits of the closed approach, using two different techniques (videos and pre / post op photographs), in the management of the nasal contour and internal nasal valve structure in the Mestizo nose.

Due to an increased in Hispanic population worldwide, is important to establish the best management in the Mestizo nose, there are several rhinoplasty techniques but in our practice we prefer the closed approach because of the risk of visible scar and necrosis in the columella. With this techniques we obtain a good cartilage exposure without compromising the management of soft tissue and the contouring of the nose profile and function, thus eliminating the myth that open rhinoplasty is the "gold standard" approach to achieve the best result.

We will show in videos the management of the septal cartilage with the "three sheet technique" and other coadyuvant suture techniques; how we use the delivery and "retrograde" approach in the management of the tip with sutures and grafts; the management of the internal nasal valve without spreader grafts (we use suture suspension techniques), due to the lenght of the Mestizo nose and this grafts can modified the aesthetic mosaic; and our way to close the surgical incisions.

Instructor name: Dr. Enrique Girón Archundia.

Nationality: Mexican

HOW POWERED INSTRUMENTS MIGHT HELP THE CLOSE APPROACH TO COME BACK

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Rhinoplasty operations were first performed in Europe in the 19th century, and since that time there has been much controversy on the best approach. Currently, the majority of rhinoplasty operations are performed using the “open access” approach. This approach has helped many surgeons get started in functional aesthetic surgery. However, the disadvantages of the open technique, such as destabilization of structures, longer operating times, and prolonged wound healing, allowed a comeback of the closed technique. In order not to lose the advantage of a better overview in the open technique, some steps of the operation may also be performed under endoscopic control. Visual inspection of individual steps of the operation, as well as specialized miniaturized instruments, allow operations to be performed using minimally invasive technology, leading to good results and fulfilling the desire of many patients. Specific advantages include high definition monitor, intraoperative navigation system, and powered dissecting instruments. Combined rhinoplasty and FESS can be performed with good results (functional and cosmetic). Equipment for the FESS included high definition monitor, 4 mm endoscopes (0 degree, 30 degrees, and rarely 70 degrees) and powered instruments/Landmarx Navigation System by Medtronic (710 Medtronic Parkway, Minneapolis, MN, 55432-5604). The average operative time for the FESS was 50 minutes. FESS operative times prior to powered instruments use were longer. The use of endoscopic instruments does not change the surgical steps required. Rather, it allows direct vision of steps previously not viewable. Endoscopic control is useful and easy, the rasping becomes gentle, and allows a very precise control. The powered rasps reproduce the action of a manual rasp but in a more precisely controlled manner. There is no soft tissue trauma, typical instead of manual rasping. Osteotomies if indicated were always performed as the last surgical maneuver. If inferior turbinate reductions were indicated, they were performed immediately prior to the osteotomies. Advantages in sinus surgery technique and equipment have made the procedure safer, faster, more precise, and more comfortable. No revision rhinoplasties have been performed. More can be achieved with a wise, yet not exclusive, use of the endoscopic approach. Possibly, having started with a closed technique later evolved into an open approach, we might once again imagine turning back to a closed rhinoplasty, yet endoscopically assisted.

PS-Rh-14

How to stabilise septum in rhinoplasty in complex crooked nose.

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Introduction:-

The stabilization of the nasal septum is a rhinoplasty's challenge when the job requires: septal posterior chondrotomy and complete detachment of the septal foot and excision cartilaginous hump. This will leave very weak upper lateral cartilage septum union.

We present, the septum stabilization through the rotation-translation suture in the context of rhinoplasty. This suture was described by George Guillen (Bourdeaux) in the context of septoplasty by Cottle technique.

Material and Methods.-

All patients treated by rhinoplasty underwent: an aesthetic evaluation by the scale of R Anderson on pyramidal deformities, and functional assessment by anterior active rhinomanometry.

The technique is explained by short video.

Results.-

We present the results of 10 patients who took place: Cottle technique septoplasty and excision cartilaginous hump as aesthetic purposes. Anderson's aesthetic scale showed an improvement in all patients, in all nasal areas and projections. Total deformities average was reduced from 27 to 9. Flow in both nostrils 100Pa average increased from 432 to 527cm³/seg in anterior active rhinomanometry.

Conclusion.-

Rotation-translation suture allows balancing tension forces on the septum not causing subsequent twists. It is conservative since it can get if necessary since it is a suture, no added dissection surgery and allows stabilizing the septum in cases of nasal septal important deformity.

Impact of Endoscopic Partial Inferior Turbinectomy in Rhinoseptoplasty on Quality of Life: a Randomized Clinical Trial

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Objectives/Hypothesis: To evaluate the impact of endoscopic partial inferior turbinectomy (EPIT) associated with primary Rhinoseptoplasty on quality of life outcomes (QOL), complications, and surgical duration.

Study Design: Randomized clinical trial.

Methods: Individuals with nasal obstruction aged ≥ 16 years who were candidates for functional and aesthetics primary Rhinoseptoplasty were evaluated from March 2014 through May 2015 at a tertiary university hospital in Brazil. Eligible participants were randomly allocated to rhinoseptoplasty with or without EPIT.

Outcomes: Absolute change (postoperative –preoperative) in the following QOL scores: Nasal Obstruction Symptom Evaluation-Portuguese (NOSE-p), Rhinoplasty Outcome Evaluation (ROE) and World Health Organization Quality of Life (WHOQOL)-bref (to measure general QOL). Outcomes were blindly assessed 3 months postoperatively. The protocol was registered at ClinicalTrials.gov (NCT02231216).

Results: Fifty patients were studied. Most were Caucasian and had moderate/severe allergic rhinitis symptoms. Mean age was 36 (± 14.5) years. Rhinoseptoplasty was associated with improvement in all QOL scores irrespective of turbinate intervention ($P < 0.05$). There were no differences between the groups regarding presence of the complications. Surgical duration was higher in the EPIT group (212 minutes ± 7.8 vs. 159.1 ± 5.6 ; $p < 0.001$).

Conclusions: Turbinate reduction through EPIT during primary rhinoseptoplasty did not improve short-term general and specific QOL outcomes. The use of EPIT increases surgical time considerably without improving QOL scores. There was no difference in postoperative incidence of complications, suggesting that EPIT is a safe technique.

Key Words: Rhinoplasty, turbinate surgery, endoscopic partial inferior turbinectomy, quality of life, randomized clinical trial.

JUSTIFICATION OF THE CLINICAL AND FUNCTIONAL STUDY OF SIMULTANEOUS RHINOSEPTOPLASTY AND ENDOSCOPIC SANATION OF PARANASAL SINUSES

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Aim of the study. Rhinoplasty has been and remains one of the most frequently performed aesthetic operations, where there are various accesses and modifications. Severe deformation of the external nose as a rule is accompanied by a deviated septum of the nose and a violation of the respiratory function. This not only adversely affects a variety of physiological processes, but also contributes to the development of chronic inflammation of paranasal sinuses. Among patients seeking rhinoplasty in order, revealed 10% to 15% of patients with different pathologies of the paranasal sinuses. The development of criteria of selection and indications for surgical treatment in patients with deformities of the nasal structures combined with the pathology of the paranasal sinuses with clinical and functional justification for the possibility and need simultaneous rhinoplasty and readjustment of the paranasal sinuses, and the systematization of the main stages of the complex rehabilitation of patients with deformities of the nasal structures in conjunction with the pathology of the paranasal sinuses.

Methods. Surgical treatment: septoplasty (accompanied by turbinate reduction), which later contributes to the improvement of ventilation of the paranasal sinuses, removal of the cyst from maxillary sinus (performed by FESS), correction of deformation of the external nose.

Results. In the period from 2011 to 2016 was made 162 (9,2% of all rhinoplasties) simultaneous interventions on the pyramid of the nose and intranasal structures, paranasal sinuses in ENT diseases service of Medical Center Nairi (base of YSMU ENT Department). Of the 147 (90.8%) had cysts in one maxillary sinus, and 15 (9.2%) had cysts in both sinuses.

Conclusion. Valid combination for simultaneous rhinoseptoplasty and sanitation of paranasal sinuses are the non-purulent pathology of sinuses, namely hyperplastic, catarrhal sinusitis, cystic degeneration of the mucosa of the sinuses. Simultaneous correction of associated deformities of the nose structure and, if necessary, sanitation of paranasal sinuses with optimized visual inspection techniques makes it possible to eliminate the multi-stage surgical procedures, retains the psyche and health of patients, reducing their hospital stay.

PS-Rh-17

**Nasal Tip Remodeling Technique
. Modified Converse's Technique.
Functional and Esthetic Results on more than 750 Patients .**

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Les auteurs rapportent leur expérience de la chirurgie des pointes nasales globuleuses. Après avoir fait un rappel sur les différents types de pointes nasales hypertrophiques et les techniques chirurgicales les plus habituellement utilisées dans la littérature, les auteurs décrivent la technique qu'ils utilisent depuis maintenant de nombreuses années avec un recul très important. Cette technique reprend la technique de Converse, dont la première publication date de 1972. Dans cette technique, après une incision marginale, et une contre-incision inter cartilagineuse, les cartilages alaires sont éversés, une résection d'une bande supérieure de cartilage par une crosse de hockey incomplète est effectuée et un hachurage à la demande par des chondrotomies non transfixiantes, réalisées sous microscope opératoire, permet le modelage de la pointe tel que désirée. Dans la technique modifiée que les auteurs présentent dans cette communication, les premiers temps sont les mêmes mais la voie d'abord muqueuse marginale et inter-cartilagineuse n'est pas refermée, ce qui permet un meilleur enfouissement et un modelage de la pointe d'une part. Pour éviter d'autre part la fermeture de la valve nasale, les auteurs positionnent en fin d'intervention dans le vestibule nasale un mini conformateur en Gélatine résorbable, taillé exactement à la forme des narines désirées. Cette technique réalisée chez plus de 750 patients présentant une pointe globuleuse, a permis dans la très grande majorité des cas un affinement harmonieux et sûr de la pointe du nez . Les auteurs insistent sur les défauts possibles de cette technique et exposent les manières d'y remédier. Enfin, ils exposent leurs résultats esthétiques et fonctionnels .

NASEPT STUDY: MULTICENTRIC BIPHASIC CALCIUM PHOSPHATE IMPLANT ASSESSMENT FOR COMPLEX SEPTORHINOPLASTIES.

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PURPOSE OF THE STUDY

Saddle nose surgery is a challenge because cartilage and bone may be lacking or unavailable. This context leads to harvest a great quantity of autologous material and a biomaterial would have several great medical advantages avoiding donor site morbidity. It turns out that ceramics have numerous features to be implanted in nasal septum close to the septic nasal content. We performed a phase IIa clinical trial that was designed to evaluate the biocompatibility and efficacy of a biphasic calcium phosphate (BCP) implant for this indication.

MATERIAL & METHODS

In this multicentric prospective study including 25 patients with multi-traumatized saddle nose with functional and aesthetic disorders, nasoseptal skeleton have been repaired with a preclinical validated macroporous BCP implant. The primary endpoint was the frequency and severity of expected adverse and severe adverse events during the 6 months following surgery. The secondary endpoints were epithelial cell affinity, nasal shape and function assessed by measurements on photography, clinical scores (NOSE, RhinoQoL), endoscopic control, light and electronic microscopies and immunohistochemistry.

RESULTS

Any adverse events, as extrusion, infection, and chronic inflammatory reaction, pain and epistaxis were observed. All septa were in sagittal, straight and solid position, without extra-lobular depression. Comparisons of pre and post-operative symptoms showed that nasal comfort ($p < 10^{-4}$), morning frontal headache ($p = 0.0003$), snoring ($p = 0.0067$), quality of life ($p < 10^{-4}$) and restorative sleep ($p = 0.0013$) dramatically improved in all patients after their nasoseptal repair. Aesthetic measurements showed no modification of the BT/NT ratio or the naso-frontal angle. The naso-labial angle and the columellar projection were statistically different before and after surgery due to the implant allowing projection of the tip and lowering of the columellar retrusion. Histological data comparison showed few or no inflammatory submucosa infiltration, hyperplasia, giant cells or foreign body reaction. The epithelial cells were mostly well differentiated.

CONCLUSION

This study showed the good biocompatibility and restoration capabilities of the implant to repair saddle nose.

Objective and subjective evaluation of postoperative breathing outcomes of rhinoseptoplasty

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Background: Rhinoseptoplasty is considered a challenging procedure within all facial plastic surgeries. Combining aesthetic principles and knowledge of causes and corrective techniques of nasal obstruction, it aims to improve not only the aesthetic appearance but also breathing function of the nose, optimizing nasal air flow. Several techniques can be performed to achieve those objectives, from lateral osteotomy to septoplasty, turbinoplasty and cartilage grafts, such as spreader and alar batten grafts. Acoustic rhinometry is a method of evaluation of the nasal cavity, based on analysis of reflected sound waves. It provides valuable information about the cross-sectional areas and volumes of the nasal airway. Minimum cross-sectional area (MCA), whose value is defined as square centimeters, is related to the anterior nasal portion, and may therefore reflect the patency to the nasal flow and the severity of deformities in this location, when present. **Objective:** To evaluate the application of Acoustic Rhinometry coupled with the Nasal Obstruction Symptom Evaluation (NOSE) Scale, in patients undergoing rhinoseptoplasty. **Methods:** This is a prospective clinical study conducted within a tertiary care rhinoseptoplasty practice, carried out in two hospitals associated to the Federal University of Sao Paulo. All patients underwent acoustic rhinometry before surgery and 3 months after the procedure, the same time they were asked to complete the NOSE scale. Statistical analysis of measurements was performed using SPSS version 22.0 (SPSS Inc., Chicago IL, USA). Test for normality on difference of data sets was calculated using Kolmogorov-Smirnov and Shapiro-Wilk tests. Wilcoxon-Mann-Whitney tests were performed to compare the preoperative and postoperative data, concerning the cross-sectional area and the values of NOSE. Statistical significance was defined as $p < 0,05$. **Results:** A total of 58 patients, undergoing rhinoseptoplasty, were included in the study. Calculations comparing preoperative and postoperative data for MCA and NOSE scale values showed significant improvement. The techniques varied between patients and their indications. Osteotomy was performed in 46 cases (approximately 79%), turbinoplasty in 42 (approximately 72%), spreader grafts in 31 (approximately 53%) and alar batten grafts in 21 (approximately 36%). **Conclusion:** This is one of the studies with larger number of patients that analyzes objectively and subjectively the results of rhinoseptoplasty. The MCA values could show the effectiveness of the surgeries performed, increasing the area for the nasal air flow. This gain coexists with subjective improvements in nasal patency, which suggests that the new anatomic configuration created after rhinoseptoplasty enables a positive outcome on breathing function.

POSTOPERATIVE COMPLICATIONS FOLLOWING NASAL SEPTOPLASTY AND RHINO(SEPTO)PLASTY

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Purpose of the study: To present and evaluate postoperative complications following nasal septoplasty and rhino (septo) plasty.

Materials and methods used: A retrospective review of 939 patients who underwent septoplasty, and rhino (septo) plasty between Dec 2011 and Dec 2016 was conducted. 651 procedures of septoplasty, 185 rhinoseptoplasty and 103 of rhinoplasty by the same surgeon were followed up for six months and evaluated for probable postoperative complications. Most functional operations were carried out in otorhinolaryngology department of Military Hospital of Craiova and all cosmetic operations were carried out in a private clinic.

Results: The 939 patients were aged 16 to 84 years old. 30.6% of them wanted also the improvement of the aesthetic aspect of the nasal pyramid. 78% from the group of patients that underwent surgical interventions only for nasal functional dysfunctions have been males, meanwhile 74% from the group of patients who wanted also nasal cosmetic corrections have been females. From the number of 836 septoplasty, about 60% have been realized for disorder of permeability of nasal fossa, 20% for different affections concomitant with nasal septum deviations (headaches, recurrent epistaxis, ear diseases, nasal polyposis, chronic dacryocystitis, chronic sinusitis and other sinus affections) and the remaining 185 cases as part of rhinoseptoplasty. The most frequent post-operation complications of septoplasty have been abnormal bleeding (9.7%), septal hematoma (4.4%), followed by synechiae (3.3%). Less than 2% have been – remaining septum deviations (0.8%), deformation of the nasal external aspect (0.4%), hyposmia (0.2%), septal abscess (0.2%), perforation of hard palate (0.1%) and others. Septal perforations but also orbital and cranial complications have not been met. The most frequent post-operative complications of rhinoplasty have been small nose deformities (15.9% - irregularities of nasal dorsum, lateral deviations, asymetria, pollybeak deformity, over and under-resection of the median portion of the nasal pyramid, drooping tip) as well as complications of the skin and of the soft tissues (3.3% - fibrosis, rubeosis, chronical pains and numbness). Out of 288 rhino -corrections, 18 have been revisions – 6.25%.

Conclusion: Post-operative complications have been around 19% concerning septoplasty as well as for rhinoplasty. The majority of post-operative complications after septoplasty appeared in the first 7-10 days and have been solved easily and efficiently, meanwhile post-operative complications after rhinoplasty appeared immediately as well as in time (during the first 4-6 month) and solving them was much more difficult but also delicate.

Predictive factors for surgical revision of rhinoplasty

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Introduction:

Rhinoplasty is a common surgical procedure but remains difficult, with a surgical revision rate of 6 to 15% in literature.

The aim of our study was to identify predictive factors for surgical revision of rhinoplasty.

Method:

We performed a retrospective, unicentric and observational study including 62 patients who underwent surgical revision (revision group) among those who underwent rhinoplasty between 2005 and 2015.

For each patient, after careful reading and examination of the medical records and photographs, data of the first rhinoseptoplasty performed were collected: medical history, nature of the request, preoperative examination, surgical data and post-operative results. Statistical analyses were used.

Results

The surgical revision rate was 9.4% (62/657). The mean age was 27.5 years with a sex ratio male to female of 1/3.

Before surgery, there existed respectively for patients of revision group and control group: a functional respiratory disorder in 41 (66.1%) and 31 (40.3%) (OR = 2.89) and a wide aspect of the nose for 23 (37.1%) and 12 (15.6%) (OR = 3.19).

After multivariate analysis, three factors were found to be statistically significant and independently associated with surgical revision: a functional respiratory disorder existing before surgery (OR = 3.30), a wide aspect of the nose due to nasal bones (OR = 3.94) and the absence of use of cartilaginous graft during surgery (OR = 0.26).

Discuss

To our best knowledge, it is the first study of primary and secondary closed rhinoplasty.

Two factors are independently and statistically predictive of a surgical revision of rhinoplasty: a functional respiratory disorder existing before surgery and a wide aspect of the nose due to nasal bones.

Our study shows that the revision rate of closed rhinoplasty is comparable to that of open procedures. The interest of this study is to better inform patients and to adapt our operative management (turbinoplasty). We have found that the systematic resection of the nasal septum was insufficient to correct the functional disorder of rhinoseptoplasty.

More over, we integrate the importance of the preoperative computer project. This allow to better objectify with the patient if there are aesthetic disorders of the lower third of the nose and to consider the possible use of a cartilaginous graft and finally to predict more realistic results. Nevertheless, it is possible that these factors are specific to the surgeon and / or population studied

PS-Rh-23

PREVALENCE OF BODY DYSMORPHIC DISORDER IN CANDIDATES TO RHINOSEPTOPLASTY

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Purpose:

To describe the prevalence of Body Dysmorphic Disorder (BDD) in patients underwent rhinoseptoplasty in a sample from south Brazil population.

Material and methods:

Cross-sectional study designed of rhinosseptoplasty candidates from a Facial Plastic Surgery outpatient in a Otorhinolaryngology Service in a tertiary hospital.

Exclusion criteria were age under 16 years old, concomitant surgeries needed, cognitive deficit, previous diagnosis of BDD. All patients were submitted to a socio-demographic questionnaire and Body Dysmorphic Disorder Examination (BDDE) consisting of questions regarding appearance and self-image. The maximum score of it is 168 and scores above 66 are considered positive for screening. This research was previously approved by Ethics Committee of the institution.

Results:

It was included 36 patients whit mean age of 35.4 years (SD = 13.5) and twenty two of them were women. Mean score in the BDDE was 67 points (SD = 37.9) and 47% of all patients have positive screening for BDD.

Conclusions:

BDD is a perception disorder about the body's self-image that can lead the patient to have extreme dissatisfaction due to nonexistent defect or excessive attention to minimal deformities.

Prevalence of this disorder is estimated at 2.5% of the general population, but among plastic surgery candidates it varies between 6 and 54%. Our study presented results according to the values described by previous studies.

The BDD has a high prevalence among candidates for aesthetic surgeries. The application of specific screening instruments can aid in the early diagnosis of the disease and avoid unsatisfactory results that reduce complications for physician and patient.

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Responsiveness of acoustic rhinometry to septorhinoplasty by comparison to rhinomanometry and subjective instruments

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Purpose of the study: Nose patency measures and instruments assessing subjective health are increasingly being used in rhinology. However, there is very little evidence of comparing existing methods' responsiveness to change. We evaluated the responsiveness of acoustic rhinometry to nasal valve surgery by comparison to rhinomanometry and patient-reported outcome instruments.

Material & Methods: Sixty patients with internal nasal valve dysfunction and 20 healthy volunteers as control group were enrolled. Prospectively collected data included acoustic rhinometry, rhinomanometry, NOSE scale, SNOT-23 questionnaire, visual analogue scale and demographics. Primary endpoint was the responsiveness of acoustic rhinometry to functional septorhinoplasty surgery at 3 months. Secondary endpoints were ability of acoustic rhinometry to reflect "known group" differences and correlation to subjective symptoms.

Results: Acoustic rhinometry was highly responsive to septorhinoplasty ($p < 0.0001$) while anterior rhinomanometry was not ($p = 0.08$). Based on the quartiles of the post-operative change in NOSE score, patients were classified as respectively non responders, mild, moderate and good responders to surgery. Logistic regression model showed that acoustic rhinometry was able to discriminate non responders to responders to surgery ($p = 0.019$), while anterior rhinomanometry failed ($p = 0.611$). Sensitivity and specificity of acoustic rhinometry were significantly higher (ROC area = 0.76) than rhinomanometry (ROC area = 0.48). Acoustic rhinometry was also superior than rhinomanometry to discriminate patients from control subjects, and correlated better to patients-based subjective questionnaires.

Conclusion: Our study confirms and quantifies the responsiveness of acoustic rhinometry to nasal valve surgery, with a higher sensitivity and specificity than rhinomanometry.

PS-Rh-25

Rhinoplasty approaches: Closed versus Semi-open, a comparative study

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Background:

The “open” (external) and “closed” (endonasal) rhinoplasty approaches remain a subject for debate. Semi-open approach was proposed by Inchingolo et al. in 2012 with the advantages of the open technique without division of the columella.

Aim:

The aim of this study was to evaluate the advantages and disadvantages of semi-open rhinoplasty approach and comparing its results to closed rhinoplasty approach.

Patients and Methods:

This study was a prospective randomized single blinded study, conducted in Kasralainy – Cairo University hospital over a period of 18 months starting from July 2014 to December 2015. Patients were randomized using consecutive randomization. Thirty patients with nasal deformity candidate for rhinoplasty were recruited for this study. Patients were divided into two groups. In group A 15 patients underwent rhinoplasty through Closed approach while in group B 15 patients were subjected to rhinoplasty with semi-open approach. Parameters used for evaluation were taken intraoperatively (Time, accessibility and edema), one week and three months postoperatively (Residual edema, scars, patients’s and surgeon’s visual analogue scale).

Results:

Operative time and tip accessibility were more in group B than group A with a high statistical significance. Postoperative edema was more with group B than group A with significant difference in the immediate postoperative period.

Conclusion:

Semi-open approach shows better tip accessibility than the ordinary closed approach with fewer incisions than tip delivery technique and with no need for columellar division as in open approach. However, it has longer operative time with more postoperative edema than the closed approach. Therefore, the best use for this approach is for cases where tip modification is needed especially if concomitant nasal dorsum modification is also needed.

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Rhinoplasty procedures - personal experience

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Keywords: rhinoplasty, surgical technique, alar cartilage surgery, open approach, endonasal procedures

Purpose of the study: Rhinoplasty is a frequent operation that only few surgeons are considered to truly master the wide scope of technical nuances. Rhinoplasty is one of the most commonly performed aesthetic surgical procedures in plastic surgery. Over the past 20 years, the trend has shifted away from ablative techniques involving reduction or division of the osseocartilaginous framework to conserving native anatomy with cartilage-sparing suture techniques and augmentation of deficient areas to correct contour deformities and restore structural support.

Materials and methods: In this study, we present patients who underwent nasal surgery utilizing one of these three techniques between 2010 and 2016 and discuss some modifications to the techniques.

Results: Various techniques are used in rhinoplasty. These techniques can be classified under transcolumellar approaches and endonasal procedures. Open rhinoplasty without transcolumellar incision (ORWTI) procedure can be described as a combination of these two techniques.

Conclusion: The endonasal approach is an appropriate choice for select patients due to the lower chance of complications and a shorter procedure time. With open rhinoplasty with the transcolumellar incision technique, the type of surgery can be more easily controlled, however, extended nasal tip edema and columellar scar are some of the disadvantages of this method. ORWTI allows a patient to avoid these disadvantages and provides a more controlled procedure, similar to the open method.

Saddle Nose - How we do it.

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INTRODUCTION

Saddle nose deformity is a pathologic entity resulting from loss of the median third height caused by a substancial decrease in the cartilaginous or bony vault. It may have different causes and it can be responsible for loss of nasal tip support, shortened (vertical) nasal length, overrotation of the nasal tip, retrusion of the nasal spine and caudal septum, accompanied by various degrees of nasal obstruction.

An exact understanding of the nasal deformity and dysfunction is essential for the proper selection of the best reconstructive option.

The authors pretend to illustrate the importance of the pre-operative evaluation and the different correction techniques.

MATERIALS AND METHODS

Clinical series. Surgical Videos performed in our institution.

Evaluation of different clinical cases from multiple etiologies (syndromic, traumatic, iatrogenic) according to Daniels Classification (types I through V based on presenting deformities and method of treatment). Discussion of the deformities and the chosen surgical technique to restore the dorsum support. Importance of the graft type (septal, auricular and costal cartilage) and composite reconstruction.

CONCLUSION

Correction of Saddle nose deformity is one of the most challenging issues in facial plastic surgery. The careful planning of this procedure is determinant for a good functional and aesthetic outcome.

Sail Excision for Correction of Hanging Ala

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Introduction

The hanging ala can be lifted by either external or internal to the alar rim. This paper will discuss the guidelines and landmarks for the internal excision.

Technique:

The alar lift is done by direct excision at the vestibular side of the ala. The piece of tissue removed is shaped like a "sail" or a triangle (2 sides and a base). The "apex" starts at the peak of the gull's wing in flight. The caudal "side" is along the rim while the cephalic "side" is along a vestibular groove that is located a few millimeters infero-lateral to the caudal-lateral margin of the lower lateral cartilage. See fig. The groove can also be identified by the demarcation of hair bearing and non-hair bearing area in the lateral vestibular wall. The "base" is usually at the area where the nasal sill ends. If alar base and sill excisions are required, these are marked prior to markings of the "sail". Closure is by coaptating the caudal "side" to the cephalic "side" plus the base. Because of the unequal lengths of caudal "side" to the cephalic "side" plus the "base", adjustments in the closure is required to achieve the smooth contour of the new alar rim as the two sides are coaptated.

The amount of alar lift can be calculated by the length of the "base" removed. If 2mm lift is required, then 4mm of base is excised. This type of excision and direct closure essentially creates a flap from the rim of the ala to the vestibular defect.

Using blade 15, the "sail" skin is excised together with a moderate amount of subcutaneous tissue making sure the excision does not expose the opposite dermis. Cautery is not required. The retained subcutaneous tissue will somehow ensure a smooth contour of the alar rim. The defect is closed using nylon 6-0 simple interrupted. Because of the uneven length of the sail excision (caudal "side" to the cephalic "side" plus the "base"), closure starts at both ends of the incision to avoid dog ear deformity and gradual adjustments are made during closure. The scar is within the vestibule.

In some instances the alar rim base is lower in location than the columellar base, the alar base as well as alar rim can be lifted by an extended sail incision wherein part of the inferior postero-lateral wall is excised.

Scroll flap and Sandglass Spreader flap suture : tips to preserve the nasal valve in primary rhinoplasty

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Scroll flap and Sandglass spreader flap suture are new tips to preserve the internal valve.

Sandglass spreader flap suture is the way of suturing the inferior part of the two spreader flap to the nasal septum. An out to in, in to in through the nasal septum, in to out and back suture can be done to increase the angle between the septum and the Upper lateral cartilage (ULC) in his inferior part.

The scroll flap:

After lateral crural reduction and before to graft a tip we should perhaps repair what nature have done in the scroll zone.

After subperichondral dissection the scroll appears to be a specific transition between LLC (lower lateral cartilage and ULC.

The junction between ULC and LLC form a Z shape that act like a spring.

The aim of the scroll flap is to preserve this anatomical spring area during a primary rhinoplasty.

The reduction of the lateral part of the LLC is transformed in a simple section.

After removing the anterior hockey cross to reduce the dome the lateral flap is placed under the cranial part of the remaining LLC in a subperichondrial pocket.

Then one or two sutures will stabilize the flap

Step 1: the new dome is drawn on the tip.

Step 2: subperichondrial internal hydro dissection is done at the cranial part of the LLC

Step 3: the subperichondrial pocket is made by small scissors.

Step 4: section of the scroll flap

Step 5: the anterior hockey cross is removed.

Step 6: after the tip work, the flap is adjusted and sutured on the LLC with one or two sutures.

Esthetic and fonctionnal result are discussed on 25 patients with scroll flap technique and 10 patients with scroll flaps and Sand glass suture.

Secondary Rhinoplasty

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Natural sculpturing of the nose during secondary rhinoplasty is the goal of every rhinoplastic surgeon. The aim of this study is to assess secondary rhinoplasty on patients by presenting the functional and aesthetic techniques, and evaluating the results of the surgical interventions. Between January 2000 and January 2014, 1242 secondary rhinoplasties were performed on 162 males and 1080 females with a mean age of 26 years old. Open and closed rhinoplasties were performed on 1170 and 72 patients respectively. Local and general anaesthesia were applied on 108 and 1134 surgeries respectively with or without submucosal reduction of septal deviation and inferior turbinectomy. Septal, auricular or costal cartilage and fat graft reconstruction were also performed. The reconstructive and aesthetic techniques were performed on 13 different categories: 234 nasal tip deformities; 180 short or pig snout noses; 108 beak nose deformities; 126 nostril deformities; 198 saddle noses; 108 residuals cartilages or bone humps; 54 deviated noses; 36 pinched noses and fibrous prominent tips; 18 short, broad, oblique, showing columella; 36 flat noses; 36 inverted V; 108 over projected nose; 1 bilateral internal cantus tearing. The functional results were evaluated using a questionnaire that addressed the degree of nasal obstruction for respiration, the degree of aesthetic satisfaction and the odorant quality of pre and post operational procedure. An independent observer evaluated the aesthetic results based on pictures taken before and more than 6 months after Rhinoplasty. Highly satisfactory outcomes were reported in the majority of the cases, along with olfactory and respiratory improvements. Preoperative evaluation, complete dissection of different anatomic elements, identification of nasal respiratory obstruction and meticulous reconstruction provide a functional and aesthetic satisfaction.

Structural Rhinoplasty for South East Asian Noses

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The art and science of Asian Rhinoplasty are based on two main goals. Firstly the framework has to be strengthened. Secondly, the form has to be modified.

As for its framework, the central portion of the septum is harvested leaving 7-10mm of dorsal and caudal strut. The harvested septal cartilage is mainly use as support graft for the tip. The most common support graft is the Septal Extension Graft (SEG). This graft is best for lengthening a small nose, counter rotation of an upturn tip and projecting a low tip. These are often seen aesthetic deformity. If there is deformity in the septum and the internal valve, a spreader or batten graft can be used to straighten the deviation. There are times when the conchal cartilage is used as support for a small SEG; its technique varies according to the vector of the desired tip projection.

As for its form or final aesthetic outcome, mostly the alar rim has to be trimmed and lifted to give a better ala-columella relationship. The tip has to be defined better using conchal cartilage as contour grafts. The dorsum has to be augmented with synthetic or autologous materials. All these have to be precisely placed to avoid asymmetry and other aesthetic undesirable outcome.

There are other procedures like medial and lateral osteotomy and defatting of subcutaneous material that can be performed so as to achieve a more pleasant dorsum and tip.

Finally, if the alar flare is still wide then alarplasty can be performed.

PS-Rh-32

Structure rhinoplasty: a "must do" technique?

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The objective of our presentation is to show a variety of rhinoplasty techniques, showing from basic techniques to advance techniques in wich the term structure rhonioplasty can be apply. We start with a case were no grafting was used but the structure was preserved . The second case is a patient with a bulbous tip with good rotation and projection, in this case we show a technique were you can avoid the dead space after resecting the cefalic border of the lateral crura by making a "push down " of the cefalic border. The techniques were you reposition the domes con be consider an structure technique because you preserve the support mechanisms and frequently you use an strut. Finally some primary and revsion cases are shown were some basic advance use of grafting is nescesary to obtain good aesthetic and functional results.

My conclusions are:

If preserving the structure of the nose is structure rhinoplasty : then all my rhinoplasties are structure rhinoplasty

If putting an strut is structure rhinoplasty : then only in a few cases i don't do it

BUT.....if structure rhinoplasty is tu rebuilt the shape and increase the support of the nose with extreme grafting of all type then is an exelent option in SELECTED cases.

The case of a successful reconstruction of the nose wing

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The problem of treatment of bite wounds more than one century. In U.S. recorded 500-600 thousand bites per year. Most of the damage is applied to dogs. In Russia, the negotiability of the population for medical help for the specified occasion also high. The bitten wounds often occurs amputation of the soft tissue and that makes trauma especially severe. Bite wounds of the face leads to serious anatomical, functional and neurological disorders.

Within a few days after the injury, 98% of children have symptoms of post-traumatic stress disorder, depression, nervous exhaustion. These attributes are stored in 82% of patients within one month in 44% - within a year. Treatment of children with extensive wounds bitten is a pressing and complex surgery section.

The patient was operated on after being bitten by a dog. She came to the clinic only after 6 months with complaints of defect of the nose wing. The operation was carried out in 3 stages and included a plastic nose wing free skin graft, autograft cartilage reshaping and correction of nasal valve. As a result of treatment has been achieved good cosmetic and functional effect.

A feature of the present clinical observation is the use of mixed methods to eliminate cosmetic defects.

The DCF (diced cartilage fascia) in rhinoplasty

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Rhinoplasty has grown and developed over so many years but the choice of the graft material in revision rhinoplasty and rhinoplasty for post-traumatic cases still remains debatable. In such patients, non-availability of adequate autogenous graft, multiple septal fractures and skin fibrosis are a challenge to the rhinologist. Rhinoplasty surgery using diced cartilage grafts has been modified several times since its inception. The study, highlights the distinct advantages of using diced cartilage wrapped in fascia for dorsal augmentation. Reconstruction of the dorsum is difficult and requires good pre-op planning, intra-op implementation and post-op care. Full length grafts were used in all patients and this was supported on a L-shaped cartilage fixed between the two upper lateral cartilage. Fascial tube was prepared from fascia lata and conchal, rib or septal cartilage was the source of diced cartilage (0.5–1 mm sized pieces). The tube-shaped structural support was prepared from the remnant of septal cartilage if any or from the conchal or rib cartilage. Patients were followed for a period of 6 months–3 years. In all patients post-op course was uneventful with good reconstruction results. In conclusion, diced cartilage wrapped in fascial tube has distinct advantages like it is simpler procedure and graft material is adequate and autogenous. Grafts can be prepared as per the desired length, shape and size to fit the specific defect. Since they are extremely malleable, grafts can be used without any tension on the already thickened and fibrosed skin and soft tissue. Complications like step deformity and extrusion rarely occur and can be easily managed. Over correction and graft visibility were not met with.

The Effect of Spreader Graft to Nasal Obstruction Caused by Internal Nasal Valve Stenosis

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Purpose:

Nasal obstruction is one of the most common complaints among otolaryngology patients. Internal nasal valve (INV) stenosis can easily increase the resistance of nasal airway and cause symptom of nasal obstruction. Functional rhinoplasty with spreader graft insertion (FR-SGI) may correct the INV stenosis. The improvements of nasal obstruction in patients with INV stenosis with high septum deviation following functional rhinoplasty with FR-SGI are analyzed in this study.

Materials & Methods:

A total of 31 non-rhinosinusitis patients (64 INVs) with nasal obstruction symptom were recruited in a consecutive manner from Nov. 2012 to Jul. 2016 at Taipei and Sijhih Cathay General Hospital. The INV was measured by nasal endoscopic exam. The association between degree of nasal obstruction and INV type was investigated. Visual Analogue Scale (VAS, from 0 best to 10 worst) was used to evaluate the quality-of-life impacts of nasal obstruction before and after FR-SGI. The VAS was also used to evaluate modified Cottle maneuver (MCM) effect before and after surgery as pre-operative evaluation of the FR-SGI possible adjustment for INV stenosis and post-operative measurement of the improvement of INV stenosis.

Results:

The types and the VAS of nasal obstruction after nose decongestion in INVs are: angle occupied by septal body type (39%, VAS 3.5), sharp angle (19%, VAS 4.9); blunt angle (10%, VAS 1.7); concave caudal border (11%, VAS 0.7); convex caudal border (13%, VAS 2.3); angle occupied by the septal body (8%, VAS 2.6). Nasal obstruction improved significantly following FR-SGI ($P<0.05$) in all patients including INV angle occupied by septal body type. The MCM effect also decrease after FR-SGI ($P<0.05$) including INV angle occupied by septal body type.

Conclusion:

In Taiwanese patients, angle occupied by septal body type is the most common type of INV. Sharp angle is the type causes the most severe nasal obstruction. Although angle occupied by septal body type of INV cannot be easily dilated by MCM, the angle still can be widened by FR-SGI with good functional result. FR-SGI can improve nasal obstruction in all types of INV stenosis.

The local anaesthesia technique in nose surgery: a long time personal experience

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Purpose of participation to roundtable or institutional course

The purpose of this presentation is to describe the advantages of the local anaesthesia technique, based on 35 years of experience in the field, with more than 550 cases every year in septoplasty and in FESS. This long-term experience has been also applied during International activity in Africa and Middle Orient, through heading missions for nose and ear surgery as founder of NGO Hiwet at the Mekane Hiwet Hospital ENT Department in Asmara, Eritrea, from 1993, and as World Health Organization Adviser for Eritrea and Yemen Republic from 1994 at the University Hospitals of Asmara, Sana'a and Aden.

The local anaesthesia in septoplasty and turbinate reduction and in FESS of selected cases gives patients many advantages respect to the same surgery performed in general anaesthesia.

1. Many patients, especially young patients, are usually afraid of general anaesthesia also with the current sophisticated and safe techniques of general anaesthesia
2. Many patients fear about the utilization of nasal packing that is commonly used in general anaesthesia surgery and that sometimes is painful.
3. The great majority of patients would like to return to their normal activities (job, sports) in the shortest possible time.

The local anaesthesia technique in ENT surgery is not a simple or fast procedure to learn and perform, but when mastered it presents many advantages also for the surgeon.

1. This approach grants bloodless surgical field with the possibility to perform, when required, also an endoscopic septoplasty and no use of packing in septoplasty and in FESS.
2. Local anaesthesia allows a day surgery hospitalization and a quick recover of patients, with a great reduction of cost for healthcare systems. Saving costs is important, today, not only in emergent countries, like it was many years ago, but also in European and world middle or high income countries.
3. Local anaesthesia gives the possibility to perform surgery also in patients at risk for general anaesthesia
4. Local anaesthesia is an advantage in revision surgery, and patients are pleased to avoid revision surgery with a second general procedure

We will report the local anaesthesia technique, describing every step in details. Moreover, we will discuss about the pre-operative counselling for patients and any possible dangerous point of this approach, with the goal to avoid any complication, quite rare in our experience of thousand of different cases in over 35 years.

The Portuguese version of “The Utrecht Questionnaire for Outcome Assessment in Aesthetic Rhinoplasty”: validation and clinical application

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Introduction: Facial plastic surgery and its results continue to be a challenge for both the patient and the surgeon. “The Utrecht Questionnaire for Outcome Assessment in Aesthetic Rhinoplasty” is a questionnaire covering the main aspects that influence the satisfaction of the patient undergoing rhinoplasty. The aim of this study was to perform the translation, cross-cultural adaptation and validation of “The Utrecht Questionnaire for Outcome Assessment in Aesthetic Rhinoplasty” from English to Portuguese of Portugal.

Methods: Retrospective study involving 40 patients (22 women and 18 men) submitted to rhinoplasty and 30 volunteers (18 women and 12 men) without indication or desire of rhinoplasty or any other kind of nasal surgery.

Results: Content validity were confirmed by similar internal consistency (Cronbach α coefficient of 0.824) as the original questionnaire, and strong correlation between individual items and total score. The questionnaire was easy and quick to administer (2 min). At six months, there was a significant decrease from baseline for most sub-scale scores, indicating clinical improvement in subjective perception of nasal appearance and quality of life in the investigated rhinoplasty population.

Conclusions: The Portuguese version of “The Utrecht Questionnaire for Outcome Assessment in Aesthetic Rhinoplasty” is a valid instrument to assess patient’s outcomes following rhinoplasty surgery.

Key words: questionnaire, rhinoplasty, “The Utrecht Questionnaire for Outcome Assessment in Aesthetic Rhinoplasty”

PS-Rh-38

The rhinoplasty under local Local Anesthesia

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Rhinoplasty under local anesthesia is a practical trending approach to one of the most common surgeries in the cosmetic field. While many of more complicated non-aesthetic surgeries in The face and neck and the body are being performed under local anesthesia, many of the plastic surgeons worldwide are still reluctant to this type of surgery raising many medico-legal issues around it.

In our practice, we have done so far over 2000 rhinoplasties under local anesthesia.

The setup is in the hospital or a well equipped clinic. The type of anesthesia is purely local without the need of any anesthetist. The surgery is ambulatory with minimal pre-operative preparation of the patient.

This surgery is addressed to primary as well as revision rhinoplasties. Additional facial surgeries can be associated to it (eyelid surgery, liposuction, lipofilling).

The major pre-requisites for such a procedure are the patient consent and understanding of the surgery and the duration of the operation. Patient should be aware they are fully awake and so aware of every gesture of the surgeon. This makes anxiety the chief contra-indication to this type of surgery. The surgeon should be aware that he should be focused and prompt and precise in his gestures. This makes

Tips and Pearls in e-PTFE as Dorsal Augmentation Material

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e-PTFE implants popularly known as Goretex have been widely used nowadays in augmenting the dorsum. It gives a natural look than Silicone, which is still the most popular implant.

The morbidity in Gore-tex use can be divided into aesthetic and clinical types. The aesthetic complications are usually deviation and gore-tex visibility. The clinical complication is infection.

Here are some tips and pearls in avoiding goretx visibility and deviation

-In using sheets, all sides should be tapered.

-The superior end should rest well on the radix and the inferior end should reach at the area just superior to the domal cartilage. Avoid short implants ending at the upper cartilage because of a high probability of being visible during long term healing. Implants ending at the area of the dome are not visible under the SSTE because of the thick fibrofatty tissue.

-There are preformed implants that are dense and firm. These goretex implants should not be floating e.g. it should rest on bare nasal bone and perichondrium of upper cartilage. If the key stone area is prominent, the underside of the goretex should be carved out to follow the contour of the hump.

To help keep the infection rate low, I would like to share some of my personal opinions:

-pre-cut Goretex strips should be individually autoclaved or gas sterilized. Never cut goretex sheet intraop and share the remaining with other patients.

-Goretex implant should be opened just before carving and insertion

-soak the goretex in pure 80mg gentamycin solution during preparation before insertion

-avoid contamination of Goretex with operative sponge

-use nylon or pds suture in suturing Goretex sheets

-careful medial osteotomy avoiding nasal mucosal tear

-Careful split of UC to the septum to avoid mucosal tear

-Fixing the goretex at its caudal end using nylon 6-0 prevents deviation and possible subluxation with subsequent infection.

-It is important to avoid dead space underneath the goretex. The space can be filled up using cartilage or thinned goretex sheet; the thinned goretex sheet should not abut the vestibular mucosa between the UC and LLC. Make certain that no inferior edge of goretex implant is near incision margin.

-Meticulous closure of the incision. Make sure there are no open wound.

Tongue-in-Groove Technique associated to Vertical Dome Division in Rhinoplasty: Case Series Study

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Purpose of the study: To describe an endonasal rhinoplasty technique associating the Tongue-in-groove (TIG) with the Simon`s modification of Vertical Domus Division (VDD) techniques when nasal tip rotation and changes in projection are indicated. **Materials and methods used:** Three patients from our rhinoplasty clinic showing overprojected and droopy nose were selected. They were submitted to our protocol, which includes the Rhinoplasty Outcome Evaluation (ROE) and Nasal Obstruction Symptom Evaluation (NOSE), physical examination, nasal endoscopy and photography. The patients underwent to the proposed surgical technique under general anaesthetic. The TIG involves repositioning and fixating the medial crura cephalically onto the caudal septum into a surgically created space between them. In the VDD technique, the lower lateral cruras are delivered by marginal incision, the natural domal high point is identified and then vertically divided on either side of the apex and resected, the vestibular skin and mucosa are kept preserved, it is further fixed in position and bring together the medial crural ends. When needed, appropriate septoplasty, dorsal profile alignment were achieved and osteotomies were done. **Results:** Three patients, female, caucasian, aging 47, 50, and 57, were eligible for the study. They underwent the proposed surgery, and no adverse outcomes were described. Currently, the patients have been followed up for one month. The ROE and NOSE scores showed improvement compared with preoperative scores, as well as satisfaction with nasal appearance. **Conclusion:** TIG associated to the VDD technique can be an alternative approach for nasal tip rotation, refinement and overprojected nose in aesthetic and functional rhinoplasty. It has been associated to improvement in quality-of-life, nasal obstruction and satisfaction with nasal appearance in a short time follow up. Longer follow up is necessary for stronger conclusion and recommendation.

UNDERSTANDING AND HANDLING DERANGED TIP DYNAMICS. FINDINGS FROM THE ANATOMICAL LAB

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PURPOSE OF THE STUDY

Altered tip dynamics represent a frequent finding of patients seeking for rhinoplasty. The commonest complaint is represented by tip drooping and alar base widening/lifting when smiling. Other findings identified by the astute rhinoplastic surgeon are represented by a dynamic «notching » of the alar border and tethering of the upper lip that can be accompanied by a « crease » over the philtrum and different degrees of gummy smile, especially visible on the side views.

The purpose of this presentation, based on cadaveric dissections of the dynamic anatomy of the inferior nasal third and upper lip, is to classify on a pure anatomical basis the aesthetic dynamic defects and to give practical advices on how to recognize and handle dynamic derangements of the nasal tip through paradigmatic clinical cases.

MATERIALS AND METHODS

Cadaveric dissections have been performed to show the functional link between the nasal tip position and the upper lip movements that have an impact on both these two key aesthetic units.

RESULTS

The mediator of this interaction is the depressor septi nasi (DSN) muscle, whose variable anatomy may have an aesthetic impact on the position and contour of upper lip, creating a clinical scenario that includes shortening and over-elevation of the upper lip, visibility of the upper gums, and creation of a mid philtrum crease. These complex and extended changes are related to the action of different muscles like DSN muscle, muscular compartment of nasal SMAS, orbicularis oris (OO) muscle and alar muscle. The final clinical effect is the resultant force of the conjoined actions of the different muscles involved in smiling that seems to be a pretty articulated muscular situation.

The alar base widening and elevation is related to the action of the levator labii superioris alaeque nasi (LLSAN) muscle, which makes connections with the nasalis muscle, which is part of the nasal Smas, that is connected to the DSN muscle, that is linked to the OO muscle.

CONCLUSIONS

This anatomical situation explains how the hypertrophy of a single muscle can affect the tip-upper lip junction, causing deepening of the naso-labial angle, retraction of the columellar base, lowering and down-rotation of the lobule and lifting of the nasal base.

PS-Rh-42

Using PDS Flexible Plate for Septal Crossbar Graft in Caudal Septal Deviation Correction – A Preliminary Study on Quality of Life

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Purpose: Caudal septal deviation causes not only cosmetic problem (nasal tip deformity) but also nasal dysfunction (nasal obstruction). Correction of the caudal septal deviation is one of the most formidable challenges in rhinoplasty. Numerous techniques have been proposed to solve this dilemma. The difficult and time-consuming procedure to correct the caudal septal deviation can be facilitated by the use of a connecting material. We used the PDS Flexible Plate for septal crossbar graft to correct the caudal septal deviation, and evaluated the efficacy by questionnaires.

Materials & Methods: After thorough pre-operative consultations and evaluations (Nasal Obstruction Symptom Evaluation score, NOSE; Nasal Obstruction Visual Analog Scale, NO-VAS; 36-Item Short Form Health Survey, SF-36), we performed the septal PDS crossbar grafting technique to correct deviated caudal septum. The same questionnaires were used to evaluate the post-operative improvement on nasal obstruction for the following few months.

Results: All three questionnaires (NOSE, NO-VAS, SF-36) showed significant improvement on nasal patency for our patients after the surgery, subjectively.

Conclusion: Our experiences indicated that septal PDS crossbar grafting is an effective and satisfying surgical technique for caudal septal deviation correction by achieving not only nasal function improvement but also satisfactory cosmetic results. Septal PDS crossbar graft combined with autologous cartilage streamline the surgical correction in caudal septal deviation. It may reduce the need for secondary cartilage donor site surgery and is good for the “graft-depleted” patients.

PS-RH-43

5 years experience of powered rhinoplasty

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Powered rhinoplasty by the Bien Air Rhinosculpture set has begun in 2009 by Turkish surgeon Dr Avsar.

Since 2011 I have used the rhinosculpture set on 455 procedures for primary and revision rhinoplasty.

Purpose of the study: retrospective study of the 455 procedures.

Duration of the surgery, difficulty scale, instruments have been studied (information are taken from continuous video recording)

Results:

A progressive transition from traditional osteotomy to powered osteotomy is fundamental.

The external approach is the best to start with powered tools and the rhinosculpture set can be used by hidden and endoscopic approach.

At the beginning the surgeon can get use to the set by only using the rasps

Since 2005 new tools enhanced the rhinosculpture set with more powerful rasps.

The time of surgery increase during the learning curve and then decrease and became as short as by the traditionnelle way.

Using powered saw decrease the risk of bad fracture, especially for old patients.

A perfect exposition is fundamental and the surgeon needs to use a suction-retractor instrument so that he can see the surgical field during powered irrigation.

Sharpen bone scissors is now forbidden in many countries like France and it's very difficult to have a proper bone scissors set at every surgery during the year.

Using powered saw and rasp that can be changed allows the surgeon a more constant quality of bone working

Learning curve, benefits, pitfalls and results of this surgical procedure will be discussed.