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ABSTRACT BOOK

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TABLE OF CONTENTS

ACRAL ISCHAEMIA AS A REFLECTION OF SARS-COV2 ENDOTHELIAL MECHANISM

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Objectives

Endothelial cells have recently been nominated as the primary cell type involved in the initiation and propagation of ARDS caused by SARS COV 2, consequently implying a severe endothelial injury and hypercoagulability state across vascular beds of different organs. Acral ischemia is one of the visible manifestations related to this thrombotic microangiopathy, causing loss of digits and severe impair of hand function. In order to prevent this scenario, it should be imperative to recognize its early signs and furthermore, aggressively managed. Presently, there is a paucity in literature detailing the clinical course and management of digital ischemia in COVID-19 patients. Herein, we report our experience with 3 cases of digital necrosis in patients with confirmed SARS Cov 2 infection.

Materials

During the first 18 months of COVID -19 disease we admitted in our clinic 3 cases with complete digital necrosis - one case was discharged directly from intensive care unit and 2 cases developed necrosis 3-4 months after covid disease.

During the COVID 19 pandemic, we evaluated 3 patients with clinical signs of digital ischemia. All of them were mentioned with recent history of SARS-CoV-2 infection. 2 patients presented with dry gangrene, the 3rd one with pale atrophic skin, moderate edema of the digit and distal phalanx bone exposure. One of them reported also previous self-limiting Raynaud episodes, with digital pain and discoloration, triggered by cold temperature and improved with hand warming. All 3 patients had preserved major peripheral pulses (radial and ulnar artery), revealed elevated D-dimer and fibrinogen serology, lacked improvement following standard vasospasm and anticoagulation medications and the involved digits needed amputation. Also, each one of them had preexisting conditions such as hypertension, obesity, and diabetes, which are all associated with endothelial dysfunction, thus being more susceptible to an adverse course of COVID-19.

Results and discussion

On admission, laboratory investigation showed elevated levels of inflammatory markers, chest X rays and pulmonary CT showed only in one case sequelae after bilateral pneumonia. After delimitation of the necrosis area, a necessary amputation of the phalanges was performed, the local evolution was favorable, the wounds healed in14 days

COVID -19 theories include hypoxia-induced microvascular damage, endothelial shedding, cytokine inflammation-mediated damage. Still is unclear the association between COVID-19 coagulopathy and antiphospholipid antibodies.

Though digital /extremity ischemia is routinely seen in ICU/ critically ill patients we had cases with digital necrosis without respiratory or other significant symptoms

While the exact mechanisms are still under debate, SARS CoV2 affecting endothelial cell function has found its proof in the widespread systemic manifestations related to both a hypercoagulability and pro-inflammatory state. The vascular endothelium represents the critical interface between the blood compartment and tissues, and displays a series of remarkable properties that normally maintain homeostasis. Cytokines, pro-inflammatory and pathogen-associated molecules, serve as key danger signals that shift endothelial functions from the homeostatic into the defensive mode, activating the coagulation storm and producing one of the most potent vasoconstrictors known, endothelin-1. Acral ischaemia in patients with COVID-19, reflects the pathogenic endothelial mechanism of the virus in a series of findings: histological ones – artery biopsy showing features of microthrombosis and

endotheliitis, serological ones – hypercoagulability was suggested by elevated D-dimers and lack of improvement following standard vasospasm treatment, patients' associated conditions, related to endothelial dysfunction – Raynaud disease, hypertension, diabetes, prophylactic anticoagulation therapy recommended by the guidelines showing beneficial and protective outcomes.

Conclusions

Due to the unique risk of both hypercoagulability and vasoconstriction in COVID-19 patients, promptly fast diagnosis and management of digital ischemia are highly recommended to prevent digital necrosis and finger loss. Progression of acral ischemia despite on time aggressive anticoagulant and vasodilatative therapy, stresses the need for a targeted therapy to combat the catastrophic microangiopathic response induced by SARS-CoV-2: ARDS, multiorgan failure, and death. Therefore, the discovery of new clinical targets to treat endothelial dysfunction is currently an urgent unmet clinical need.

Keywords

Acral ischemia, digital necrosis, endotheliitis, thrombotic microangiopathy, COVID-19 infection, SARS-CoV2 mechanism

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HAND AND FOREARM REPLANTATION

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Objectives

Replantation is the gold standard surgical treatment of amputations of the upper limb. It represents the reattachment of a severed body part woth attempts to restore neurovascular and musculoskeletal integrity, function and aesthetics.

Materials
A total number of three patients reported with amputations at the level of the hand and of the forearm, which received upper limb replantation. Surgery included debridement of the amputated segment and recipient's strumps, bone fixation, arterial and venous anastomosis, nerve sutures, tendon sutures and skin closure. The handling of this type of injuries included meticulous preoperative management, microsurgical experience and continuous postoperative care.

Results
Two cases of replantation at the distal level of the forearm and one at the level of the hand were included. One at the level of the distal forearm was unsuccessful with failure of the vascular anastomosis. The other two were efficient, with well restored circulation and sufficient regained function and sensation. To improve functional results, these patients needed further reconstructive surgeries.

Conclusions
Upper limb amputation is one of the most challenging trauma presentations in plastic and reconstructive surgery, both from a technical and a recovery standpoint. The most important factors that influences the results are the type and the level of injury. Proper postsurgical care and rehabilitation are crucial for an optimal outcome.

Keywords
amputation, hand, forearm, replantation, hand surgery, microsurgery, trauma

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SOME FEATURES OF REPLANT MANAGEMENT DISTAL POLICE PHALANGE

VLADIMIR STRATAN, ANATOLIE CALISTRU, VLADISLAV GLADUN, VASILE ROŞCA, ALINA PANCIUC

THE MANAGEMENT OF BONE DEFECTS RESULTED AFTER EXCISION OF ENCHONDROMA OF THE HAND. COMPARING THE TECHNIQUES OF AUTOLOGOUS BONE GRAFT OR BONE SUBSTITUTE

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Objectives
Enchondroma is the most common benign bone tumor of the hand. The diagnosis of the enchondroma is established frequently by an accidental X-ray or due to local pain, swelling or a pathological fracture. Surgical excision of the tumor using curettage and filling of the remaining cavity with autologous bone or bone substitute is the treatment of choice.

Materials
This retrospective study includes 20 patients diagnosed with solitary enchondroma in the hand bones: ten cases with type A (central), four cases with type B (eccentric) and six cases with type D (polycentric) according to Takigawa classification. The aim of this study was to compare the course and outcome in the three patient groups treated by curettage associated with natural consolidation of the bone defect, autologous bone graft or injectable synthetic bone substitute in association with plate and screw osteosynthesis. In 11 of the 20 cases, the procedure was performed under regional anesthesia with a bloodless operative field by exsanguination and the use of a pneumatic tourniquet. The other nine cases were performed under local anesthesia using the WALANT technique (Wide Awake Local Anesthesia No Tourniquet), using a solution of 1% Lidocaine with Epinephrine in a concentration of 1:100,000

Results
Outcomes were assessed using the DASH score (mean score 3) and TAM score (excellent in all patients) with no significant functional differences between the three groups. Defects managed with k-IBS® injectable (Hydroxyapatite and β-Tricalcium Phosphate) bone substitute were associated with shorter operating time, simpler surgical technique and less postoperative pain assessed by VAS score.

Conclusions
In the case of solitary enchondromas of the hand, the results do not show major differences in their excision, but there is controversy over the method of filling the remaining defect. Although the autologous bone graft still meets the gold standard criteria, the injectable bone substitute gains ground against the autologous graft, demonstrating greater efficiency and accessibility through shorter operating time and lower postoperative pain. The Takigawa classification could predict the optimal treatment option.

Keywords
enchondroma; bone defect; autologous bone graft; injectable bone substitute; hydroxyapatite; tricalcium phosphate; chitosan

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EVALUATING THE LEVEL OF POSTTRAUMATIC STRESS IN PATIENTS HOSPITALIZED WITH HAND INJURIES

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Objectives
Stress is a psychological factor to which a person is exposed when hospitalized, especially when being under the risk of temporary or permanent disability, abandonment, pain, loneliness, as it is the case of patients with hand injury. Our objective is to evaluate the level of stress of the patients with complex hand injuries by taking into account the symptoms of PTSD and, also, to describe the degree of personal, social and professional integration.

Materials
Fifty patients with complex hand injuries were included in the study and they all signed informed written consent. They were given the PTSD Checklist for DSM-5-Standards and asked to choose one of the five possible answers. After gathering all the data, we established the percentage of the patients meeting the criteria for PTSD and, also, analysed, the answers of those just facing symptoms.

Results
Two patients met the criteria for PTSD, meaning 4% of all patients; forty-two patients experienced symptoms, but did not meet the criteria and eight patients experienced no symptoms of PTSD.

Conclusions
In this study, despite a limited evidence base, the test results may detect only a low percentage of patients with PTSD, but a very high number of patients facing symptoms, such as disturbing memories, avoiding thoughts and feelings, sleeping disorders.

Keywords
stress, PTSD, hand injury, psychological factor

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DAY CARE HAND SURGERY IN MARTINIQUE IN COVID ERA

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Introduction
Day care office hand surgery is increasingly popular, based on new concepts (local anaesthesia without sedation, field sterility). The great flexibility of procedures in hand surgery is a big advantage, especially under the impact of Covid-19 pandemics.

Material and method
We analysed the patients operated in our unit in 2021. Our unit is the only public service for hand surgery in a territory with a population of 358.749 inhabitants. There exists also a private facility, but they don't perform emergency cases.

Results
There were 2059 patents presented in emergency in SOS Main. From those, 1315 (63.9%) were operated in local anaesthesia without sedation and without hospitalisation, and 449 (21.8%) were hospitalized and operated in the regular theatre. Planned day surgery cases were 700 patients, out of which 448 (64%) were operated in local anaesthesia without sedation in office surgery and 252 (36%) were hospitalized and operated with general anaesthesia / sedation in the regular theatre.

Discussions
The number of planned surgery cases was severely reduced because of suspension of regular theatre activity due to resource allocations to fight Covid. If you do not use sedation, the patient can go home immediately after the procedure. As shown in the literature, the field sterility in office surgery is safe and cheap.

Conclusions
Many procedures in hand surgery can be performed in office surgery, both in emergency and in scheduled cases. Patients' satisfaction is high and complication rate does not increase.

NERVE COMPRESSION DUE TO GANGLION CYSTS OR BENIGN TUMORS IN THE UPPER LIMB-CASE SERIES

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Objectives
Tumor nerve compressions in the upper limb are relatively rare, usually involving ganglion cysts and benign tumors. The purpose of this study was to present a series of patients which suffered nerve compressions secondary to presence of benign lesions, with improvement of clinical symptomatology in each of the presented patients after adequate surgical treatment.

Materials
We present a case series of six patients with peripheral nerve compression in the upper limb due to tumor or cystic masses- ulnar nerve compression in the Guyon's tunnel due to a ganglion cyst, large median nerve schwannoma compressing anterior interosseous nerve and median nerve, voluminous lipoma compressing median nerve in the proximal forearm, two cases of superficial branch of radial nerve compression by synovial cysts and elbow region lipoma compressing radial nerve.

Results
In the beginning, those benign lesions are asymptomatic but, as they continue to grow adjacent to a peripheral nerve clinical manifestations appear progressively as compressive neuropathies. All the patients have received surgical treatment-excision of the compressive masses with consecutive

releasing of the nerves with very good clinical results in terms of symptom remission and functional recovery if the lesion is treated before severe functional impairment is installed .

Conclusions
After a preoperative imagistic analysis, tumor resection with careful dissection, in order to preserve the neurovascular structures, is the elective surgical procedure in order to obtain an optimal functional recovery.

Keywords
upper limb, lipoma, schwannoma, ganglion cyst, nerve compression

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A PROSPECTIVE STUDY OF EXPANDING THE INDICATIONS FOR THE SUPERCHARGE CONCEPT FOR SEVERE OR RECURRENT CUBITAL TUNNEL SYNDROME

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Objectives
The supercharge technique of transposing the anterior interosseous branch from the median nerve in an end-to-side fashion to the motor branch of ulnar nerve was already described years ago, in an attempt to maintain the end motor plates of the intrinsic muscles of the hand in case of a severe or recurrent cubital tunnel syndrome. However, there are a lot of situations when we have to deal with a partial laceration of the ulnar nerve that we think we can cope with and resolve easily with a few fine stitches. The truth is that by the time we can examine the patient thoroughly, there can be some intrinsic muscles' activity that is already lost.

Materials
Thinking about the patients that had a proximal partial laceration of the ulnar nerve along with the ones with a severe or recurrent cubital tunnel syndrome, we decided to conduct a prospective study on the next 10 patients with proximal partial laceration of the ulnar nerve and also on next 10 patients with severe or recurrent cubital tunnel syndrome. The study was achieved after 5 years, between January 2015 and January 2020. The assessment of the study was done after 2 years for each patient.

Results

At 2 years, 80% of the group of patients with severe or recurrent cubital tunnel syndrome had a huge improvement in the intrinsic muscle function and 60% from the proximal partial laceration of the ulnar nerve group had a significant improvement on the affected intrinsic muscle function, related to different specific movements provided by the motor branch.

Conclusions

We strongly believe that beside the severe or recurrent cubital tunnel compression neuropathy, the proximal ulnar nerve injury patients in which incomplete regeneration is anticipated, a supercharge end-to-side nerve transfer may be useful to augment the regenerating nerve with additional axons and to more quickly reinnervate target muscle.

Keywords

AIN, supercharge, ulnar nerve, cubital tunnel,

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MUSCLE-VEIN COMBINED GRAFT: SOLUTION FOR BRIDGING NERVE DEFECTS

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Objectives

Nerve lesions are very common within hand and forearm injuries, with percentages reaching about 10% of traumas. In cases of wide nerve substance loss, when a direct end-to-end suture would demand an excessive tensile stress, the gold standard is still represented by autologous nerve grafting commonly the sural nerve. Carrying the disadvantages of sacrificing a healthy nerve, such as sensory loss at the harvesting site and neuroma formation, several alternative types of conduits have been studied. Vein filled with muscle might serve as a grafting conduit for the repair of peripheral nerve injuries and could give better results than traditional nerve grafting. Based on the anti-inflammatory effects of veins and the proregenerative environment established by muscle tissue, this approach has been studied in various preclinical and clinical trials.

Materials
A 22 y.o. patient reported a sharp injury with a glass to the antero-superior side of his right forearm. Intraoperatively, alateral antebrachial cutaneous nerve lesion was reported and section of the flexor carpi radialis muscle. After the resection of the nerve stumps, a residual gap of 12 mm impaired an end-to-end tensionless suture. Muscle belly was repaired, we therefore decided to perform a MIV (muscle in vein) graft harvesting a strip of muscle and a vein segment from the same opened area. We sutured both the graft ends with four 8-0 stitches at each side of suture and postoperative dorsal splinting in a resting position was maintained for 3 weeks.

Results
Functional results were similar to those found in traditional nerve grafts. It is true, though, that recovery may take place even beyond the 12-months time lapse, but at the follow-up performed at 2 months we observed good to excellent sensibility, with no complain from the patient.

Conclusions
Although autogenous nerve grafting is still considered the best method for bridging nerve defects, MIV's main benefit is the preservation of healthy nerves with no co-morbidity at any donor site whatsoever. MIV graft is a relatively new technique; its cost-effectiveness comparing to manufactured conduits and the preservation of healthy donor nerves makes it a valuable option in bridging nerve gaps up to 3 cm where it acts as a "growing chamber".

Keywords
Muscle in vein, nerve lesions, nerve conduits, nerve gaps.

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FLAP COVERAGE OPTIONS FOR THE UPPER EXTREMITY

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Objectives
The upper extremity is often involved in accidents resulting in severe trauma with a great impact on function. This presentation will address few of the existing possibilities of coverage for the upper arm.

Materials
A series of 6 cases is discussed, presenting complex trauma of the upper arm with different coverage options. Trauma at this level can involve skin and soft tissue, muscle, vessels and nerves, with or

without acute ischemia. The types of flaps used range from pedicled flaps, like the latissimus dorsi and TAP flap, to free flaps: DIEP, ALT.

Results
The choice of flap was done accordingly to the size of the defect, but also regarding the tissue that needed to be reconstructed. When a large defect was encountered, the DIEP flap was used and when the size was smaller the ALT flap was used.

Conclusions
There are a multitude of flaps from where to choose, in our experience the ALT is the workhorse flap. This flap can combine skin, fascia, muscle and even vessel, for a flow-through flap, in case of a major vessel reconstruction.

Keywords
reconstruction, free flap, ALT, upper arm, microsurgery

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VERSATILITY OF VEIN GRAFTS IN HAND AND FOOT NEUROVASCULAR RECONSTRUCTION

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Objectives
Mangled hand and foot injuries are often associated with soft tissue defects. Among the most affected structures, which could put in question the viability of the traumatized segment, are vessels and nerves. This paper wishes to highlight the usefulness of vein autografts in reconstruction of such noble elements.

Materials
Our paper brings into attention five cases with above mentioned. Interposed vein grafts were used to re-stablish sensate function in a patients with a collateral digital and dorsal foot nerve defects, but also to bridge vital digit arterial defect in a torsion-avulsion thumb amputation, as well as re-establishing venous flow in two patients with Urbaniak II finger degloving injury.

Results
The two patients with sensitive nerve gaps had an excelent result, with 2 point discrimination test similar with the healthy, contralateral side. The postoperative period of patients with degloving injury was uneventful, with no congestion. Finally, the restoration of thumb arterial perfusion within a vein graft was a success and the patient started early on the rehabilitation program.

Conclusions
Usage of vein grafts represents an essential tool comprised in the reconstructive surgeon's armamentarium, with high versatility in nerve, arterial and venous reconstruction. Not only does it

provide an ideal solution, with high adaptability to each case, but it also may enhance short- and long-term outcome, offering an optimal reconstructive option in any upper and lower limb trauma situation, regardless of etiology.

Keywords
vein grafts, hand, foot

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THE USE OF VENOUS FLAPS FOR HAND DEFECTS RECONSTRUCTION

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Objectives
Venous flaps have been described as an alternative for grafts, local flaps and conventional reconstruction methods for defects of upper and lower limbs, facial and intraoral region. Venous flaps are composed of skin, subcutaneous tissue and a venous network, usually based on a central vein which will provide the inflow and outflow of the flap in comparison with usual flaps which have an artery and vein as afferent and efferent flow. Chen et al classified venous flaps into four types are 1) free venous flow-through flap, 2) pedicled venous flap and the third and fourth are arterialized flaps. There is an ongoing debate regarding the use of venous flaps despite offering plenty of advantages, the use in clinical practice it is limited by numerous factors.
Performing a venous flap requires microsurgery training and equipment which are not available in every department. Another fact to consider is the high rate of complications because of the vascular particularity of the flap.

Materials
We performed various types of venous flaps for coverage of small defects in hand in numerous patients. The particularity of the cases was that we designed the flaps preoperative using noncontact vein visualization (AccuVein) furthermore easing the process of design.

Results
All flaps survived. Post-operative, four of seven flaps presented venous congestion which lasted 1-2 days. Two flaps presented in day 5-7 epidermolysis which resolved after 2 weeks post-operative.

Conclusions
The advantages of performing a venous flap are the ease of design and harvest of the flap, low donor site morbidity, because it does not necessitate the sacrifice of a main artery and the variability of

donor sites. Performing noncontact vein visualization can furthermore ease the design of venous flaps. Using venous flaps for reconstruction of hand defects is still under discussions because of the high rate of complications and the need of an experienced team with microsurgery training and specialized equipment.

Keywords
venous flaps, venous flow-through flaps, hand wound coverage, AccuVein

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FREE FOREARM PERFORATOR MINI FLAPS IN FINGERS RECONSTRUCTION

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Objectives
The reconstruction of fingers' soft tissue defects remains challenging. The optimal reconstructive treatment should be simple, reliable, cost effective, and provide pliable, sensitive, and cosmetically similar tissue allowing adequate function. A free flap of appropriate size may provide an ideal surgical solution. The aim of the study was to compare the outcomes of fingers' reconstruction using free arterialized venous flap (AVF), superficial palmar branch of the radial artery (SUPBRA) flap, dorsal radial perforator flap (DRAP), and dorsal ulnar artery perforator (DUAP) flap harvested from the same donor area.

Materials
During 6 months were performed 4 types of free flaps from the same extremity for the coverage of fingers' defects, with small/moderate soft tissue lack (1 AVFs, 3 SUPBRA flaps, 1 DRAPs, and 1 DUAP flaps). Standardized assessment of outcomes was performed, including duration of operation, objective sensory recovery, cold intolerance, time of returning to work, active total range of motion (ROM) of the injured fingers, and the cosmetic appearance of the donor/recipient sites.

Results
All flaps survived completely, and the follow-up duration was 12 months. The average length of the surgery for the AVFs was distinctly shorter in comparison to other types. The SUPBPRA were employed to reconstruct skin defects and extensor tendon defects using a vascularized palmaris longus graft in 1 finger. Optimal sensory recovery was better with AVFs and SUPBRA flaps as compared with DUAPs and DRAP flaps. No significant differences were noted in ROM or cold intolerance between the 4 types of flaps. Optimal cosmetic satisfaction was noted for the recipient sites of AVFs and the donor sites of SUPBRA flaps.

Conclusions
All four types of free flaps from the ipsilateral extremity are a practical choice in finger reconstruction for small/moderate-sized defects. The SUBPRAs play an important role in such operations due to the wider indications, and better sensory recovery and cosmetic appearance associated with this method.

Keywords
free mini flaps; finger soft tissues defects.

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COVERAGE OF SKIN DEFECTS IN COMPLEX HAND TRAUMA

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Objectives
The incidence of complex hand trauma is increasing in the last years due to poor interest for work safety and recklessness of the unqualified workers. Hand skin defects need a prompt management in order to provide a surgical treatment capable to restore the function of the hand. For coverage are often used fasciocutaneous flap, especially the reverse radial forearm reverse flap and posterior interosseous flap.

Materials
We present several clinical cases of patients with large hand skin defects who benefited from reverse radial forearm flap and posterior interosseous flap. Both flaps are fasciocutaneous antebrachial flaps which consist of units of tissue including skin, subcutaneous tissue and fascia. They have a main vascular pedicle and may have an island or a peninsula shape. Skin defect resulted from trauma are covered with them and the donor site is covered with skin grafts.

Results
Flap integration and skin graft take are optimal with well functional results.

Conclusions
Fasciocutaneous antebrachial flaps are optimal for covering the skin defects at the dorsal or volar side of the hand. Due to the regional hand anatomy, in these type of injuries it can not be used only the skin grafts, the flaps being a requirement in the majority of the cases. The reverse radial forearm flap is prefered when the skin defect is associated with amputations at the level of the metacarpus, and the posterior interosseous when the digits are intact.

Keywords
flap, trauma,hand, skin defect

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NASAL RECONSTRUCTION WITH A PRELAMINATED RADIAL FLAP AFTER A 4-YEAR RECURRENCE OF A BASAL CELL CARCINOMA

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INTRODUCTION
Skin carcinomas account for about 90-95% of all cancers location. Given the increase in solar activity in recent years, the continuous reduction of the ozone layer, young people's excessive sun exposure, it is estimated to be a significant increase in cutaneous cancer globally.
Basal cell carcinoma accounts for about 80% of non-melanoma skin cancers and is the most common form of cancer in the Caucasian race. It's a tumor with slow spread and local malignancy, with high cure rate and a favorable prognosis when is diagnosed in the early stages.
Despite this relatively benign behavior, there are aggressive clinical forms that produce significant local tissue damage, with a significant impact on patients' quality of life.

CASE REPORT
We report a case of a 62 year old woman, non-smoker, who was found to have a lesion of 0.5 cm in diameter on the nasal pyramid, four years later after a basal cell carcinoma excision and a complete nasal reconstruction using 2 paramedian frontal flaps (sandwich type). The patient had multiple relapses even after histopathological exams declared cancer free resection margins. Latest reconstruction was done using a prelaminated radial flap, with costal cartilage from the 4^{th} rib, for support, integra – as a dermal substitute and skin graft, for the nasal cornets.

CONCLUSION
As we can see, we are never sure about a possible recurrence of basal cell carcinoma, because it can occur years later, even after an excision in healthy tissue.
Regarding the reconstruction, of the first intention, in this case, would be local or nearby flaps, but because a previous reconstruction was made using the paramedian flaps, next and best solution, considering the fact that the local resources were insufficient, was a microsurgical free flap transfer.
As previously mentioned we used a prelaminated radial flap, with integrated cartilage, integra and skin graft for the for the support and lining of the future nasal cornets.

COMPLEX NECK RECONSTRUCTION WITH FREE FLAPS IN PATIENTS WITH TOTAL LARYNGECTOMIES

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Objectives
Most neck soft tissue defects are present after surgical ENT procedures, often after total laryngectomies. Neck burns or trauma are also encountered in these cases. Most patients with total laryngectomies are heavy smoker and previously had surgeries. Often the surrounding donor areas are already used in previous trying of closure. The amount of scar and the "frozen" neck makes these reconstructions difficult.

Materials
49 patients underwent reconstruction with 72 free flaps. Jejunum free flap was used in 25 patients, lateral arm flap (LAF) in 35, anterolateral thigh in 5 and radial forearm flap in 7 cases. Simultaneous combined free flaps were used in 21 cases, simultaneous three free flaps in single case. Most anastomoses were performed at the common carotid artery and external carotid arteries. The transvers cervical vessels were used in 8 patients.

Results
All free flaps survived except single one with complete necrosis. Partial flap necrosis was present in three patients. Postoperative fistula occurred in 7 patients and secondary suture was performed in 4 cases. There was one case with tumor recurrence and death within 6 months. All other patients were able for oral feeding and improving quality of life.

Conclusions
The poor vascular supply and presence of scar tissue in these patients make the local resources not usable. The choice of free flap depends on the type of hypopharynx defect (circumferential of partial). Free jejunum is the choice for circular defects reconstruction and the LAF for the partial defects. Combined free flaps represent a good choice for pharynx and soft tissue defects. The pectoralis major flap is used as a back-up procedure.

Keywords
Free flap, jejunum, lateral arm flap, anterolateral flap, fistula

MIDFACE RECONSTRUCTION WITH FREE FLAPS

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Objectives
The face is a well vascularized structure and also complex, due to the amount of anatomical elements. Large defects are often results of malignant tumors. A radical resection includes removal of large tissue and makes the free flap reconstruction the first choice.

Materials
13 patients with midface large tissue defects were operated with free flaps. Four patients had maxillary reconstruction with vascularized iliac crest. Chimeric osteomuscular free flap was used in single case. There were 2 children with ameloblastoma fibroma and osteosarcoma. 9 patients had soft tissue reconstruction. Infragluteal free flap was used in two patients, while the anterolateral thigh flap was preferred for the other 7. The follow up varied from 3 months to 4 years.

Results
All free flaps survived. One patient died 2 months after surgery due to metastasis. Flap thinning was performed in 5 cases for better symmetry. The anastomoses were done at the external carotis and internal jugular vein in 9 patients and to the facial artery and vein in 4 cases. Vein graft was necessary in single case.

Conclusions
Defect oriented approach reconstruction is the choice for midface reconstruction. The vascular iliac crest is the choice for maxillary reconstruction. The infragluteal adipose flap is the choice for soft tissue free flap reconstruction which has the best hidden donor area.

Keywords
Free flap, vascularized iliac crest, mid face reconstruction

MICROSURGICAL REHABILITATION OF THE MANDIBLE AFTER TUMOR EXCISION.

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Objectives
Starting with 1989 (Hidalgo published the first case report of mandible reconstruction with fibula free flap) the fibula has become a safe and good method for mandibular partial or total defects reconstruction. Versatility of the fibula gives the possibility to cover different shape and structure defects from the mandible region, profoundly improve patient quality of life by restoring form, function and integrity of the bone and soft tissues. The purpose of our work is to determine the possibilities of migration of the fibula free flap for mandible reconstruction after radical excision of ameloblastoma with appreciation of the aesthetic results and possibilities of recovering a mechanical function of the mandible.

Materials
We present a clinical case of a 21 year old man, hospitalized with a tumor process (ameloblastoma) of the right side of mandible, diagnosed 2 months previously, following a routine check. Surgical treatment, including mandibular resection, resulted in an 8 cm mandibular bone defect. length, which was recovered with a free fibular osteo-muscular flap, the flap was shaped according to the shape of the mandible and fixed with the help of a reconstructive plate.

Results
The migrated free fibular flap given a qualitative, non-absorbable bone mass, 6 months after the surgery we obtained bone consolidation which allowed subsequent orthodontic rehabilitation with the functional and aesthetic recovery of the mandible.

Conclusions
The free fibular flap can be used for the recovery of large bone defects of the mandible, providing qualitative bone mass for subsequent dental replanting thus recovering the basic mechanical function of the mandible.

Keywords
fibula free flap, mandible bone defect.

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POST EXCISIONAL EYEBROW RECONSTRUCTION WITH HAIR-BEARING TEMPOROPARIETAL FASCIA FLAP

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Objectives
Extensive facial defects resulting from extensive excision of invasive carcinoma often lead to difficult and inaesthetic results. Reconstructing eyebrows can be done with various techniques, most requiring hair grafting to ensure an esthetic result due to the circulatory condition of the recipient bed. However, by using a temporoparietal fascia flap (TPF), both a good recipient bed for skin grafts and a hair bearing flap cand be provided. We present the case of a patient with eyebrow and frontal defect reconstructed with composite temporoparietal fascial flap

Materials
This case report is of a patient with a right eyebrow defect following a large excision that was successfully reconstructed using a hair-bearing TPF flap and skin graft. The basocellular carcinoma was excised în two stager with an oncological safety margin, to ensure negative margins, resulting în an extensive defect with superior orbital rim exposure requiring partial eyebrow reconstruction and volume restoration of the right frontal region. We planned a composite TPF flap with a longitudinal island of hair bearing scalp, harvested from the right parietal area along with a skin graft taken from the patients right flanc.

Results
Following the procedure, we were able to reconstruct an aesthetic hair-bearing brow, whilst simultaneously restoring lost volume in the right frontal region and providing a good recipient bed for skin grafting. During the 6 month follow-up period no complication was seen and a satisfactory aesthetic result was achieved. The basocellular carcinoma was completely excised

Conclusions
The temporoparietal fascial flap is a versatile flap that provides an elegant solution for periorbital defect and can be used to restore aestetic units of the face with minimal donnor site defect

Keywords
Eyebrow; surgery; flaps; case report; temporofascial

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ADVANTAGES OF USING LOCAL FLAPS IN COVERING SKIN AND SOFT TISSUE DEFECTS IN THE PERIORBITAL REGION. SURGICAL CHALLENGES

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Abstract:
The periorbital region is a complex anatomical region of the face with various functional and aesthetic implications. We know that in addition to the aesthetic functions they perform, the eyelids protect the anatomical structures of the eye; and the Meibomian glands produce a number of substances, specifically lipids that stabilize the tear film to prevent the cornea from drying out. But for this, the eyelids must be intact and functional. In reconstructive surgery of the periorbital area, the plastic surgeon faces a series of technical challenges ranging from anatomical, aesthetic to morpho-functional and mechanical implications. Eyelid reconstruction requires professionalism, perspective, imagination, vision, surgical passion, the art of modeling as a good creator, perfection and an eye for

detail. Under the impetus of these challenges, we approached every case addressed in our Clinic, with the desire to be perfect in the art of shaping this complex region with important clinical meanings and implications, always reminding us that with every blink comes meaning. We present below some of the clinical cases we have faced and the adjacent surgical challenges, which have allowed us, to reflect on what the Dutch painter Vincent van Gogh said: "there is nothing truly more artistic than loving the people".

Keywords: periorbital region, eyelid reconstructive surgery, surgical challenges, morpho-functional and mechanical implications.

TOTAL SCALP AVULSION SUCCESSFULLY TREATED WITH TISSUE REPLANTATION: A CASE REPORT

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Objectives
Total scalp avulsion is rare but severe injury. If done on time, the results can be satisfactory. There is a huge variety of shape and thickness of the avulsed part due to different cause: animal attack, industrial trauma, assaults. We present one of the few cases of successfully replanted scalp using tissue replantation on the head without using microvascular technique and review the current literature.

Materials
Our patient is 32 years old women who suffered occupational accident: her long hair was entrapped within rotary parts of packing machine and the injury was devastating. The avulsed portion included parts of frontalis and temporalis muscles, galea aponeurotica, her left eyebrow and upper 2/3 of the left ear. The patient was immediately admitted to ER of the "St. George" University Hospital, Medical University Plovdiv, Bulgaria and after that successfully reimplanted at the Department of Plastic, Reconstructive, Aesthetic Surgery and Thermal Trauma. After meticulous debridement, electrical dermatome was used to degreased the fat of the avulsed scalp before suturing back.

Results
Despite the fact we did not use microsurgical anastomosis, the outcomes are very good and the patient is satisfied with the results. We prove that the described technique can be used even there are some limitations.

Conclusions
The most important factor of successful result is to minimize the time between the accident and the operation room.
Different methods are described during the years and nowadays the most common method is the microsurgical anastomosis of both superficial temporal arteries. When this is not possible, the right surgical solution can include replacing the avulsed portion as a well-prepared free graft.

Keywords
Scalp avulsion; Scalp replantation, Tissue replantation

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RECONSTRUCTION OF THE LOWER LIP USING A COMPOSITE RADIAL FOREARM - PALMARIS LONGUS FREE FLAP : CASE REPORT

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Objectives
Total lip reconstruction following excision of full-thickness invasive tumors may present a challenge for plastic surgeons given the complex aesthetic and functional anatomy of the region. The free radial forearm flap represents one of the most popular methods in head and neck reconstructive surgery, being maybe the most reliable free flap to suit the dictum of replacement of like tissue with like.

Materials
We present the case of a 55-year-old caucasian man, heavy smoker, with extensive oral pathology, close to edentulism, admitted for a full-thickness squamous cell carcinoma of the lower lip, affecting the entire vermilion, both oral commissures, the lower lip as well as the mentolabial sulcus. Radical excision of the tumor, including the gingival mucosa and the mandibular periosteum was performed. After the pathology report confirmed clear margins, the lower lip was reconstructed using a composite radial forearm-palmaris longus free flap, with the palmaris longus tendon anchored to the remnant orbicularis muscle. Two revision surgeries were performed at 6 and 12 months postoperatively to ensure optimal aesthetic results.

Results
Post-operative functional results were excellent. Despite his preexistent oral pathology, no complication occurred and the patient presented good oral competence at 6, 12, and 18 months follow-ups. The circumference of the oral aperture was maintained and no distortion of the facial features was noted. Aesthetic results were satisfactory after refinement interventions.

Conclusions
Microsurgical reconstruction remains the ideal solution for large defects exceeding 80 % of the lip surface. The composite radial forearm-palmaris longus flap provides outstanding functional results in terms of articulation, speech, and mastication. The aesthetic results are acceptable and can be improved by secondary interventions aiming to create a neo-vermillion and to improve facial contour.

Keywords
radial forearm free flap, lip reconstruction, palmaris longus, orbicularis oris, lower lip,

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HIGH-INTENSITY FOCUSED ULTRASOUND: THERMOTHERAPY OF PATHOLOGICAL SCARS

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Objectives

Pathological scars and keloids are the growth of different tissue types at the site of damage to the skin and underlying structures. They can result from significant burns, surgeries, and injuries. The formation of pathological scars can lead to both functional and psycho-emotional disorders.

Materials

The presented study includes 53 patients. All patients underwent HIFU thermotherapy. According to the study protocol, patients are divided by age, sex, type and size of the scar, number of procedures performed, and the applied therapy effect. Between 46 and 60 days is the time between two procedures.

In all patients, the maturation of the pathological scar was completed before the procedure. A multidisciplinary team performs photography and ultrasound measurements of the scar. After application of ultrasound gel and anticicatricial unguents, thermotherapy (above 56 °C) was performed locally with five transducers with different characteristics: from 1.5 mm to 13 mm penetration depth, frequency 4 MHz – 7 MHz, wavelength 25 mm and output power 0 , 2J- 2.0J AC 110 - 240V depending on the location and thickness of the scar. Between 15-30 pulses are applied to each zone - for one procedure. We applied anticicatricial unguents and self-adhesive silicone gel sheet after each procedure and the patient was instructed to perform massage procedures.

Results

In all patients, there is a decrease in the volume of pathological tissue in the dermis. The size of the scar decreased in width and depth due to the reorientation of the collagen fibers. As with hypertrophic scars and to a significant extent with keloids, a significant softening of the deformation is found. There is a reduction in scar pigmentation and a significant reduction in itching and pain in all patients. We did not observe any side effects related to the HIFU procedure.

Conclusions

Thermotherapy of pathological scars with HIFU gives excellent functional and aesthetic results. It reduces the volume of the scars, contributes to their softening, and reduces the feeling of itching in the treated patients.

Keywords
scars, high intensity focused ultrasound, thermotherapy, conservative treatment

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EXPERIMENTAL STUDY IN NON-IMUNOGEN VASCULARIZED BONE ALLOGRAFT

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Objectives

One of the final products of tissue engineering is the extracellular matrix (ECM), a non-cellular component of tissues that can be obtained using different methods of decellularization. Most decellularization protocols are divided into those for soft tissues and those for hard tissues. Our study aims to develop and test the universal protocol for decellularization of the composite vascularized bone graft (soft and hard tissue) in order to obtain the vascularized extracellular bone matrix that can be used in reconstruction of the massive bone defects.

Materials

The same protocol was used for the decellularization of different diameters vascular grafts, and different structures of bone tissue (soft and hard tissue) porcine origin. Like large diameter vessel, was used carotid artery from mini pig, for medium diameter vessel was used femoral and tibial artery, and small diameter, was used muscular artery from the calf region.

Spongy and cortical bone tissue was taken from the tibial bone.
The efficacy of the protocol was demonstrated by histological examinations, DNA quantification and the biocompatibility test.

Results
The used protocol has been effective even for small diameter vascular grafts and on cortical and spongy bone blocks. Histological examination (H&E staining) showed cell death after processing. DNA quantification has shown a decrease in the amount of DNA, especially for spongy bone grafts and the biocompatibility test has demonstrated the biocompatibility of vascular and bone grafts after processing.

Conclusions
We can obtain an effective decellularization for both soft and hard tissues using the same protocol.

Keywords
extracellular bone matrix, decellularization, composite graft.

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FAT-GRAFTING – AN ALTERNATIVE TREATMENT FOR LATE COMPLICATIONS OF CHEMOTHERAPEUTIC AGENT EXTRAVASATION USED IN SYSTEMIC CANCER THERAPY

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Objectives
Cytotoxic chemotherapeutic agent extravasations have a reported incidence of 0,5-6%. Developing guides both for prevention and for immediate care has an indicative role. Thus, the attending physician, in collaboration with the interdisciplinary team establish the final algorithm. Inadequate initial measures may lead to chronic disabling pathology of functional areas (frequently at hand level). These are difficult to manage both due to the great number of affected structures (skin and deeper tissues) and the restrictions in physical therapy imposed by the oncologist. Therefore, fat-grafting may represent a great option for treating this pathology through immunomodulation.

Materials
This is the case report of a 64-year-old female patient, known with breast cancer, was admitted for cellulitis of the dorsum of the hand and wrist level, for the past 9 months, after neoadjuvant doxorubicin administration, reluctant to local anti-inflammatory treatment. Autologous fat-grafting the affected areas in a grid-like fashion in the subdermal plane with abdominal fat was performed. Postoperatively were measured: local pain, quality of life and hand utilization, integument aspect, local edema, passive mobility. Moreover, ultrasound was used for measuring edema, local tendinous aspect and remaining fat.

Results
Beneficial results were registered after 6 weeks postoperatively, both clinically with pain relief, functional improvement, edema reduction (subcutaneous and tendoninous) and skin quality, and by ultrasound evaluation.

Conclusions
Autologous fat-grafting may represent an efficient delayed treatment for patients with chemotherapeutic agent extravasation, who were not treated adequately in the acute phase.
Instructing both the medical personnel and the patients regarding the preventive and immediate measures reduces the incidence of long-term morbidity and complications

Keywords
fat-grafting; chemotherapy extravasation; immunomodulation

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FUTURE DIRECTIONS: SVF AND NANOFAT GRAFTING

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Objectives
Stromal vascular fraction (SVF) defines a heterogeneous population of adipose-derived stem cells (ADSCs), growth factors, cytokines and other signaling cells, with tissue regenerative capacity, which resides in fat. Researchers demonstrated fat has a main role in the regenerative medicine field by isolating the SVF and its adipose-derived stem cells (ADSCs). Nanofat grafting represents the method used for preparing and injecting the SVF, being regarded as a cellular therapy and antiaging treatment. SVF cells stimulate angiogenesis, increase capillary density, prevent apoptosis, restore elastin and collagen fibers, and reduce inflammation by modulating the immune response. In this paper, we describe SVF's regenerative potential addressing the structural changes of the skin, noticed both in the aging process and the scarring one, highlighting its therapeutic and aesthetic indications.

Materials
Nanofat grafting was performed in 13 cases for a variety of indications using the sharp needle intradermal fat grafting (SNIF) technique, combined in a few cases with microfat delivered by cannula. Nanofat grafting was used for a full-face rejuvenation (3 cases), hand skin rejuvenation (1

case), dark lower eyelids treatment (4 cases), acne scars (2 cases) and posttraumatic scars (3 cases) improvement. Fat was harvested by liposuction from the lower abdomen after infiltration with a modified Klein solution. The lipoaspirate was mechanically emulsified after saline rinsing. Emulsification of the fat was achieved by shifting the fat between two 10-cc syringes connected to each other by a Luer-Lock connector of 2,4 mm, 1,4mm and 1,2 mm, 30 passes with each of them. After the fragmentation process, the fatty liquid was filtered to remove the connective tissue remnants that would block the fine needles, the final product representing the the SVF isolate, also called "nanofat". A 27-gauge needle was used for superficial intradermal injection and a cannula for additional subdermal delivering of microfat in selected cases.

Results and discussion

The clinical results were perceived as maximal 6 to 8 months after nanofat grafting: skin brightening and depigmentation, increased elasticity and smoothness, fine wrinkles removal, soft, size-decreased scars, even relief of scar-related pain in our 2 patients with posttraumatic sequelae of the hand. No significant complications were seen, such as infections, fat cysts or granulomas. At the injection sites a temporary erythema or ecchymosis have occasionally been observed but they resolved in 2-5 days. To ensure an effortless SNIF procedure (27-gauge), the fat has to be thoroughly processed to obtain nanofat as a liquid emulsion from the fibrous quasi-solid lipoaspirate. 1 ml of nanofat per 10 ml of lipoaspirate can be expected using the procedure described above. Nanofat has no filling capacity, it is a highly concentrated solution of mesenchymal stem cells and has no viable adipocytes, as seen in lipofilling. The goals pursued are tissue regeneration and remodeling, triggered by SVF cells. The regenerative mechanism by which nanofat works is still not completely understood. Research suggests the mechanical shear stress, imposed on the fat during preparation of nanofat, triggers signaling pathways that determine ADSCs' capacity to differentiate. The results of this complex intercellular "talking" range from enhanced collagen and elastin deposition to formation of new blood vessels, tissue remodeling, thickening of the dermis, and downregulation of melanogenic activity. Thus, all these bring nanofat grafting into focus for both aesthetic and reconstructive surgery.

Conclusions

The wide availability of adipose tissue easily harvested by minimally invasive liposuction combined with the uncomplicated mechanical process for SVF and ADSCs isolation, brings regenerative medicine into real-life clinical plastic surgery practice. Furthermore, since nanofat grafting is a cellular renewal therapy, it subscribes as a promising start to understand how to alter the aging process in other organs.

Keywords

Nanofat, adipose-derived stem cells, regenerative medicine, antiaging, stromal vascular fraction

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THE UTILITY OF THE RAT RETROPERITONEUM DISSECTION MODEL IN MICROSURGICAL TRAINING

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Objectives
Microsurgical training is highly important in the formation of a reconstructive surgeon. Various models have been described, ranging from low to high fidelity models such as live animal procedures. The rat microsurgical model has been very popular and widely used in microsurgery training courses all around the world. Most rat microsurgical training models focus on the femoral region, due to its relatively straightforward dissection and exposure of the femoral vessels. We aim to emphasise the importance and utility of the aorta training model both for dissection purposes and for the variety of arterial and venous anastomosis configurations possible in this anatomical region.

Materials
The abdominal cavity of the rat is opened and the retroperitoneum is exposed. Following this, the vessels are dissected by dealing with important anatomical landmarks and key aspects of the dissection are emphasised.

Results
By achieving a good exposure of the main blood vessels, numerous vascular procedures can be performed in this region.

Conclusions
After mastering these procedures, one should be comfortable enough to deal with difficult dissection scenarios, manage and control bleeding as well as be able to perform various vascular anastomosis configurations.

Keywords
Microsurgery, Training, Experimental microsurgery, Dissection, Anastomosis

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ALGORITHM FOR PREDICTING THE EVOLUTION OF FLAPS USING THERMAL CAMERA

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Objectives

The objective of the study is to present an easy and accessible instrument that, used in current medical practice, brings considerable benefits in the planning and follow-up of reconstructive surgery using a local or distant flap. The thermal camera has a temperature difference detection capability of 0.05 degrees Celsius, which allows areas of potential tissue injury to be identified before they become clinically visible. The advantages are multiple, as it is a cheap, indirect, non-invasive method that allows real-time and instantaneous data acquisition.

Materials

This presentation shows a series of cases demonstrating the utility of using the thermal camera in choosing the optimal operative plan, verifying it intraoperatively, and monitoring the evolution to prevent complications by capturing pre, intra and postoperative images. The images obtained must be medically relevant, so for their acquisition, we propose a standard protocol related to environmental conditions and patient positioning, according to international guidelines. Data processing and interpretation must be done by trained medical personnel, but in the current age of technology, we also propose the possibility of an artificial intelligence algorithm to help physicians.

Results

The results obtained in the form of images can be exploited according to our needs. The identification of perforating arteries allows the planning of a personalized flap and increases the chance of survival. Intraoperatively, we assess the status of the arteries and flaps following surgical injury. The evolution of the flap is carefully monitored, with a critical period of 48 hours, and temperature changes accurately detected by the machine will alert the doctor to possible risks such as venous congestion, ischemia or tissue necrosis, and local infection.

Conclusions

The thermal camera is a useful and easy-to-use tool that guides the physician through all surgical steps, with the ultimate goal of achieving superior functional results.

Keywords

Thermal camera, flap monitoring, artificial intelligence

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DEVELOPING AN EXPERIMENTAL MICROSURGICAL RAT MODEL: EPIGASTRIC PROPELLER FLAP – PRELIMINARY RESULTS

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Objectives

Introduction

Microsurgical training is a mandatory step in developing adequate surgical skills of the reconstructive surgeon. Working on animal models ensures the improvement of microsurgical techniques and also the study of specific flaps useful for complex reconstructions. As a small animal model, the rat is a good option for microsurgical studies.

Objectives

With this paper we aim to analyze the feasibility of a propeller flap in the rat model describing the surgical technique and study a series of parameters involved in the final outcome.

Materials

An experimental study was conducted on 20 Wistar rats. The elected surgical model was the propeller flap raised in the epigastric area. A series of parameters were noted: animal weight, flap weight, pedicle torsion and flap survival area.

Results

In this study, all the interventions were performed by a non-experienced surgeon in the beginning of his training. The size of the animal was important in the due to vascular pedicle size, allowing an easier flap dissection. The flap final outcome was evaluated in relation with the percentage of flap viability area, observing a higher viability rate in relation with lower degree of pedicle torsion. With increasing torsion degree of the vascular pedicle, we encountered higher complication rates, lower overall flap survival and less predictive outcome (heterogenicity of results).

Conclusions

Epigastric propeller flap is a highly demanding surgical model, requiring microsurgical experience and ability in working with very small caliber vessels, this making the flap model a potential workhorse as a super-microsurgical technique model. Future experimental studies, including a larger study group and more data analysis are required to improve this practice model for ensuring better survival rates of flaps.

Keywords

Rat model, propeller flap, survival rate, microsurgery, training

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DRUG STIMULATION OF THE PERIPHERAL NERVE REGENERATION IN THE RAT SCIATIC NERVE INJURY MODEL USING PIRACETAM; SCIATIC NERVE CUTTING INJURY MODEL IN THE RAT - AN ENTRY LEVEL, LOW BUDGET EXPERIMENTAL MODEL

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Abstract

We investigated whether administration of Piracetam for 60 consecutive days after sciatic nerve cutting injury in the rat could improve nerve regeneration. Twenty-four Wistar rats were equally divided into two groups: Piracetam (P) group received 400 mg/kg Piracetam intramuscular injections daily for 60 days, while Control (C) received no medication after surgery. Both groups were followed for 9 weeks. Functional, electromyographic and histologic assessments were analyzed. We calculated the Sciatic Function Index (SFI) for each rat of each group twice, at 30 and 63 days after surgery; Mean nerve conduction latency (NL) and Peak amplitude of voltage (PA) were also calculated on the

63rd day and after euthanisation the sciatic nerves of each hindlimb were harvested and histomorphometrically analyzed.
We found that sciatic injured rats in P group showed greater functional recovery, a higher mean SFI compared to the Control both 30 and 63 days after injury, however Electromyography and Histomorphometry revealed similar levels of motor innervations between the two groups and no statistically significant differences.

Objectives
We studied the effects of the drug Piracetam on the peripheral nerve regeneration using a microsurgical sciatic nerve injury model in the Wistar rat.

Materials and methods
Twenty-four Wistar rats were equally divided into two groups: Piracetam (P) group received 400 mg/kg Piracetam intramuscular injections daily for 60 days, while Control (C) received no medication after surgery. Both groups were followed for nine weeks. Functional, electromyographic and histologic assessments were analyzed. We calculated the Sciatic Function Index (SFI) for each rat of each group twice, at 30 and 63 days after surgery; Mean nerve conduction latency (NL) and Peak amplitude of voltage (PA) were also calculated on the 63rd day and after euthanasia the sciatic nerves of each hindlimb were harvested and histomorphometrically analyzed.

Results
We found that sciatic injured rats in P group showed greater functional recovery, a higher mean SFI compared to the Control both 30 and 63 days after injury, however Electromyography and Histomorphometry revealed similar levels of motor innervations between the two groups and no statistically significant differences.

Conclusions
There is no gold standard in increasing peripheral nerve regeneration following trauma. The enhancement of different neurological functions attributed to Piracetam suggested the path for this research. After the results from the walking track analysis performed on the 30th day we can conclude that Piracetam gives better muscle reinnervation than the uninfluenced nerve regeneration. The enhanced regeneration of peripheral nerve induced by Piracetam can represent a promising and valuable therapeutic solution.

Keywords
Neural Regeneration; Piracetam; Rat Sciatic Injury; Neurorrhaphy; Walking Track Analysis; Histomorphometry; Electromyography; Sciatic Functional Index; Nerve Function Regeneration; Sciatic Function Assessment.

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WHAT'S NEW REGARDING ONCOLOGICAL CONCERNS OF AUTOLOGOUS FAT TRANSFER FOR BREAST RECONSTRUCTION: UPDATE

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Objectives
Breast reconstruction with autologus tissues has been demonstrated to have a major beneficial role in increasing the quality of life after breast cancer. As an effective natural filler, autologus fat transfer (AFT) may be a useful tool in reconstructive surgery following breast cancer to increase volume, restore contour, improve the quality of irradiated skin. Despite the obvious clinical benefits, experimental research proved that it comes with angiogenetic, antiapoptotic, immunomodulatory, chemotactic and potential carcinogenetic pathways. Oncological concerns have been raised from the fact that adipose-derived mesenchymal stem cells (ADSC's) play a key role in the survival of the fat graft by stimulating angiogenesis and adipogenesis but with the drawback of tumorigenesis. This paper aims to discuss the current and up to date studies regarding the oncological concerns of autologus fat transfer in breast reconstruction, within the context of both the basic science research and clinical outcomes.

Materials
An electronic search was performed in the medical database PubMed, to identify all published studies in the last year. The search was focused on keywords "breast reconstruction" and "autologous fat transfer". As there are several terms describing autologus fat transfer (AFT), to maintain a systematic approach, available synonyms (lipofilling, adipose fat transfer, lipotransfer, adipose tissue, fat grafting) were also used as search terms. The references in all found publications were additionally screened. A summary of the results was then performed.

Results
The lack in today's data consists in the relative absence of higher-level-evidence randomized prospective studies with a sufficient follow-up time. Although statistics fail to indicate a significant increase in cancer recurrence and there is encouraging data such as the potential of AFT to facilitate tissue regeneration together with accelerate wound healing following irradiation and the fact that it may be effective in the treatment of capsular contracture following radiotherapy, there still remains a relative risk related to AFT.

Conclusions
A sustained update to the newest studies and an acute need to equalize clinical and preclinical results are required due to the steady upward trend in the number of performed procedures worldwide.

Keywords
Autologous fat transfer; Adipose-derived stem cells; Oncological safety; Local recurrences; Breast cancer; Breast reconstruction;

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IGY TECHNOLOGY FOR SKIN LESIONS – ACTIVE IMMUNITY BY PASSIVE IMMUNIZATION

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Objectives
The IgY technology was first described in 1990, when birds were immunized in order to obtain monoclonal and polyclonal immunoglobulin. There are multiple human uses for IgY – from nutritional supplement, to dermato-cosmetic products. The present abstract aims to reveal its utility in a series of cases of infected wounds with multiple resistant bacteria.

Materials
We present a series of 5 cases – patients aged between 63 and 87 years old, suffering from different skin pathologies (chronic ulcers of the inferior limb, abscess of the thigh, diabetic foot, wound dehiscence after abdominoplasty). All wounds presented a documented infection with at least one MDR bacteria (Staphyllococus Aureus, Enterobacter, Proteus Mirabilis Klebsiella Pneumoniae, Pseudomonas Aeruginosa). In some patients limb amputation was recommended. The patients underwent local treatment with cream/gel with IgY immunoglobulin and necrosis debridement where needed.

Results
All patients presented sterile cultures soon after the initiation of treatment with IgY. The gel was also useful to prevent other wound infections until wound epithelization. No other antibiotics were needed after using the IgY formula. Epithelization occurred in all patients between 16 days and 4 months, depending on the size of the defect.

Conclusions
The IgY solution is a safe and effective treatment for different types of infected skin lesions. This novel approach can reduce (even replace) the usual antibiotic therapy. This innovative treatment is particularly useful in the treatment of lesions with MDR bacteria, where antibiotics have limited or no effect. IgY therapy is a conservative treatment, which requires compliance and patience from both patient and physician.

Keywords
IgY immunoglobulin, MDR bacteria, skin lesions, wound care

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IN VITRO ANTISEPTICS EFFECTS ON ADIPOSE-DERIVED STEM CELLS AND FIBROBLASTS IN 2D AND 3D CULTURE SYSTEMS

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Objectives
Topical antiseptics, as povidone-iodine and chlorhexidine, are widely used in wound management, although current data on regards of their shortcomings on wound healing is debatable [1, 2]. Though there are emerging adipose-derived stem cell-based strategies for wound management, little is known on antiseptic effects on stem cells especially in co-cultures [3, 4]. Herein, the effects of two commonly used antiseptics are evaluated on four cell conditions in both 2D and 3D culture systems.

Materials
Cell constructs were treated with different antiseptic (povidone-iodine and chlorhexidine) concentrations, followed by migration, α-SMA and proliferation marker assessment. TGFβ1, TGFβ3 and IL-10 levels were evaluated using enzyme-linked immunosorbent assay. Furthermore, quantitative real time PCR was used to assess TGFβ1, TGFβ3 and IL-6 gene expression following treatment. Cytokine levels and gene expression were assessed for both 2D and 3D culture systems and comparisons were performed between untreated conditions.

Results
Povidone iodine display a marked cytotoxic effect, impairing migration in both 2D and 3D models for all cell conditions compared with chlorhexidine. Both antiseptics seem to regulate α-SMA and proliferation marker expressions. Cytokine levels and gene expression is significantly modulated following antiseptic treatment. Even if gene expression is similar, when cytokine profile was compared between untreated cell conditions in 2D and 3D systems, cytokine levels vary significantly between the two culture systems.

Conclusions
Although both antiseptics display a cytotoxic effect with cytokine profile modulation depending on concentration, cell type and culture systems, povidone iodine has a more pronounced effect compared with chlorhexidine. Moreover, 3D culture systems may provide more in-depth data compared with 2D experimental setup.

Keywords
adipose-derived stem cells, antiseptics, cytokine, co-cultures, 3D cultures

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MUSCLE ATROPHY AFTER SCIATIC NERVE DEFECT REPAIR – EXPERIMENTAL MODEL

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Objectives
Nerve regeneration is a challenging subject for any plastic surgeon, especially when there is a nerve defect involved. There are several therapeutic options to address this issue, either by nerve grafting or by using nerve conduits. Aiding factors in nerve regeneration include PRP, stem cell and other nerve growth factors, which can be used to improve clinical results. In experimental model, the rat sciatic nerve is the most accessible and also similar to the human peripheral nerves. Evaluation of muscle atrophy via MRI can be used as surveillance for nerve regeneration.

Materials
40 Wistar rats were operated on the right sciatic nerve. They were divided into 4 groups, based on the nerve defect repair technique – 1. autograft; 2. nerve conduit; 3. nerve conduit and PRP; 4. nerve conduit with stem cells. The rats were evaluated at the end of 12 weeks using MRI scanning of the calf muscles as well as weighing the operated gastrocnemius muscle and comparing it to the contralateral one (the ratio between the 2 being the gastrocnemius index). Statistical analysis was performed in order to compare the nerve regeneration between the 4 batches by assessing muscle atrophy.

Results
2 rats in the first batch were excluded from the study – one due to postoperative death and the other due to nerve rupture. The remaining 38 rats were evaluated by comparing the gastrocnemius index between the batches and the MRI calf muscles diameter ratio between the operated and non-operated limb. The MRI calf muscles ratio correlated with the gastrocnemius index. The best results were recorded in the PRP batch, followed by autograft and stem cells batch and the poorest regeneration was observed in the simple nerve conduit batch.

Conclusions
PRP proved to be the optimal solution for improving nerve regeneration. Muscle atrophy was more pronounced in the case of the simple nerve conduit. The gastrocnemius index and MRI scanning of the calf muscles represent an objective assessment of muscle atrophy after sciatic nerve injury.

Keywords
nerve regeneration, MRI imaging, muscle atrophy, PRP, stem cells

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MURINE FREE FLAP TRANSFER MODEL BASED ON INFERIOR SUPERFICIAL EPIGASTRIC VESSELS

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Objectives
Skill and knowledge are essential in the field of microsurgery, the practice of entry-level flaps representing a valuable endeavor for each surgeon, before attempting human complex reconstructions. Microsurgery free-flap training is a demanding challenge for aspiring young surgeons, with limited options depending on local and regional programs. The aim of this paper is to present the surgical technique in a murine model of both harvesting a fascio-cutaneous free flap and transferring it to the cervical area.

Materials
Wistar rats, weighing 300-400 grams were used, the epigastric flap presenting the advantage of low morbidity with possibility of primary closure, while the donor cervical site represents a recipient area with one of the lowest chances of post-surgical self-mutilation areas in murine models. Microscopic magnification was used, the epigastric vein presenting a diameter of 0.7-0.8 mm and the epigastric artery a diameter of 0.5-0.6 mm, presenting a feasible choice for super-microsurgery training. An easier option would be harvesting the epigastric vessels with segments of the femoral vessels for entry-level microsurgery training.

Results
The aforementioned flap presents a pedicle based on the superficial inferior epigastric vessels at the emergence from the femoral vessels which can be anastomosed to an anterior cervical created defect to the carotid artery termino-laterally and to the external jugular vein termino-terminally.

Conclusions
This flap represents a reliable living training model, which can develop microsurgical skills involving raising, transferring and insetting free flaps, providing ample and valuable knowledge and practice, simulating the challenges of a real-life microsurgical intervention.

Keywords
microsurgery, free flap, superficial inferior epigastric, training

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EPIDEMIOLOGY, CHARACTERISTICS AND OUTCOME OF BURN PATIENTS REQUIRING SPECIALIZED INTENSIVE CARE MANAGEMENT

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Objectives

Burn injuries continues to be a major public health problem, especially in low- and middle- outcome countries [1, 2]. Epidemiological data about patients with burns requiring intensive care are limited in Romania. The present retrospective study was conducted in the "Severe Burns Care Unit" of the Emergency Clinical Hospital of Bucharest, including 93 consecutive patients with major burns. The main objective was to identify factors that may influence the outcome of the burn patient.

Materials

Data regarding patients` age, gender, type of admission, aetiology, % total body surface area (TBSA), burn grade, presence of airway burn injury, mechanical ventilation, tracheostomy, comorbidities, length of stay in hospital (LOS) and outcome were collected from hospital informatics system, from 1st of January to 31th of December 2021.

Results
There were 61 male patients (65,6%) admitted in our specialized intensive care unit (ICU). The age range was between 19 and 93 years old. About 38,5% of patients were admitted by transfer from other health units in the country. The majority of injuries were produced by a thermal factor (fires), followed by electrocution. The TBSA varied from 3 to 95%, over 60% of patients presenting third degree burns. 39 of patients have been diagnosed with inhalational injuries, requiring mechanical ventilation, 6,5% receiving tracheostomy. 55,9% of patients had no associated comorbidities. The mean LOS was 42,2 ± 37,1 SD. 58 patients were dismissed and 2 were transferred abroad. Of the deceased patients, the majority were male.

Conclusions
Epidemiological studies are important in order to predict and conduct proper medical interventions. Thermal burns continue to be the leading cause of ICU admission, especially in middle age male patients, associating a higher risk of death.

Keywords
burns, inhalation injury, epidemiological study, length of stay

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THE ROLE OF NPWT IN THE TREATMENT OF SEVERE BURNS IN CHILDREN

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Objectives
Severe burns (IIb and III degree, large body surface) are from far one of the most traumatic injury in children. Not only the management of local lesions, but also the treatment of burn shock might pose a high degree of difficulty in the severe burned child. Some particular body regions like face, hand (including fingers), feet and perineum require a special care. While IIa degree burns require only conservative management of the legions and III degree burns require indubitable surgical treatment, IIb degree burns have a more complex assessment. Our work presents the importance of using NPWT (negative pressure wound treatment) in the treatment of pediatric burn patient. It helps avoiding infection, limits the severity of burn shock, reduces the edema under the burn legions (space three Randal) promotes graft taken, stimulates healing of IIb degree burns.

Materials
We evaluated 9 cases. Our study includes large body surface burns (10 to 40 % BS), IIa, IIb and III degrees. At the admission was made burn shock treatment, burn wounds cleaning followed by NPWT. For III degree burns we made surgical excision of the burned skin followed by skin grafting. Graft intake was assisted with NPWT. For IIb burns only NPWT sufficed for complete healing of the burns. Complete epitelisation was achieved in a period up to 10 days.

Results
The evolution was favorable in all patients with complete healing of IIb degree burns, no infections, complete intake of skin grafts for III degree burns, reducing edema under burn lesions, preventing intrinsic hand muscles fibrosis in hand burns, shortening the hospitalization time.

Conclusions
NPWT is an excellent tool in addressing pediatric patient with severe burns. It permits complete healing of IIb degree burns, complete intake of skin graft for III degree burns, reduces the frequency of wound dressing, pain, fluid loss as well as the risk of infections. It limits the total hospitalization period and allows a much better functional and aesthetic result in the treatment of pediatric severed burned patient.

Keywords
burns, NPWT

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ELECTRICAL INJURIES IN ADULT PATIENTS

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Objectives
Electrocutions are a particular type of trauma, usually affecting young active people, leading to high morbidity and mortality rates in extensive injured patients. Those patients require complex, multidisciplinary treatment in specialized burn centers. A clear understanding of the physiopathology of electrical injuries and their complications is essential for providing an optimal therapeutic strategy.

Materials
We conducted a retrospective study in the Burn Unit of the Clinical Emergency Hospital Bucharest, Romania. Data were collected from medical records and the hospital's eHealth program, then

centralized and analyzed. Multiple parameters were noted for each patient: demographic characteristics, lesion characteristics, encountered complications and patient outcome.

Results
Electrical injuries are uncommon but are recognize as the most devastating type of burn injuries, with high morbidity and mortality, determining severe damage of both the skin and deep tissues, leading to large necrosis areas. Those patients require complex, multidisciplinary treatment in specialized burn units. Through this study we identified different factors that characterize electrical injuries, with the goal to standardize and improve our clinical protocols in order to decrease overall complications, the morbidity and mortality rates and obtain an optimal functional prognosis for those severely injured patients. Patient-related and injury-related parameters were analyzed and particularities observed in our burn unit were noted.

Conclusions
Rapid initiation of systemic supportive measures, accurate diagnostic and an adequate surgical treatment, correctly conducted, are essential for improving the vital and functional prognostic of patients who suffer electric injuries.

Keywords
electrical injuries, severity factors, surgical treatment, fasciotomies, complications.

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IS PRESEPSIN A GOOD SEPSIS MARKER IN SEVERELY BURNED PATIENTS? A RETROSPECTIVE STUDY IN ONE CENTER

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Objectives
Diagnosis of sepsis in severely burned patients who already have signs of systemic inflammation is of paramount importance in starting antibiotic treatment and adapting local care. Presepsin was described as a reliable sepsis marker and prognosis variable in septic non-burned patients.

Materials
A retrospective study was conducted on burn patients treated in the ICU unit of the burn department admitted in 2020. Collected data included: sex, age, TBSA, outcome, other sepsis markers (leukocytosis, fever, blood glucose levels, platelet count etc.). An analysis was performed centered on the evolution of presepsin levels and the probable onset of sepsis. Sepsis diagnosis was based on ABA criteria.

Results
The group included 77 patients with TBSA between 20 and 83% and an average ABSI score of 8.74 The sepsis group had 44 patients and the non-sepsis group had 33 patients. On average, the presepsin levels were significantly higher in the sepsis group, especially after day 5, but a cut-down level of presepsin that could positively diagnose sepsis could not be identified.

Conclusions
Presepsin cannot, by itself, predict sepsis onset or final outcome, but the trend in its levels can assist the physician in sepsis diagnosis and choosing the correct way of treatment.

Keywords
presepsin, large burns, predictive value.

THINNED CHIMERIC LATERAL ARM FREE FLAP TO TREAT PHARYNGOCUTANEOUS FISTULAS

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Objectives
Pharyngocutaneous fistula is a major complication after total laryngectomy, especially in heavy smoking patients leading to a severe adverse impact for the patient and quality of life impairment. The reported incidence ranges from 9% to 25%. The lateral arm flap has the advantage of being a thin flap.

Materials
Herein we present our experience using thinned chimeric lateral arm free flap for reconstruction of the pharyngo-esophageal segment. 11 patients with chronic pharyngocutaneous fistula were treated with this technique. The flap has 2 skin islands, each one supplied by a perforator. One skin island is used for pharynx closure and the other is used for anterior soft tissue coverage. The skin paddle was cut in order to match the size and shape of the pharyngeal defect (inside defect) taking into consideration to have the perforator as close as possible to the central skin paddle. The follow-up period ranged from 8 months to 4 years. After harvesting the flap, the island were further thinned for better inset of the flap. The anastomoses were performed end-to-side to the external carotis and the

internal jugular vein in 7 cases. In 4 cases, the anastomoses were performed end-to-end to the transverse cervical vessels.

Results
All flaps survived. There were 2 small fistulas that were sutured. External skin wound dehiscence was present in single case and it was secondary closed by itself. All patients were able to eat by mouth and there were no signs of stricture.

Conclusions
The authors preferred this type of flap because both defects are simultaneously closed and each skin paddle is supplied by a perforator coming from the main pedicle. It has a better color match than other free flaps. The skin island is thin and remains thin even after the patients gain weight. The donor site can be closed primarily for most flaps without difficulty, which is preferable to a skin graft for other donor site flaps

Keywords
Chimeric flap, lateral arm flap

TRANSPOSED AND FAN-SHAPED ISLAND FLAPS FOR LOWER LIP RECONSTRUCTION: A CASE REPORT

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Objectives
The reconstruction of the lip and oral aperture after excision of extensive lesions (usually squamous cell carcinomas) can prove challenging despite the large armamentarium of local and free flaps.
Obtaining a functional and aesthetic result frequently proves to be a demanding endeavour due to the complex anatomy of the region.

Materials
We present an 89-year-old caucasian man admitted for a full-thickness squamous cell carcinoma involving most of the lower lip, 3/4 of the vermilion, including the right oral commissure and mentolabial fold.
Radical excision was performed, resulting in a rectangular defect and after the pathology report has shown clear margins, the lower lip and right-side commissure were reconstructed using local "gate" and fan-shaped flaps: Fujimori technique was used for the right half of the lower lip and oral commissure and Nakajima's modification of the McGregor fan flap for the left half.
Results
Postoperative results were satisfactory, with the survival of both flaps, no surgical site infections or dehiscence, preservation of an optimal oral aperture and adequate aesthetic appearance.

Conclusions
Transposed island flaps based on the facial and labial arteries represent one of the few approaches for the reconstruction of defects involving most or even all of the lower lip that preserve the circumference of the oral aperture, avoiding microstomia.

Keywords
lip reconstruction, fan flap, gate flap, lower lip, oral aperture,

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HUGE LIPOMA ADHERING TO THE COMMON CAROTID ARTERY

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Objectives
Lipomas are one of the most frequently encountered benign tumors in any location, but are seldom found in the subcutaneous tissue of upper extremities. There is limited information about head and neck lipomas in the literature and most data is in the form of case reports. Cosmetic deformity or compressive symptoms usually bring lipomatous masses of the upper extremity to medical attention earlier than rapidly growing masses in other locations of the body. Lesions larger than 5 cm, so-called giant lipomas need a proper evaluation including imaging or tissue sampling to rule out malignancy. MRI/CT or biopsy are the two best options available.

Materials
A 50 y.o man presented for a non-tender soft mass with ill-defined borders occupying the right part of the neck. He had no noticeable lymphadenopathy or other palpable masses, and his oral pharynx was normal. The patient was otherwise in good health except for mild hypertension for which he took no medication. A CT of the soft tissue of the patient's neck was recommended. The mass was well-circumscribed without evidence of invasion of adjacent structures, but adhering to the common carotid artery and close to the recurrent laryngeal nerve. After general anesthesia was induced, the anterior neck was exposed and accessed via an elliptical incision because excess skin was anticipated. Patient underwent excision of the mass with primary closure of the tissue in two layers after a 10 Fr drain was placed. Specimen was sent to pathology postoperatively.

Results
Surgical removal of lipomas may require significant dissection and mobilization of neurovascular structures for successful resection, and preoperative discussions with patients regarding potential loss of function are essential. Postoperatively, our patient recovered well with no functional deficits and no complications.

Conclusions
The proper management of giant lipomas is open excision. They are usually well encapsulated, allowing relatively straightforward complete removal. Preoperatively, imaging is important to

delineate the extent of the lesion and to assist in operative planning. Finally, a full pathology report on the specimen is required to determine the possible need for further treatment.

Keywords
Lipoma, Mass, Head and Neck Surgery.

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HEAD AND NECK NON MELANOMA TUMORS - CLINICAL AND HISTOLOGICAL ASPECTS

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Objectives
NMSC regroups basal cell carcinoma (BCC), squamous cell carcinoma (SCC), Merkel cell carcinoma, cutaneous lymphoma and sarcoma. The most common forms are BCC and SCC, both still implying a significant level of morbidity due to local invasion.

Materials
Our study lot comprised 65 patients, with an almost equal distribution of sexes, and ages between 23-91 years old (mean value±standard deviation 62.61±16.67), all treated within the Clinic of Plastic Surgery and Reconstructive Microsurgery, Clinical Emergency County Hospital Craiova, Romania, between 2019-2020. In order to determine the main morphological characteristics of both studied cancers, we used paraffin embedding techniques, with various staining methods: hematoxylin-eosin, Masson's trichrome stain with aniline blue, and Periodic acid-schiff Alcian Blue. The statistical study was completed using Microsoft Excel (Microsoft Corp., Redmond, WA, USA), with XLSTAT (Addinsoft SARL, Paris, France).

Results
The overall results of our study indicate that BCC accounts for 67.69% of all NMSC forms; SCC covers 27.69%, while 4.62% are represented by other forms. The most frequent site is the nose for BCC (27.69%, 18 patients), being followed by preauricular regions, forehead and periorbital areas. For patients with SCC, tumors were mainly located at lips level (66.67%, 12 patients). The analysis of NMSC histological forms indicated that nodular BCC is predominant (45.45%, 20 patients), as well as ulcero-vegetant SCC (38.89%, 7 patients). We have not identified any topographic characteristics or NMSC forms significantly related to
age or sex.

Conclusions
The most frequent NMSC form identified for our study lot was BCC. The preferred location was the nose for BCC. For SCC, the oral cavity is the most frequent anatomical site, especially the lips level. Our findings emphasize the need for periodic screening, in order to improve prevention and early treatment.

Keywords
non-melanoma skin cancer, basal cell carcinoma, squamous cell carcinoma, histological

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THE ROLE OF NPWT IN SEVERE TRAUMA OF CHILDREN

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Objectives
Severe trauma with significant loss of soft tissue, bone support destabilization, involvement of vascular and nerve axis often requires exhausting surgical procedure. Particularly in children prior to tissue defect covering should be the evaluation and stabilization of vital signs, treatment of traumatic and/or hemorrhagic shock. That could delay the surgical reconstruction for an unpredictable period of time. Our study presents the importance of using NPWT (negative pressure wound treatment) in avoiding infection, reducing the tissue defects, preparing the wound to get reconstructed.

Materials
We evaluated 30 cases. Our study includes large soft tissue defects, severely infected wounds, vascular anastomosis inside the wounds. At the admission was made shock treatment, wound debridement, bone stabilization, vascular axis reconstruction followed by NPWT until the general status of the patients and the local condition of the wounds permitted surgical reconstruction. Wound coverage was achieved in a period up to six weeks using free flaps, pedicled flaps, prefabricated flap, skin grafts.

Results
The evolution was favorable in all patients with dismissing the defects surface, reducing edema, preventing/treating wound infection allowing perfect wound cleaning stimulating angiogenesis.

Conclusions
NPWT is an excellent tool in addressing pediatric patient with severe trauma. It permits postponing the surgical procedure until complete stabilization of the patient, offering an optimal protection and preparing the wound to the surgical reconstruction and allows a good intake of flap or skin grafts.

Keywords
severe trauma, pediatric, NPWT

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A NOVEL TECHNOLOGY – ENZYMATIC DEBRIDEMENT – NEXOBRID IN COMBINATION WITH HY TISSUE MICROGRAFTS

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Objectives
Introduction:
We present a novel concept consisting of enzymatic debridement - Nexobrid of deep partial-thickness and full-thickness burns in combination with Hy Tissue Micrografting technique using autologous micrografts and "smart" dressings, avoiding SOC treatment using tangential excision and split thickness skin graft (STSG) coverage.

Materials and methods:
In a retrospective case study, 3 patients (1st 85% TBSA, 2nd 45% TBSA, 3rd 15% TBSA) with deep partial-thickness and full-thickness burns were treated with enzymatic debridement and autologous cell therapy.
Our novel technique was applied to up to 5% TBSA.
Other injuries were treated with enzymatic debridement, surgical excision and skin grafting - split thickness skin graft (STSG) and MEEK micrograft coverage.

Results
All three patients in areas treated with our new technique did not require additional surgery and coverage. In less than 2 weeks the lesions completely epithelized.

Conclusions

The use of selective enzymatic debridement in combination with hy tissue technique is a regenerative technique of the future, in order to reduce the need for grafting using its own donor area or allografts / xenografts currently unavailable nationally.

This technique will show its efficacy when higher standardization and experience is achieved.

We observed a reduced healing period and length of hospital stay, improvement in time to full epithelialisation, areas treated did not require additional surgery and coverage, the elasticity, quality of and the aesthetic aspect of the scars is clearly superior to scar quality in comparison with traditional excision and skin grafting.

Keywords

Enzymatic debridement, Nexobrid, Micrografting technique, Hy Tissue

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3. A Multicentre Study: The Use of Micrografts in the Reconstruction of Full-Thickness Posttraumatic Skin Defects of the Limbs—A Whole Innovative Concept in Regenerative Surgery. Michele Riccio, Andrea Marchesini, Nicola Zingaretti, Sara Carella, Letizia Senesi, Maria Giuseppina Onesti, Pier Camillo Parodi, Diego Ribuffo, Luca Vaienti and Francesco De Francesco
4. A Novel Autologous Micrografts Technology in Combination with Negative Pressure Wound Therapy (NPWT) for Quick Granulation Tissue Formation in Chronic/Refractory Ulcer. Satoshi Takagi, Takuto Oyama, Shiro Jimi, Arman Saparov and Hiroyuki Ohjimi
5. A Retrospective Study on the Use of Dermis Micrografts in Platelet-Rich Fibrin for the Resurfacing of Massive and Chronic Full-Thickness Burns. Alessandro Andreone and Daan den Hollander
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CLOSING AND RECONSTRUCTING – NEGATIVE PRESSURE WOUND THERAPY AND NEGATIVE PRESSURE WOUND THERAPY WITH INSTILLATION AND DWELL IN A NATIONAL REFERENCE CENTER

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Objectives

Negative pressure wound therapy (NPWT) is a renowned tool in wound closing mostly effective in difficult to treat areas, infected or contaminated wounds with high exudation. In our center we have used different protocols of pressure according to the defect, area, patient comorbidity and tolerance. Our experience dictates debridement as a key factor in achieving successful healing thus we note the use of instillation and dwell with a combination of substances.

Materials

A retrospective study of selected records of patients with lower leg and foot defects treated in the last year with NPWT or NPWTi-d has been conducted. There were noted the subsequent complications, surgical reintervention, infection, length of stay inpatient, hospital readmission, reconstructive method applied after achieving granulation tissue.

Results

Risk of complications, surgical reintervention, and hospital readmission were all reduced by 40% or more for the patients treated with NPWT, although primary hospitalization was longer, due to time needed for performing all the sessions of negative pressure dressing and safe reconstruction. Infection was most common in the days prior surgery of initial debridement and less present after starting NPWT. Final wound closure was possible by local flaps, pedicled flaps or skin grafting.

Conclusions

Patients included in the study treated with NPWT had fewer complications at the site of surgery, fewer readmissions and mostly maintained a clean wound with infection. There was noted also a relatively lower use of antibiotics. Further research using randomized clinical trials is needed to confirm the findings of the current study's data.

Keywords

negative pressure, foot ulcers, instillation, contaminated wounds

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VERSATILITY OF NEGATIVE PRESSURE WOUND THERAPY IN MANAGEMENT OF SOFT TISSUE DEFECTS

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Objectives
Negative pressure wound therapy (NPWT) represents a versatile system insuring wound healing, as well as facilitating the therapeutic process in various tissular defects. We analyzed current indications and results of this therapy (NPWT) in a wide range of soft tissue defects.

Materials
We present a case series of patients suffering from various soft tissue or complex defects, in which negative pressure wound therapy (NPWT) was used in order to promote local healing.

Results
Negative pressure wound therapy (NPWT) was adopted as an adjuvant treatment of open wounds, with benefits in reducing edema and seroma formation, in the mean time enhancing granulation and encouraging healing. All of these benefits have been observed in the process of wound management in our patients receiving this type of therapy.

Conclusions
Negative pressure wound therapy (NPWT) provides an impactful and exciting development in wound care, with different clinical applications, providing an efficient therapeutic option in various pathologies, such as trauma, soft tissue infections, chronic wounds, complex excisional defects.

Keywords
negative pressure wound therapy (NPWT), trauma, soft tissue, infection, wound healing

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PRESENTATION AND SURGICAL MANAGEMENT OF PERINEAL LANGERHANS CELL HISTIOCYTOSIS AND HIDRADENITIS SUPPURATIVA

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Objectives
Hidradenitis suppurativa (HS) and Langerhans cell histiocytosis (LCH) are rare disorders that can reveal similar clinical manifestations. The complex pathophysiology of these diseases have still not been elucidated completely, therefore the treatment is still a challenge for physicians.
Langerhans cell histiocytosis (LCH) is a very rare systemic disease characterized of a cell proliferation of histiocytic-dendritic nature, with pseudonodular manifestation that deeply infiltrates the hypodermis and ulcerates the epidermis on the surface. The most common presentation of LCH is the single-system disease. The multifocal form particularly affects bone, skin, lymph nodes, liver, lungs and the gastrointestinal system. Perianal cutaneous Langerhans cell histiocytosis is one of its rarest manifestation.
HS is a chronic inflammatory skin condition, presenting with painful nodules, abscesses, sinus tracts, primarily affecting the apocrine gland-rich intertriginous areas. HS pathophysiology involves follicular occlusion of the folliculopilosebaceous unit, followed by follicular rupture of the sebofollicular canal, finally resulting in the development of perifollicular lympho-histiocytic inflammation.

Materials
We report 2 cases of these affections. The first patient is a 43-year-old male patient with a 2-year history of hidradenitis suppurativa, who presented with multiple abscesses involving the pelvic region. The lesions were non-responsive to medical treatment. The second case is a 47-year-old male patient suffering from Langerhans cell histiocytosis involving bone, who presented with painful ulcerovegetant purulent mass in the perianal area.
The diagnosis is clinicopathologic, based on typical clinical appearance with histopathological confirmation. The patients were treated similarly with wide local excision, followed by negative pressure wound therapy (NPWT) and coverage of the defects with split thickness skin graft. A temporary colostomy was performed for the patient with LCH in order to facilitate the healing of the perianal lesions, but the second patient refused this therapeutic approach.

Results
A 6-months follow-up for the patient with LCH and 12-months follow-up for the patient with HS revealed no evidence of local cutaneous recurrence.

Conclusions
Therefore, radical surgical excision is the treatment of choice for perineal HS and LCH, with postoperative wound management according to each individual patient. A temporary stoma may be useful in some complicated cases to prevent further complications.

Keywords
hidradenitis suppurativa, Langerhans cell histiocytosis, perianal, colostomy, negative pressure wound therapy

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NEGATIVE PRESSURE THERAPY: A NOVEL ADDITON TO THE TREATMENT OF CHRONIC VENOUS ULCERS REQUIRING SKIN GRAFTING

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Objectives

Venous insufficiency is the second most frequently encountered cause of lower limb ulcer. These slowly healing lesions are notorious not only for the tremendous financial burden on both the public healthcare system and society in general by decreasing workplace attendance and productivity, but also for the associated morbidity and impact on the patients' quality of life. The core treatment principles include controlling infection, facilitating wound closure and avoiding recurrence.

This paper aims to explore the efficacy of incorporating negative pressure therapy in the treatment algorrhythm of chronic venous ulcers following skin graft coverage.

Materials
We designed a comparative prospective study based on a case-control series of 24 patients admitted to our clinic over a period of 2 years for lower limb venous ulcers evolving for at least 3 months. All patients received targeted antimicrobial therapy and vacuum assisted wound therapy prior to split skin grafting in order to obtain proper granulation tissue. Half of them were subsequently assigned to the study group characterized by the application of a negative pressure wound therapy device over silver impregnated tulle dressing, as opposed to the control group in which exclusive use of silver dressings was employed.

Results
Graft uptake was initially evaluated in both groups at 7 days postoperatively. The study group featured a greater number of fully integrated skin grafts compared to the control group (10 versus 7 respectively), as well as an increased proportion of graft uptake in the rest of the patients (over 80% of the surface compared to 75%). An additional 5-day course of vacuum assisted therapy lead to complete graft integration for the whole study cohort, whereas the control group required at least 1 or 2 silver dressing changes (2 and 3 patients respectively) before satisfactory graft uptake was observed. The same treatment was applied to already integrated grafts to enhance epithelialization. Thus, we observed a significant reduction in the duration required for graft integration in the study group (10 days) compared to the control group (12 days).

Conclusions
Venous ulcers exhibit favorable outcomes when negative pressure therapy is applied concurrently with antibiotic therapy and skin grafting. This novel versatility of the therapy allows for preoperative, as well as postoperative use with the result of decreasing the bacterial load, promoting healing and graft integration while shortening hospital stays and decreasing the number of painful dressing changes for the patients.

Keywords
Venous ulcers, negative pressure therapy, chronic wounds, novel dressing

VAGINAL RECONSTRUCTION IN PATIENTS WITH MAYER–ROKITANSKY–KÜSTER–HAUSER SYNDROME

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Objectives
The Mayer–Rokitansky–Küster–Hauser syndrome is a congenital condition in which patients are born with vaginal and uterus agenesis, affecting the ability to have a normal sexual life and to bear children. Vaginal reconstruction is a challenging procedure for plastic surgeons. The aim of this study is to report our experience in the management of 13 patients with congenital absence of the vagina due to the MRKH syndrome. [1][2]

Materials
We performed a retrospective study on 13 patients admitted to the Plastic Surgery Department of the Clinical Emergency Hospital "Prof. Dr. Agrippa Ionescu", Bucharest, Romania, for vaginal reconstruction within a period of eleven years (January 2009– March 2022). All patients were

diagnosed by the gynaecologists with vaginal agenesis, as part of the Mayer–Rokitansky–Küster–Hauser syndrome. The Abbe'–McIndoe technique with an autologous skin graft was performed in all cases.

Results
The average age of our patients was 20.13 (16–28) years. All patients were 46 XX. The average surgical timing was 3.10 h (range 2.85–4h). Postoperative rectovaginal fistula was encountered in 1 patient. Postoperative average vaginal length was 10.4 cm (range 9.8–12.1 cm). Regular sexual life was achieved in 10 patients.

Conclusions
Nowadays, there is no established standard method of vaginal reconstruction. In Romania, the McIndoe technique is the most applied. Unfortunately, even if the MRKH syndrome is not uncommon, less and less surgeons are willing to perform the procedure to create a neovagina.

Keywords
Mayer–Rokitansky–Küster–Hauser syndrome, primary amenorrhea, surgical management, vaginal reconstruction, plastic surgery

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SCAR REVISION - WHAT CAN PLASTIC SURGERY OFFER IN THE PUBLIC HEALTH SYSTEM?

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Objectives
From the desire to improve the way of approaching patients with vicious scars, we aimed through this study to evaluate the patients population that seeks Plastic Surgery for scar revision and their therapeutic approach, in the public hospitals in Bucharest.

Materials
We realised a multicenter, retrospective, analytical study on a lot of 100 patients who were treated for vicious scars between 2015-2020. The evaluation of patients included in the database was achieved by documentation based on the general clinical observation sheets and surgical protocols, comprising the following variables: demographic data of the patients, characterisation of scars in terms of age, location, cause, type of treatment and number of days spent in the hospital.

Results
The average age of the patients in the studied group was 38.6 years, with a slight male preponderance of 52% and most frequent from an urban environment (66.25%). Regarding the age of the scar, the average duration elapsed from the causative event to the therapeutic intervention was 55.73 months,

the most common location was in the head and neck region (47.41%), being in 39% of patients of post-traumatic cause. We noticed that in 85.23% of cases, the surgery involved a single method of correction, being in 42% of cases incision, partial or complete excision followed by suture, leading to a mean hospital stay of 3.8 days. No standardised protocol for analysing a vicious scar and for decision making was observed.

Conclusions
Patients living with vicious scars frequently have aesthetic, functional and pathological repercussions. The young population is more willing to look for improvements in scars, especially when they are located in visible areas, such as the face and neck. Although there are many treatment suggestions, we lack a protocol to address these cases in current practice.

Keywords
scar revision, vicious scars, plastic surgery, public health system

MANAGEMENT OF SOFT TISSUE INFANTILE HEMANGIOMAS – IMPACT OF BETA-BLOCKER USE AND COVID 19 PANDEMIC

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Objectives
Infantile hemangiomas (IHs) always represent a therapeutic challenge, due to their special development pattern. Being able to proliferate intensely during the first months of life, these benign vascular tumors need to be monitored and treated by specialized teams from the very beginning. The introduction of the treatment with oral propranolol improved the final prognostic, and influenced also the moment of the surgical excision. In recent years, the COVID-19 pandemic raised particular challenges about how we evaluate and monitor patients with non-acute conditions that cannot be regarded as emergencies. Considering this, we wanted to assess the impact of beta-blocker use and COVID 19 pandemic on the surgical treatment of IHs within a pediatric plastic surgery department.

Materials
We retrospectively assessed the medical records of all patients with a diagnostic of IHs that were admitted to our department and underwent surgical excision. For evaluating the changes occurred in the past decade, we gathered patients in three time groups: before beta-blocker (2008-2010), beta-blocker pre-pandemic period (2016-2019) and pandemic times (2020-2021), and compared the results.

Results
Assessing the first two groups, we noticed a delay in the initiation of surgical treatment (in average, 22 months old vs. 14 months old before propranolol), and also a 36.5% decrease in the number of surgical procedures. More dramatic dropdown was noticed in pandemic times, caused mainly by bed number reduction in the plastic surgery ward, which were predominantly used for emergency burn

and trauma patients. Comparing the second and the third period, the number of procedures showed a 70% decrease, with the same age range.

Conclusions
The past decade came with two major changes for the treatment of IHs. The presence of propranolol in the therapeutic armamentarium postponed the moment for the surgical treatment and significantly decreased the number of excisions. Furthermore, due to the COVID-19 pandemic, we noticed another dramatic decrease in surgical procedures performed for IHs. We consider the full consequences of this latter change are still to be seen in the following period.

Keywords
Infantile hemangiomas, surgical excision, beta blockers, COVID-19 pandemic

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PECTORALIS MAJOR FLAP COVERAGE OF PRESTERNAL RADIOTHERAPY INDUCED ULCERATION – A CASE REPORT

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Objectives
We report the case of I.V., male, aged 68, who presented with loss of skin and soft tissue on the anterior thoracic wall due to an extensive history of surgical interventions and radiotherapy treatments that affected the presternal area.

Materials
The patient had a history of clavicular condrosarcoma, followed by two recurrences, for which he had undergone three surgical excisions and radiation therapy. On clinical presentation we observed an ulceration located in the upper third of the anterior thoracic wall of approximately 3/5 cm in size and 1.5 cm in depth, with fibrous edges and granulation tissue in the base of the ulceration, with purulent secretions and perilesional cellulitis. We also found visible mesh material from a previously

implanted device protruding from isolated areas of the base of the defect. We performed daily dressings with antiseptic solutions and antibiotherapy according to the antibiogram results. After debridement of the ulceration and removal of any residual mesh extruding from the surrounding tissues, we decided to cover the remaining defect with a right pectoralis major myocutaneous flap based on the pectoral branch of the thoracoacromial artery, with an overlying skin island of 4/6 cm. We evaluated the viability of the flap with intraoperative Doppler ultrasonography to assess the blood flow through the pectoral branch and also pre-, intra- and postoperative thermal imaging. After the flap was sutured into place, capillary refill time was evaluated at 2 seconds.

Results
During the postoperative period, the evolution was favorable, with a 0.3/0.5 cm area of dehiscence at the right extremity of the skin island. The patient was discharged at two weeks postoperatively. During subsequent visits we covered the small dehiscence area with silver impregnated dressings until it healed spontaneously by marginal epithelialization.

Conclusions
This case illustrates a safe and efficient method of covering an anterior thoracic wall defect with an optimal outcome, in spite of the radiotherapy damage to surrounding tissues.

Keywords
Pectoralis major flap, radiotherapy, ulceration, flap coverage

PROSPECTIVE STUDY – WIDE AWAKE, NO SEDATION DAY CASE SURGERY

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Abstract
Introduction: The improvement of surgical and anesthetic techniques has led to the development of new treatment methods. Surgery under local anesthesia without sedation is increasingly used.
Advantages of day case surgery: These include lower treatment costs, reduced environmental impact of medical activity, physical and psychological comfort for the patient, and for the surgical team.
Requirements: It is necessary to understand and popularize the concept of outpatient surgery with anesthesia without sedation and sterility of the operating field. It is necessary to reorganize the activity by creating a space dedicated to this type of surgery, with adequate circuits.
Method potential: Avoiding hospitalization is an advantage for the population of our country, relatively reluctant to procedures that require hospitalization. Existing underdiagnosis of some conditions can be diminished. Increases the addressability of patients across the country.
Applicability: The method can be used successfully in treating a significant number of acute and chronic conditions of the hand and of many skin cancers.
Conclusions: Surgery under local anesthesia without sedation is a safe and comfortable method for the patient and the surgical team. The activity of outpatient surgery requires organization and planning, as well as a specially arranged space. The development potential of this type of health intervention is very high.

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ORGANIZING A BASIC MICROSURGERY WORKSHOP

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Objectives

The field of microsurgery is both demanding and rewarding. A microsurgical facility where students, residents and specialists can train represents a “must have” in order to achieve optimal results after reconstruction. Furthermore, it is imperative that those who come across microsurgery for the first time be formally trained during a workshop which comprises both theoretical and practical aspects.

Materials

A microsurgery training program involving animal experimentation requires access to a special facility and approval from both the Ethics Committee and from the Sanitary Veterinary Commission. The basic microsurgical program designed for residents was structured over a period of 4 days – first 2 days they learn to perform knots and sutures under the microscope on non-living tissue (latex glove, leaves, chicken legs) and the last 2 days the microsurgical skills are practiced on living tissues (Wistar rat).
The logistic required for the workshop included – instruments and equipment (microscopes, microsurgery instruments, microsurgery sutures, laptop, projector), disposable materials and promotional materials for the participants. The locations used were MedWorkshop training center (first 2 days) and the Excellence Center in Translational Medicine (last 2 days). The invited lecturers presented theoretical aspects of microsurgery in the beginning; afterwards the residents practiced basic microsurgical techniques. At the end of the workshop, the residents were given a feed-back form and a participation diploma.

Results
Three editions of the workshop Basic Microsurgical Skills were organized between 2020 and 2021 in Bucharest. A total number of 28 residents participated in all 3 editions. The residents performed both vascular and nerve anastomoses. 24/28 participant achieved at least one patent vascular anastomosis during the workshop.

Conclusions
A formal microsurgery training course was necessary for the plastic surgery residents in the South region of Romania. This workshop offered the residents the possibility to learn microsurgery techniques, helpful in their future clinical practice.

Keywords
microsurgery workshop, organizing, training program

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THE USE OF PROTEOLYTIC ENZYMES IN THE CONSERVATIVE TREATMENT OF PATHOLOGICAL SCARS.

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Objectives
Proteolytic enzymes of the latest generation: collagenases, lipases, liases, which are found in the form of ointments and injectables, degradate and split dysfunctional collagen fibers in the fibrous tissues of the extracellular matrix, thus are performed accelerating of cell repair and improving the appearance of pathological scar. The purpose of these discussions is to define the therapeutic activity of collagenase during the treatment of the burn patient.

Materials
This study was performed at the Republican Center for Burns and Plastic Surgery, Chișinău, where was applied a non-invasive enzymatic treatment to the patients who suffered second and third degree burns with relatively old post-combustion scars at the face, joints and thunk, during 3 months. Thus, the application of the ointment and the intracicatricial injection of collagenase determined an accelerated synthesis of the new collagen, producing the reepithelization and the healing of the scar.

Results
The topical and intradermal use of proteolytic enzymes in burn patients has been positive, improving the appearance of the scar, discomfort and stiffness. As a result, the scar was removed for 3 months of topical application and ended with a positive and minimally invasive result.

Conclusions
The applicability of proteolytic enzymes on scar tissue has demonstrated anti-adhesive, reconstructive, antifibrotic effect of regeneration and reorganization of the collagen matrix as a final result.

Keywords
proteolytic enzymes, collagenase activity, conservative treatment, scar pathology.

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KEYSTONE PERFORATOR ISLAND FLAP FOR AXILLARY, INGUINAL AND SACROCOCCYGEAL SOFT TISSUE DEFECTS

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Objectives
Surgery is the first choice of treatment for chronic, relapsing, intractable Hidradenitis Suppurativa presenting at late stages. The aim of this study is to investigate the effectiveness of keystone perforator island flap for the reconstruction of axillary, inguinal and sacrococcygeal soft tissue defects in Hidradenitis Suppurativa. It is accepted that wide local excision and local coverage is the crucial treatment to prevent recurrence of the disease.

Materials
All patients presenting for surgical treatment of hidradenitis suppurativa between 2014 and 2021 were identified from the hospital database. Only patients with hidradenitis suppurativa confined to the axillary, inguinal and sacrococcygeal regions in Hurley grade II and III were included. We performed descriptive analysis of demographic data, comorbidities, topographic distribution of lesions, Hurley scoring, size of defect, specific type of reconstruction, complications, follow-up period, recurrences.

Results
25 patients with localized axillary, inguinal or sacrococcygeal hidradenitis suppurativa were identified, and 26 KPIF was performed. All keystone perforator island flaps survived giving a durable cover to the affected regions. There were no complications. Functional and aesthetic results were satisfactory and there were no recurrences.

Conclusions

These findings confirm that the keystone perforator island flap procedure can be effective for immediate defect reconstruction after wide local excision of advanced hidradenitis suppurativa of the axillary, inguinal and sacrococcygeal regions and provides excellent aesthetic results.

Keywords

reconstructive surgery, keystone flap, soft tissue defect, hidradenitis suppurativa

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COMPARTMENT SYNDROME FOLLOWING TIBIAL FRACTURES AND TYPE 1 DIABETES MELLITUS. CASE REPORT

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Objectives

Compartment syndrome is one of the devastating complications of closed intramedullary nailing of the tibia. Rarely, it can also happen spontaneously, for example in type-I diabetes mellitus. The anterior muscle compartment looks to be the one most at risk, and late diagnosis (over 8h) increases the rate of amputation. The aim of our paper is to analyze the possibility of saving the lower limb of the patient with type 1 diabetes mellitus, which means patient with vascular damage, and late diagnosed compartment syndrome after tibia intramedullary nailing.

Materials

Patients, male, 35 y. o. with type 1 diabetes mellitus, developed a tibial compartment syndrome of the calf and foot after closed intramedullary nailing of his fractured tibial shaft. Late diagnosis caused large muscular necrosis and tibial anterior artery occlusion. Large dermato fasciotomy was done after removing the intramedullary nail. A few surgical debridement followed with subsequent application of the negative pressure dressing. In the last stage of the treatment, Pirogoff's amputation was performed and an external device was applied.

Results
Surgical debridement and negative pressure dressing help to remove all necrosed tissues and avoid infection of the postoperative wounds. Using the Pirogoff amputation method we were able to save the calcaneus part, to keep in this way the support function of the lower limb. Rehabilitation of the patient occurred 6 months after last surgery, with the removal of the external osteosynthesis, which in this case had a 2 in 1 function: osteosynthesis of the tibial shaft and calcaneotibial arthrodesis fixation.

Conclusions
Compartment syndrome is a major emergency, especially in patients with diabetes, early diagnosis and staged management can be crucial in rescuing the affected limb.

Keywords
compartment syndrome, diabetes, Pirogoff's amputation.

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HALLUX MACRODACTYLY : MANAGEMENT OF A RARE CASE

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Objectives
Hand and foot major congenital malformations are rare, without treatment protocols and little literature at our disposal. Hallux macrodactyly has a major functional, aesthetical, and psychological impact, especially in young women. Usually, these defects are treated in young children, but sometimes the treatment is not efficient and they reach adulthood with this malformation.

Materials
We present the case of a 16-year-old girl with severe macrodactyly of the right hallux with a dorsal curvature of the distal phalanx. The patient had one shoe size difference between her feet. She had previous surgery during young childhood and then at 9 years old, with an attempt to remove the growth cartilages. The result was unsatisfactory, with the curvy appearance of the toe. In addition, she had an important hamartoma that increased the size of the hallux.
A two-stage surgery was performed, firstly addressing the bone and secondarily the soft tissues.

Results
Postoperatively a normal length hallux was obtained. Despite the persistence of an increased width of the phalanx, the shoe size difference between feet disappeared. The 5-year follow-up shows a

satisfactory result that allows the patient to stand, walk and use footwear normally, even sandals and high heels.

Conclusions
Malformations of the lower limb have fewer repercussions than hand deformities but they can still significantly affect patients' quality of life. Despite the scarcity of available information and reported cases in literature, this case demonstrates that even patients who underwent previous surgeries and reached adulthood can benefit from surgery with good results.

Keywords
macrodactyly, hallux, foot malformations, lower limb malformations

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ORTHOPLASTIC APPROACH TO ACHILLES TENDON SEVERE COMPLICATIONS AFTER SURGERY: THE LADDER TECHNIQUE

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Objectives
The Achilles tendon rupture represents one of the most common tendon ruptures. Although its primary repair remains the treatment of choice, surgical complications, such as secondary rupture and tendon exposure, require salvage procedures.
Combined tendon and skin defects after surgery remains a complex and common reconstructive challenge. Various approaches have been described, but there is poor bibliography about management of combined tendon and cutaneous defects.
This study aims to present our orthoplastic approach in the functional reconstruction of composite Achilles tendon defects with the “ladder technique”.

Materials
Between 2018 and 2021, seven patients with chronic open wound and large Achilles tendon defects (Kuwada type IV) underwent one-stage reconstruction. A combined team of orthoplastic surgeons performed a turndown gastrocnemius fascial flap, a composite free fasciocutaneous anterolateral thigh flap, a fascia lata autograft anchored to the tendon stump using pulvertaft sutures and positioning of a kickstand circular external fixator on each patient.
Demographic and functional data were collected for each patient. Subjective evaluation and quality-of-life measures were obtained preoperatively and 12 months postoperatively using AOFAS and SF-36 questionnaire. Early and late complications were noted during each follow-up.

Results
Average soft tissue defect was 126,2 (range, 86,1–175,9 cm2) with a tendon gap of 8,2 cm (range, 7,1–10,3 cm). Mean follow-up was 18,3 months (range, 12–24 months). Flap survival was 100%. Overall range of motion of the reconstructed side was 87% of the unaffected side (54 degrees vs. 62 degrees). The SF-36 and AOFAS scores of all patients improved significantly ($p < 0.005$) at 12 months follow-up duration.

Conclusions
Difficult cases requiring reconstruction of chronic achilles tendon ruptures have excellent results throughout “ladder technique”. Microsurgical techniques combined with orthopedic ones can provide a reconstructed Achilles tendon that achieves very satisfactory anatomical shape and equal function compared with the unaffected side.

Keywords
Achilles tendon; Tendon rupture; orthoplastic; tendinopathy; Achilles tendon reconstruction

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ACHILLES TENDON RECONSTRUCTION USING A COMPOSITE ALT WITH TENSOR FASCIA LATA FLAP IN A PERONEAL MAGNUS ARTERY PATIENT-CASE REPORT

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ABSTRACT

Introduction:

Reconstruction of soft tissue defects in the lower limb is known to be difficult due to the lack of spare local tissue in the immediate vicinity of such defects

Limb trauma often represents a challenge because apart from the initial damage, the therapeutic plan has to be constantly adapted both to the healing process and the patient characteristics.

Materials and methods:

A 31-year-old female involved in a road traffic accident two years prior, presented with a retracting scar in the left Achilles tendon region which made dorsiflexion of the left foot impossible. There was no initial known trauma to Achilles' tendon. Furthermore, angiotomography of the left leg revealed a congenital variant of the arterial supply of the leg with the presence of the peroneal magna artery. A composite free Anterolateral thigh and tensor fascia lata flap alongside with the shot peroneal tendon were used in order both to reconstruct and reinforce the Achilles tendon and to cover the overlaying soft tissue defect.

Results:

The uneventful recovery and functional rehabilitation led to a satisfactory functional outcome.

Discussion:

Management of these cases is complex and challenging and a combined approach using both local resources and microsurgical transfer may be needed in order to obtain the best functional and aesthetic result.

A CASE REPORT OF GIANT SCROTAL LYMPHEDEMA: A MULTIDISCIPLINARY APPROACH

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Objectives

Lymphedema is a clinical condition characterized by retention of lymphatic material in the subcutaneous tissue caused by an obstruction of the lymphatic vessels. Scrotal lymphedema can involve the penis and / or scrotum in isolation or male external genitalia in their entirety. This condition can develop secondary to surgery, radiotherapy, tumors or as a result of infections (e.g. filariasis) involving the inguinal lymph nodes. The term primary lymphedema, on the other hand, refers to a clinical condition caused by an abnormal development of the lymphatic system, probably due to genetic disorders (Milroy's or Meige's disease).

Materials

We report the case of a 31-year-old male patient who came to our attention with significant late-onset primary lymphedema at the scrotal and penis level and in both lower limbs, such as to be disabling and impairing walking. The patient had a history of psychiatric personality disorder and left hydrocele surgery performed about 15 years ago. Patient reported onset of the clinical condition about 7 years before and showed a significantly increased scrotum with sclerotic skin, erysipelas, significant soft tissue imbibition, contextual lymphorrhea and lymphatitis in the left lower limb. The patient also performed lymphoscintigraphy of the superficial and deep lymphatic circulation of the lower limbs. In a multidisciplinary team with urologist colleagues, surgery was performed to remove skin and subcutaneous tissue at the scrotal level up to the level of the albuginea tunic; the residual scrotal defect was repaired with local flaps and, at the penile level, by partial thickness dermo-epidermal grafts taken from the right thigh; subsequently the Lymphaticovenular Anastomosis (LVA) surgical technique was performed

Results

Microsurgical treatment of scrotal lymphedema represents a real challenge. In particular, in the case reported, the patient was not suitable for excisional and invasive procedures such as the Charles technique or the transplantation of lymph node stations, due to his psychiatric history, although presenting a transport index score > 10 on preoperative lymphoscintigraphy.

The multidisciplinary approach with urological surgeons was crucial in clinical management and in the therapeutic choice. Ensuring testicular viability and patency of the urethra were fundamental steps during the excisional procedure. In this way it was possible to significantly reduce the volume of the scrotum, covering the soft tissues exposed above the albuginea with local flaps. Moreover, multiple lymphatic-venular anastomosis were adopted at the inguinal level for the treatment of primary lymphedema.

At one month follow-up, the patient shows a marked improvement in voiding function and persistence, albeit to a lesser extent, of edema in the lower limbs (more marked in the left lower limb). In the coming months it will be important to carry out a follow-up aimed at evaluating the stability of the scrotal dimensions, the improvement of the quality of life and the restoration of the functionality of the urinary tract.

Conclusions

Lymphedema treatment is still evolving given the complexity of the pathology. Particularly in our case, considering the patient's immediate medical history and the advanced stage of scrotal lymphedema, the combination of LVA and excisional procedures, allowed a marked improvement in the patient's quality of life and psychosocial relationships.

Furthermore, the multidisciplinary approach has proved successful in restoring the patient's full urination capacity and above all in avoiding iatrogenic complications affecting noble structures such as testes, vas deferens and blood vessels.

Keywords

Lymphedema; scrotum; external genitalia; Lymphovenular anastomosis; urinary disfunction

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LYMPHATICO-VENULAR ANASTOMOSIS IN THE TREATMENT OF SECONDARY LYMPHEDEMA. INITIAL EXPERIENCE IN ESTABLISHING A LYMPHEDEMA PROGRAM IN A TERTIARY CANCER TREATMENT CENTER.

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Objectives
Lymphedema is a chronic and progressive disease characterised by the buildup of protein rich interstitial fluid in the subcutaneous fat, due to the abnormal function on the lymphatic system. Primary lymphedema is a rare congenital condition caused by obstruction, malformation or hypoplasia, whereas secondary lymphedema is more common and it is caused by the obstruction or destruction of a normal functioning lymphatic system. In developed countries, the main cause of secondary lymphedema is represented by lymph node clearance for cancer, particularly breast and gynaecological tumors. The surgical treatment for lymphedema can be split into excisional and physiological procedures. Excisional procedure aim to remove the excess fibrotic tissue in more advanced stages, whereas physiological procedures, such as vascularised lymph node transfer (VLNT) and lymphatico-venular anastomosis (LVA) restore the lymphatic drainage.

Materials
We present a series of 9 lymphedema cases admitted to our institution in the past two years. All patients suffered from secondary lymphedema due to lymph node clearance (2 upper extremity lymphedema after breast cancer and 7 lower extremity lymphedema after cervical cancer). LVAs were performed in the extremity and limb circumference was measured before and after the surgery.

Results
All patients showed a significant reduction of limb circumference and improvement of quality of life at 3 and 6 months postoperatively.

Conclusions
Recent advancements in supermicrosurgical techniques have made LVAs an effective and minimally invasive treatment for multiple stages of lymphedema. The introduction of a lymphedema program in a cancer treatment center is of a paramount importance in the era of microsurgery.

Keywords
Lymphedema, Microsurgery, Lymphatico-venular anastomosis, Cancer

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TREATMENT OF SEVERE DEBILITATING LYMPHEDEMA OF THE LOWER LIMB USING CHARLES PROCEDURE: CASE REPORT

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Objectives
Lymphedema represents a chronic, progressive disease caused by the accumulation of protein-rich fluid in the interstitial spaces, which initiates an inflammatory response leading to abnormal subcutaneous fibroadipous production. When neglected, this condition slowly progresses to produce permanent limb deformities and pathologic dermal changes.

Materials
We hereby present the case of a 32-year-old, male patient with a history of 27-year-old unilateral, massive lymphedema secondary to trauma to the right calf. Clinical examination revealed multiple retractile scars and important circumferential, non-pitting edema of the right calf and foot, hyperkeratosis, and marked limitation of movements, severely impacting the patient's ability to walk or stand. Extensive suprafacsial excision of the affected area followed by skin grafting (Charles procedure) was performed. A second-stage surgery was necessary in order to release the remaining scars.

Results
Short-term postoperative results were satisfactory with an important decrease in leg volume and significant improvement in foot movements. The patient regained the ability to utilize footwear, walk and stand.

Conclusions
Chronic neglected lymphedema represents a challenging condition for healthcare professionals. While microsurgical procedures such as lymphovenous anastomosis and vascularised lymph node transfer became increasingly popular for the treatment of early stages, excisional procedures remain relevant and in selected cases, they offer satisfactory results in reducing limb volume and risk of recurrent infections contributing to a noteworthy amelioration in patients' quality of life.

Keywords
lymphedema, lower extremity lymphedema, Charles procedure

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PREPECTORAL BREAST RECONSTRUCTION: AN IDEAL APPROACH TO BILATERAL RISK REDUCING MASTECTOMY

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Objectives
Bilateral risk-reducing mastectomy (BRRM) has increased its popularity in recent years because of its aim to minimize the chances of developing breast cancer in high-risk patients. Women undergoing this procedure must be considered highly demanding patients given the need to combine aesthetical, functional and preventive desires. This study aims to present the authors' experience in performing BRRM followed by single-stage prepectoral reconstruction (PPBR) with implant completely covered by acellular dermal matrix (ADM) and to report indications, surgical techniques, functional and aesthetic results.

Materials
A single-center prospective data collection was carried out from January 2017 to January 2021 of patients at high risk of developing breast cancer undergoing BRRM and immediate PPBR with ADM. Patients were subdivided into two groups according to the breast shape: Group A had small and medium size breasts and Group B had large and ptotic breasts. Oncological and surgical outcomes were collected. Satisfaction with reconstruction and related quality of life were evaluated through the BREAST-Q questionnaire.

Results
A total of twenty-three patients met the inclusion criteria. Seventeen patients were included in group A and six patients in group B. Average follow-up was 18.4 months. Minor complications occurred in four breasts: one seroma, one hematoma and two cases of wound dehiscence. Capsular contracture was not observed. All patients were satisfied with the final result according to the post-operative BREAST-Q questionnaire.

Conclusions
Immediate prepectoral breast reconstruction could represent the ideal reconstruction option after BRRM and should be offered to all women that fulfill the inclusion criteria.

Keywords
Breast reconstruction; Prepectoral; Risk reducing mastectomy; Mammaplasty, acellular dermal matrix (ADM), BRCA1, prophylactic mastectomy

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PROPHYLACTIC MASTECTOMY AND IMMEDIATE IMPLANT BREAST RECONSTRUCTION FOR PTOTIC BREASTS

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Objectives
Immediate implant reconstruction following prophylactic mastectomy for ptotic or ptotic and hypertrophic breasts is difficult. It can be used in both patients with a genetic risk of breast cancer or to a contralateral breast in patients at risk (young age, family history of breast and ovarian cancer, BRCA mutations present) who have already been diagnosed with breast cancer.

Materials
In the last 4 years we operated 23 patients at risk, 21 of whom were already diagnosed with breast cancer. The average age was 41,5 years, the BMI was between 26 and 40, the nipple-IMF distance average was 19,5 (range 13-26). For skin reduction we used the periareolar technique and the Wise pattern, the implant positioning (round or anatomical) being made in a muscular-dermal pocket. The average implant was 430 cc (300-560 cc). For 5 cases we opted for free NAC graft.

Results
Healing time ranged from16 days to 38 days. We had 2 complete areola necrosis, one of which with exposure of the implant and infection requiring the explants and subsequent reconstruction 4 month after complete healing, 6 partial areola necrosis that required reintervention and a inferior flap skin necrosis that required a longer healing period without implant exposure. The patients were satisfied with the final aesthetic appearance of the breasts.

Conclusions
Although autologous reconstruction provides a greater choice of having a natural reconstruction especially in the long term, sometimes patients are concerned about recovery time, scars and impact of surgery. For these patients with ptotic breasts the musculo-dermal pocket offers an excellent reconstructive result, especially for patients with a higher BMI.

Keywords
Prophylactic mastectomy, breast cancer, BRCA

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MALIGNANT CUTANEOUS MELANOMA - "MEPHISTO'S DISEASE (GOETHE-NIAN) - SURGICAL AND CLINIC DATA FROM OUR CLINIC-

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Abstract:
In the last 10 years, the incidence of skin melanoma has been increasing, according to clinical data from various Medical Centers and according to World Health Organization statistics. The concern is that malignant melanoma is responsible for most skin cancer deaths. Malignant cutaneous melanoma is the malignancy of melanocytes in the skin. The study of the immune response, including tissue and circulating immune markers that may correlate with the evolutionary stages of melanoma, could lead to the development of new diagnostic, prognostic and therapeutic strategies to reduce melanoma morbidity and mortality. Questions such as: Does it influence the anato-pathological type of cutaneous melanoma, its evolution and treatment? or Why do some types of melanoma produce predominantly lymphatic invasion, and in other cases - hematogenous dissemination, predominantly brain metastases? Does insidious dissemination or recurrences depend on the patient's immune response and biological status? These are some of the questions we have faced with the story of "cell to scalpel" malignancy. In this presentation we have tried to answer these questions and cover some of the clinical cases we have faced, following the metamorphosis of melanoma: "a monster more insatiable than the guillotine" (Dr. Siddhartha Mukherjee)

Keywords: cutaneous melanoma, melanoma mortality, invasion, the recurrences, the therapeutic strategies

ZOSTERIFORM METASTATIC SKIN CANCER – 4 CASES REPORT AND LITERATURE REVIEW

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Objectives
Zosteriform cutaneous metastases are a very rare entity, with papules, nodules, erythematous patches or plaques distributed along one or more dermatoms. The pathogenic mechanism of zosteriform dissemination is still uncertain, for our cases we supposed a lymphatic retrograde dissemination. Data from the literature show that the survival of these patients from the time of metastasis is very low, so we stressed the importance of early diagnosis of skin metastases.

Materials
Between june 2019-march 2022 in our clinic we treated 4 cases with wide spread cutaneous metastases, 3 with metastasis from melanoma, one with postradiotherapy angioliposarcoma metastasis. For cutaneous melanoma the mean Breslow thickness was 6,18 mm, all the patients were females, the primary lesion was located main on the trunk and lower leg. Time from melanoma excision and diagnosis of zosteriform metastasis ranged from 6 to 26 months. We performed wide excision and skin grafting.

Results
The mean survival was 13,8 months. We correlate the appearance of melanomas and skin metastases in two of our cases with the combination of oncological treatments for other conditions (breast cancer, ovarian cancer). We reviewed a total of 65 cases since 1980, including our own. The percentage of cutaneous melanoma account was 20%, the zosteriform localizations usually arise in the same body region of the primary melanoma.

Conclusions
There are few and incomplete published data about zosteriform melanoma and angioliposarcoma metastases. For patients with melanoma with zosteriform metastases an accurate medical history could be of primary importance for the right classification of the disease and for treatment choice. We should consider this rare form of cutaneous involvement in the differential diagnosis of herpes zoster to avoid a dangerous delay in starting a correct treatment.

Keywords
Melanoma, metastasis

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NASOLABIAL INSULAR FLAP FOR ALAR RECONSTRUCTION AFTER EXTENSIVE NON-MELANOMA SKIN CANCER REEXCISION – A CASE PRESENTATION

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Objectives
The nasolabial region is among the most popular sites providing flaps for alar reconstruction, particularly for large defects resulting from cutaneous malignancies involving this aesthetic subunit of the nose. Nevertheless, further exploitation of this anatomically altered area when faced with tumor recurrence engenders the challenge of balancing adequate tissue coverage with preserving the function and position of the nostril and oral commissure.

Materials
We present the case of a 56 year old female with previously excised basosquamous carcinoma of the left ala with histologically proven invasion of the lateral and deep excision margin exhibiting early signs of local recurrence. The initial surgery included excision of basal cell carcinoma of the nasolabial region, both resulting defects being closed with a superiorly based nasolabial flap resulting in a shallow cranial nasolabial fold associated with alar groove scarring and mild nasal obstruction. The patient required reexcision with adequate oncological margins to eliminate the threat of tumor recurrence.

Results
Extensive reexcision was deemed necessary to include the former site of the tumors with 4-mm surgical margins, covered by a few suspicious papullar lesions, with a resulting cutaneous defect spreading from the nasal tip lobule to the medial cheek. The depth of the excision reached the allar cartilage, but intraoperative histopathological examination demonstrated the absence of malignant cells in the deep layer. Consequently, we designed an island flap in the caudal part of the nasolabial fold, lateral to the oral commissure, based on a facial artery perforator, which was rotated 120° medially and advanced upward to cover the defect. The local vascular pattern, as well as the viability of the flap after inset intra and postoperatively were assessed by infrared thermography. In the absence of both postoperative complications and invaded excision margins, the patient returned for reinforcement of the alar reconstruction with cartilage graft and alar groove enhancement.

Conclusions
Island flaps based on facial artery perforators in the lower nasolabial fold provide an excellent source of abundantly vascularized tissue for the reconstruction of extensive skin defects encompassing the nasal ala and adjacent nasolabial region.

Keywords
nasolabial, island flap, alar reconstruction

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CUTANEOUS MELANOMA OF THE BREAST – ONCOPLASTIC APPROACH AFTER WIDE LOCAL EXCISION AND AXILLARY SENTINEL NODE BIOPSY

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Objectives
Melanoma of the breast is an infrequent entity, presenting as either primary or metastatic from extramammary solid neoplasms(1). Cutaneous primary melanoma of the breast (CPMB) accounts for <5% of all melanomas and only 0.5% of all breast cancers(2). The recommended management for CPMB is typically surgical with a wide local excision of the tumor and sentinel lymph node biopsy(3). There are no reconstructive pathways suggested for this pathology(3). An oncoplastic approach should be used because a wide excision in this location can have a significant impact on the breast shape by distorting it (4).

Materials
We present the case of a 68-year-old female with cutaneous breast melanoma in order to highlight the importance of the oncoplastic approach. The primary lesion was a 10x10x3mm ulcerated, depressed pink skin lesion on her left upper inner quadrant. The dermatoscopic profile was of basal cell carcinoma, but on histopathological examination turn out to be nodular primary melanoma (Clark IV, Breslow 1.1mm).

Results
The recommended surgical treatment is wide excision and sentinel lymph node biopsy. Lymphoscintigraphy mapping found the sentinel node in the ipsilateral axillary region. Post excisional defect was reconstructed using a matrix rotation mammoplasty.

Conclusions
This report emphasizes the need for an oncoplastic approach and immediate breast reconstruction in order to improve life quality.

Keywords
melanoma, breast, sentinel node biopsy, wide excision, oncoplastic surgery, local flap.

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MYELOID SARCOMA WITH MEGAKARYOCYTIC DIFFERENTIATION PRESENTING AS A SUBSCAPULAR MASS

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Objectives

Introduction

Myeloid sarcoma is an extramedullary tumor that consists of myeloblasts or immature myeloid cells that occurs in any part of the body, most commonly found in the bone, lymph nodes, skin and soft tissue. Tumors with megakaryocytic differentiation are extremely uncommon and may occur in association with a myeloproliferative disorder. We report a case of myeloid sarcoma showing megakaryocytic differentiation in a soft tissue mass without involvement of the bone marrow.

Materials

A 66-year-old woman presented to our clinic with a rapidly enlarging tumor on the dorsal thorax. The clinical exam revealed a painless firm mass located in the subscapular area. The CT scan showed a 65/80 mm mass lying on the 4th to the 7th right ribs, in close contact with the intercostal muscles and superficially with the serratus anterior muscle and the subscapularis muscle.

On presentation, the white blood cell count was 4.3K/ul and platelet count was 219K/ul. Clotting time, bleeding time and blood biochemistry were within normal limits.

Results

The intraoperative inspection confirmed a firm incapsulated tumor in close contact with the rib cage and the intercostal muscles.

The histological examination documented a proliferation of large blastic cells with nuclear atypia, poorly defined cell borders and multiple mitoses. Further immunohistochemistry demonstrated that the neoplastic cells were positive for CD45, CD99, Vimentin and EMA.

The patient was referred to the hematology-oncology department for further investigation and treatment.

Conclusions

Myeloid sarcoma can occur in three ways; it may occur de novo, or in association with acute myeloid leukemia or less commonly from blastic transformation in a patient with a prior myeloproliferative neoplasm and/or myelodysplastic syndrome diagnosis. Though rare, histopathologic evidence of megakaryocytic differentiation in myeloid sarcoma is considered as a marker of poor prognosis.

Keywords

Keywords: myeloid sarcoma; megakaryocytic differentiation; soft-tissue sarcoma

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3. Urmila Majhi, Kanchan Murhekar, Shirley Sundersingh, Primary Myeloid Sarcoma with Megakaryocytic Differentiation in Lymph Nodes and Skin

UNUSUAL PAINFUL GIANT CUTANEOUS METASTASIS OF LUNG ADENOCARCINOMA IN AN UNCOMMON LOCATION

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Objectives
According to GLOBOCAN, in Europe in 2020, lung cancer ranked second in incidence and first in mortality. Cutaneous metastases from lung cancers are rare, and sometimes they can be the initial presentation of lung carcinomas.

Materials
We present the case of a 73-year old non-smoker female patient, diagnosed in January 2022 with lung adenocarcinoma, after thorough investigation for an ulcerated tumor in the right antecubital fossa. She was admitted in February 2022 to the Plastic Surgery Department of Agrippa Ionescu Hospital, Bucharest for an ulcerated and bleeding nodular tumor in the right antecubital fossa, that has grown 5.8 cm in diameter in 3 months, and caused excruciating pain.

Results
The case was discussed in the Agrippa Ionescu Tumor Board and initial biopsies were harvested from the tumor. The histopathological diagnosis supported the diagnosis of cutaneous metastasis of lung adenocarcinoma. Further surgical treatment was warranted by the Tumor Board, and complete tumor resection was decided. Intraoperatively, the tumor engulfed both Cutaneoue Antebrachial Nerves, the cephalic vein, and invaded the forearm and arm fascia, and Brachioradialis and Brachialis muscles. The postoperative defect was covered with a split-thickness skin graft. Postoperatively, the patient had a good evolution as the intense pain subsided and the wound is healing nicely.

Conclusions
Cutaneous metastasis is rare, can occur in patients with lung cancers, or other internal malignancies, and it can be the first sign of an occult malignancy. Even though cutaneous metastasis is considered a hallmark of a diffuse metastatic disease with a poor prognosis, surgical treatment should be employed to improve the patients` quality of life.

Keywords
Metastasis - Cutaneous - Lung Adenocarcinoma - Skin

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IMPACT OF COVID-19 PANDEMIC ON CUTANEOUS MELANOMA-RELATED HOSPITAL ADMISSIONS IN OUR PLASTIC SURGERY DEPARTMENT

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Objectives
Cutaneous Melanoma is the most deadly type of skin cancer and its incidence is growing. The Covid-19 pandemic has disrupted the flow of planned medical and surgical activity. As a result, patients suspected or diagnosed with cutaneous melanoma may have experienced a delay in their treatment. This delay may have allowed the disease to progress, having a detrimental impact on patients' morbidity, mortality, and overall healthcare costs. This presentation explores the impact of the covid-19 pandemic on Cuteneous Melanoma-related patient hospital admissions in the Agrippa Ionescu Clinical Hospital, Bucharest.

Materials
We have collected regarding cutaneous melanoma-related hospital admissions in our plastic surgery department in the years 2018-2021. We have selected two-time frames: Pre-Covid-19 Pandemic (01.2018 - 11.2019) and During Covid-19 Pandemic (12.2019 - 12.2021). The latter has been further divided into three categories: Pre-Lockdown (12.2021 - 15.03.2020), Lockdown (16.03.2020 - 15.05.2020), and Post-Lockdown (15.05.2020 - 12.2021). We have compared the number of patient admissions during the covid-19 pandemic and their respective periods in 1 year before.

Results
In the 2018-2021 four-year time span our clinic had 186 cutaneous melanoma-related hospital admissions, out of which 75 in the 01.2018 - 11.2019 time frame and 121 in the 12.2019 - 12.2021 time frame. In the Pre-Lockdown period, we had 27 admissions, compared to 21 in the previous year same time frame. In the Lockdown period, we had 6 admissions, the same as in the previous year's time frame. In the Post-Lockdown period, we had 78 admissions, compared to 68 in the pre-pandemic time frame.

Conclusions
The Covid-19 pandemic has influenced medical activity in all specialties. Due to proper management, the treatment of melanoma-related cases has remained relatively constant throughout the pandemic period.

Keywords
Cutaneous Melanoma - Covid-19 - Pandemic

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FACIAL SKIN CANCER SURGERY– A CHALLENGE UNDER LOCAL ANESTHESIA

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Objectives
Skin cancer is one of the most prevalent forms of cancer, thus early diagnosis, treatment and prevention are crucial in helping to diminish the incidence, mortality and morbidity associated with skin cancers. This paper presents the pros and cons of local anesthesia in the treatment of skin cancers, including the clinical cases, summary of treatment, and prognosis.

Materials
The study took place from 2016 to 2021. 57 patients with facial tumors, with a mean age of 67 years, were included in the study. All underwent skin cancer removal, followed by reconstruction with local or loco-regional flaps, under local anesthesia.

Results
All flaps survived, and the outcome was aesthetic in all cases. Complications included hematoma (n=3). 3 patients had prior skin cancer surgery, which limited the laxity and volume of tissue that could be used. No patient had major complications.

Conclusions
Local and loco-regional flaps under local anesthesia offer an optimal shape and volume for face reconstruction. Facial skin cancer surgery under local anesthesia significantly contributes to minimizing the operatory time, thus the hospitalization and to decreasing costs of health care, comparing to the general anesthesia. Although, in our practice, excision of facial region skin tumors is an inoffensive surgery method, it can cause increased stress in some patients. However, the benefits are significantly greater than the disadvantages.

Keywords
local anesthesia, facial skin cancer, skin tumor, surgery, local flaps, loco-regional flaps

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REAPPRAISAL OF GIANT BASAL CELL CARCINOMA: CLINICAL FEATURES AND OUTCOMES

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Objectives

Background: Giant basal cell carcinoma (GBCC) is a rare subgroup of basal cell carcinomas with a diameter of >5 cm. Current evidence about determining factors is conflicting, suggesting patient neglect, on the one hand, and biologically aggressive behaviour, on the other, with outcomes varying from clearance to death. We aimed to clarify the natural history of GBCC and its response to treatment.

Materials

We extracted information from clinical records of all patients with GBCC treated from 1998 to 2017 in a tertiary oncology hospital in northwest England. Associations between patient and tumour characteristics were investigated, and modes of treatment and outcomes were assessed.

Results

In the 20-year study period, 43 patients (median age 76 years; 23 (53%) female), 3 of whom had Gorlin syndrome, were treated for GBCCs. Median diameter was 6.3 cm, and median time to presentation was 5 years. Seven (16%) GBCCs arose from recurrent BCC, while the majority (84%) presented de novo. The size of GBCC was significantly correlated with delay in presentation ($p = 0.03$) but not with age or sex. Of 41 patients receiving definitive treatment, 19 GBCCs were treated by excision with ≤1 cm margin and none recurred during follow-up, compared with 10 recurrences of 23 treated with photodynamic therapy (PDT), and 1 of 7 recurred after radiotherapy. Two of 43 patients with GBCC (<5%) presented with extensive local invasion, one of whom also had distant metastases, and both died of the disease.

Conclusions

The majority of GBCCs are not clinically aggressive and respond to conservative surgical treatment with a low risk of recurrence.

Keywords

Aggressive BCC; Giant basal cell carcinoma; Photodynamic therapy; Radiotherapy; Surgical treatment.

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RADIOTHERAPY FOLLOWING ONCOPLASTIC SURGERY: A CHALLENGE IN BREAST RECONSTRUCTION

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Objectives

Surgery remains the cornerstone of treatment for the majority of breast cancer patients, along the prominent role of systemic therapies such as chemotherapy, hormonotherapy, immunotherapy and radiotherapy. Irradiation plays its crucial role in the locoregional disease control, assuring the oncological safety of the tumor bed and axillary nodes. Integrating radiotherapy with breast reconstruction is a considerable challenge, giving rise to controversy in the management of breast cancer. RT can lead to an increased frequency of complications in the reconstructed breast. Conversely, the reconstructed breast can increase the complexity of radiotherapy delivery. How to minimize the frequency of complications without compromising oncological or cosmetic outcomes of the reconstructed breast is an important shared multidisciplinary goal.

Materials

Between 2016 and 2022 in the Plastic Surgery Clinic of “Pius Branzeu” Emergency County Hospital Timisoara 254 patients underwent an oncoplastic surgical approach for primary invasive breast tumors. 187 patients received postoperative irradiation: 133 underwent modified radical mastectomy and immediate reconstruction with tissue expander and 74 patients were treated with conservative oncoplastic techniques using mammoreduction/repositioning techniques. Of the 74 patients, 13 required re-excision of the margins to achieve oncological safety and 11 required mastectomy. For 124 patients, the contralateral breast symmetry was finally performed, either by breast reduction or breast augmentation techniques with definitive implants. WBRT was administered after complete wound healing (3-5 weeks after surgery). The radiotherapy dose was between 1,8-2 Gy daily.

Results
For OBCS, radiotherapy developed changes in the skin (erythema, dry or wet descuamations, ulcers), only 10-15% being more serious, accompanied by inflammatory edema, appeared at intervals of 2-6 weeks from the first session. The main problem was the target volume contouring in patients with mastectomy and reconstruction with expanders who had a rather high complication rate - 39% (erythema, seromas, ulcers, wound dehiscence, capsular contracture, pain, partial reduction of shoulder mobility) requiring the expander explants and reconsideration of the reconstructive procedure, with a lower degree of patient satisfaction. All patients who undergo BCS were treated with RT- problems arised with the relocated tumour bed, the placement of clips after tumor resection and before oncoplastic reconstruction very was mandatory. The indication for postmastectomy RT (PMRT) is mainly based on tumour stage and the extent of lymph node involvement. In our cases, is was not possible to opt for definitive reconstruction with a breast implant because we did not have enough data to confirm the lack of indication for radiotherapy treatment. For this reason, we opted for reconstruction with a temporary implant that would maintain an acceptable shape during the transition period of adjuvant therapy and a sufficient cavity to be filled with either autologous tissues or a permanent implant.

Conclusions
Surgical techniques for mastectomy and reconstruction are constantly evolving to improve patient's quality of life (QoL). Multidisciplinary work is needed to individualise treatment for optimal oncological outcomes, in the setting of radiotherapy following breast reconstruction. This way, a greater understanding of the chosen surgical technique will help define the target volumes for radiotherapy, while limitating the subsidiary complications and therefore achieving better breast cosmesis.

Keywords
Breast cancer, oncoplastic surgery, radiotherapy

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MANAGEMENT OF SKIN NECROSIS IN IMPLANT IMMEDIATE BREAST RECONSTRUCTION

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Objectives
Immediate breast reconstruction with silicone implants is a very popular procedure, with decent to very good results, but is also the procedure with the highest rate of complications. One of the most common and unpleasant complications is skin necrosis which increases the risk of breast loss. The purpose of this presentation is to show different types of skin necrosis management for immediate breast reconstruction.

Materials
Once the necrosis is delimited the necrosis is excised either under local anesthesia if the necrosis is small or under general anesthesia if the necrosis is larger. Larger defects are rarer and they require flap coverage with local or regional flaps. We used advancement abdominal flaps, perforator flaps based on perforators from the intercostal arteries and muscle sparing latissimus dorsi (MSLD).

Results
Necrosis incidence in our series is about 14% and about 6 % of patients required surgeries under general anesthesia. The most used flap is abdominal advancement flap which is reliable for central defects. Intercostal perforator flaps are useful in defects of the different parts of the lower pole and MSLD is the salvage procedure when less invasive surgery is not enough.

Conclusions
Immediate breast reconstruction with implants is a seductive procedure, but it also associates high complication risks, one of the most unpleasant being skin necrosis which associates a high risk of breast loss. Local and regional flaps are a reliable solution in most cases, and they are salvage procedures of the reconstructed breast.

Keywords
necrosis, immediate breast reconstruction, complication, flap, breast salvage

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TIPS AND TRICKS FOR SUCCESSFUL RESULT OF BREAST RECONSTRUCTION IN IRRADIATED CASES WITH LATISSIMUS DORSI FLAP AND IMPLANT

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Objectives
Introduction: Adjuvant radiotherapy poses the most serious challenges for surgeons who must choose both the time and the optimal reconstructive method for radiotherapy patients. One of the postmastectomy reconstructive techniques, in patients subjected to radiotherapy, is the method that combines the own tissue with the alloplastic material, the latissimus dorsi flap and the breast implant. This method is highly versatile and can be safely applied to radiotherapy patients.

Materials and Methods:
Between April 2014 and April 2020, we performed 219 breast reconstructions of which 156 cases were reconstructed with latissimus dorsi flap and implant. The main elements studied were: patient selection for the above mentioned technical procedure, an indication of operative moment and type of intervention, preoperative measurements and sketching, the minimal scar of the donor area, decision to perform simultaneous symmetrization, simultaneous prophylactic mastectomy with immediate reconstruction, cosmetic appearance, stability and evolution of results over time. The follow-up period was 1 year for all patients, while in the case of some patients up to 5 years.

Results
This technique could be applied in all cases with radiotherapy, regardless of the size of the contralateral breast, the technique allowing the shaping of breasts of different volumes. The cosmetic appearance has improved over time, the breast having characteristics similar to the healthy one - shape, natural ptosis, consistency, well-defined inframammary groove. Simultaneous symmetrization by breast reduction, mastopexy with or without implant or breast augmentation led to superior results and a high degree of patient satisfaction. The average duration of recovery was 4 weeks, with rapid social and professional reintegration of patients. The small number of complications - 1 total flap necrosis, 3 cases of partial necrosis, 5 seromas, with a small number of reinterventions - 4, make this method one of the safest in the difficult context of the radiotherapy treatment of prepectoral area.

Conclusions
Careful planning of breast reconstruction with the help of the latissimus dorsi flap in combination with the breast implant, the meticulous technique determines stable results over time, with superior cosmetic appearance of the breasts reconstructed with the aid of this method while minimizing the risk of complications. Thus, the quality of life of patients is much improved, and the social and professional reintegration is relatively fast.

Keywords
latissimus dorsi flap, breast reconstruction, breast symmetrization, radiotherapy

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CASE REPORT – RARE COMPLICATION AFTER BREAST TISSUE EXPANDER PLACEMENT POST-MASTECTOMY

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Objectives
Investigation, management and results

Materials
A 44 year old woman diagnosed with breast cancer by core biopsy has undergone bilateral mastectomy and placement of tissue expanders in a single operation at a different centre. The patient has been complaining of a moderate constant left parasternal pain during the inflation sessions of the tissue expanders. The patient's complains were not addressed by the initial team. On the final sessions

of the filling of the tissue expanders the pain has become severe the patient approached us for a second opinion. After further evaluation by our centre the diagnosis of costochondritis was suspected and confirmed during surgery. For the final result 3 more operations were required which will be presented including the final outcome.

Results
Final results will be displayed on the presentation

Conclusions
Diagnostic and management approach

Keywords
Complication after placement of breast tissue expanders

References
Centre experience

THE IMPORTANCE OF HAND THERAPY AND IMMEDIATE POSTOPERATIVE SPLINTING FOLLOWING OPEN PALM TECHNIQUE FOR DUPUYTREN'S DISEASE.

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Objectives
Dupuytren's disease was named after Baron GuillaumeDupuytren, who described the disease in 1831. Dupuytren's contracture is a benign fibroproliferative condition, characterized by thickening and retraction of the palmar fascia with flexion deformity of the fingers. The open palm technique, also refered as open transverse palmar fasciotomy technique,was first described by Dupuytren and popularized by Mc Cash in 1964. Results reported with this technique showed a low rate of complications, as hematoma, skin infection, and infection, comparing to the other most popular surgical incisions.

Materials
In this study we included 11 patients (12 hands) who suffered from Dupuytren's disease, Tubiana stage III and IV, all treated by the same surgeon with the open palm technique. Under wide awake anaesthesia, the palmar cord was identified and the affected tissue was removed through transverse incision in the region of distal palmar crease and metacarpophalangeal (MCP) crease. When needed, an additional incision over the proximal interphalangeal (PIP) joint crease was performed. The digits were released into full extension by gentle pasive manipulation of the joints. The digital incisions were closed primarily, while the palmar incision was left open. A nonadhesive dressing was apllied and the affected digits were splinted in full extension at the MCP and PIP joints. A strict rehabilitation program performed by the same hand therapist was initiated after 6 days. Initially, splints were worn at all time for 2 weeks, followed by night time splint for another 2 weeks. Active and passive mobilisation with the hand therapist was started 7 days postoperatively, and occupational therapy after 4 weeks.

Results
The wounds closed in a mean period of 23 days. Skin necrosis, residual hematoma, infection, digital neurovascular injury, wound healing problems were not reported. In 11 hands (92%) the complete range of motion was regained and the deformities were completely corrected

Conclusions
Open palm technique is a safe option to treat Dupuytren's disease, which offers an attractive balance between complication rates and overall results, comparing to closed techniques. For the best results, the patient must be instructed about the importance of postoperative care, including the absolute necessity to follow the hand rehabilitation protocol.

Keywords
Dupuytren's contracture, open palm technique, postoperative rehabilitation, hand therapy.

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RECUPERARE POST FRACTURĂ CU DEPLASARE FALANGĂ PROXIMALĂ DEGET II PRIN ORTEZARE ȘI KINETOTERAPIE – STUDIU DE CAZ

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Objectives
Fractura falangei proximale este mai rar întâlnită decât cea a falangei distale, cu toate acestea incidența este destul de ridicată, atât în rândul copiilor, cât și a adulților. Tratamentul de elecție în cazul fracturilor cu deplasare este cel chirurgical, prin fixare cu materiale de osteosinteză, iar abordarea chirurgicală joacă un rol major în prognosticul pacientului.
Recuperarea medicală după intervenția chirurgicală este de o importanță majoră, aceasta restabilind mobilitatea și functionalitatea degetului afectat.

Materials
In acest articol este prezentat cazul unui pacient cu fractură cu traiect oblic și cu deplasare la nivelul falangei proximale a degetului II, mână strangă, post intervenție chirurgicală de fixare a acesteia cu două broșe Kirschner.
După extragerea materialului de osteosinteza pacientul prezenta redoare funcționala majoră, cu articulația MCFP blocată în flexie de 110grade, cicatrice retractilă și imposibilitatea realizări extensie active din MPFP. Așadar s-a realizat fiziokinetoterapie și ortezare personalizată pentru menținerea degetului în extensie, progresiv, dar cu posibilitatea realizării flexiei active. Astfel s-a încercat evitarea unei noi intervenții chirurgicale și recuperarea functională a pacientului într-o masură cât mai mare astfel încât acesta să poată folosi degetul în realizarea ADL-urilor.

Results
Cu ajutorul ortezării și a fiziokinetoterapiei pacientul a putut fi recuperat în proportie de 90%, astfel evitându-se o noua intervenție chirurgicală și eventualele complicații ca urmare a acesteia.

Conclusions
Maniera în care sunt realizate intervențiile chirurgicale au un impact major asupra evoluției și prognosticului pacientului.
Colaborarea dintre medicul chirurg și fizioterapeut este esențiala pentru a fi luate deciziile cele mai bune legate de pacient și de recuperarea acestuia.

Keywords
Fractură falangă proximală, recuperare, ortezare

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WHAT WE KNOW AND WHAT WE SHOULD KNOW ABOUT HAND FUNCTION: HAND THERAPIST POINT OF VIEW

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Objectives
Restoring hand function is a complex process that consist in stages and limitations impose by the severity of the initial trauma, methods used in evaluation, surgical strategies and last but not list, therapy protocols and management afterwords.

Materials
Using specific protocols, subjective adaptation, personalised interventions, constant evaluation tools and methods, having a close look at limitations and injuries preventions, rehabilitation program can obtain restoration of lost function and social and professional reintegration of the patient is short time and good function.

Results
Following protocols and variations, maintaining a close connection between surgeon, patient and therapist, good management and good evaluation, are some of the very important aspects in restarting function in hands.

Conclusions
Good understanding of hand function and limitations and adaptive evaluating tools along with evidence based methods and protocols are some of the basic needs in managing hand therapy rehabilitation program.

Keywords
Hand Therapy, Evaluation, Protocols

THERAPEUTIC APPROACH IN KIENBOCK SYNDROME

ANDREEA TRUSCA, LUCIAN GALOSI

EVALAURE FUNCTIONALA IN MANA TRAUMATIZATA

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Objectives
Evaluarea in traumatismele mainii este parte componenta a tratamentului recuperator. Evaluare functionala primara postoperatorie este baza stabilirii obiectivelor de tratament. Aceasta se regaseste in tratamentul recuperator atat ca forma de monitorizare continua a rezultatelor, insa si ca forma de antrenare a functiiilor diminuate. Aceasta foloseste instrumente specifice (goniomentru, two point discriminator, jamar dinamometru, pinch metru, kit de dexteritate), cat si formulare de monitorizarea dexteritatii redobandinte.

Materials
Recuperarea mainii este o specialitete in sine care se dezvolta si in tara noastra. Astfel pentru orice tratament reusit e important sa identificam punctul de plecare, sa avem capacitate de a stabilii obiective de recuperare in concordanta cu potentialul functional restant postraumatic.

Results
Mana traumatizata este un o afectiune mutilanta pentru pacient si familia acestuia. Recuperare este de lunga durata si cu asteptari semnificative. Evaluare functionala este un instrument prin care pacientul si terapeutu pot urmarii impreuna si pot stabilii statusul functional si tratamentul adecvat.

Conclusions
Acest material are ca obiectiv sa puna in ordine succesiune actiuniilor in recuperare mainii traumatizate si un limbaj comun pentru echipa multidisciplinara din jurul pacientului.

Keywords
recuperarea mainii, hand trauma assesment, hand surgery, hand rehabilitation,

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RECUPERARE IN FRACTURA DE EPIFIZA DISTALA DE RADIUS.

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Objectives
Una dintre cele mai frecvente traumatisme directe prin cadere de la aceiasi inaltime este fractura de epifiza distala de radius. In ciuda frecventei acesteia si experientei terapeutului, acesta poate provoca sechele articulare si limitari. Acestea sunt in concordanta cu gravitatea fracturii, cu abordarea ortopedica si momentul initierii tratamentului recuperator.

Materials
Fractura de epifiza distala de radius necesita o abordare individuala, insa permite linii generale care pot fi in beneficiul pacientului. Astfel doresc sa subliniez aspectele generale care pot duce la o recuperare functionala crescuta.

Results
Din experienta cazurilor rezolvate in centrul nostru, preconizez un material care poate fi un subiect deschis pentru o discutie constructiva in beneficiul pacientiilor cu fracturi la nivelul epifizei distale de radius.

Conclusions
Evaluarea si tratatamentul pot duce la o recuperare functionala. Insa definirea particularitatilor acestei patologii ne pot ajuta sa depasim situatii delicate si complicatii.

Keywords
Fractura epifiza distala de radius, recuperare ARC,

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EARLY ACTIVE RESISTED ROM OF ZONE 2 FLEXOR TENDONS INJURIES FOLLOWING 'PULL OUT' TECHNIQUE, HAND THERAPIST PERSPECTIVE.

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Objectives
Objectives: Obtaining safe Early active mobilisation of Flexor tendon Injuries, follow a long path in Hand surgery. Using 'pull Out technique' allows not only AROM But AR ROM very early after intervention.

Materials
Methods: Following 'pull Out technique', early active flexion is enhanced. Day 2 after surgery, a dorsal blocking splint is constructed with fingers in relative extension from all joints and slight flexion of ARC and MCF.
Patient performs PROM and AROM under supervision in the first day after surgery, resting in full extension in between sessions.
48 hours after surgery, a pulley is attached on the dorsal aspect of the Finger, and using rubber band, the AR ROM is initiated. Patient is instructed to perform 7-10 repetitions every hour.

Results
Results: All patients regain full range of motion in the first 5 days after surgery and maintain all functions intact up until 6 weeks. We encountered No rupture, and in few cases a dorsal extension splint was used during the night.

Conclusions
Conclusions: Moving the tension from the suture site with this technique, allows very early mobilisation of tendons with good results and full ROM.

Keywords
Flexor tendon, Pull-Out technique, ROM

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EVALUATING THE LEVEL OF POSTTRAUMATIC STRESS IN PATIENTS HOSPITALIZED WITH HAND INJURY

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Objectives
Stress is a psychological factor to which a person is exposed when hospitalized, especially when being under the risk of temporary or permanent disability, abandonment, pain, loneliness, as it is the case of patients with hand injury. Our objective is to evaluate the level of stress of the patients with complex hand injuries by taking into account the symptoms of PTSD and, also, to describe the degree of personal, social and professional integration.

Materials
Fifty patients with complex hand injuries were included in the study and they all signed informed written consent. They were given the PTSD Checklist for DSM-5-Standards and asked to choose one of the five possible answers. After gathering all the data, we established the percentage of the patients meeting the criteria for PTSD and, also, analysed the answers of those just facing symptoms.

Results
Two patients met the criteria for PTSD, meaning 4% of all patients; forty-two patients experienced symptoms, but did not meet the criteria and eight patients experienced no symptoms of PTSD.

Conclusions
In this study, despite a limited evidence base, the test results may detect only a low percentage of patients with PTSD, but a very high number of patients facing symptoms, such as disturbing memories, avoiding thoughts and feelings, sleeping disorders.

Keywords
stress, PTSD, hand injury, psychological factor

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REGENERATIVE PLASTIC SURGERY (RPS) APPLIED IN TREATMENT OF A PATIENT WITH LINEAR SCLERODERMA IN INFERIOR 1/3 OF THE FACE

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Objectives
Linear scleroderma is a rare autoimmune disease with progressive loss of subcutaneous fat and pigment changes in the skin. It is a type of localized scleroderma in which the area of skin affected appears in a band. It typically first appears in young children on one side of the body. It can affect the trunk, arms, legs, face or neck, or multiple parts of the body.

Materials
Regenerative plastic surgery applies the principles of cellular and tissular regeneration. It has the following effects: natural like, improved appearence. Adipose tissue is an abundant source of autologus cells for regenerative medicine applications. Laser CO2 is a regenerative agent for resident and grafted cell. Platelet rich plasma (PRP) is a blood product with high concentration of platelets in a limited volume of plasma. This contains growth factors (IGF1, VEGF, FGF2, EGF, TGF beta1), bioactive proteins that regulate differentiated cells, modulating cell growth and activity.

Results
Patient, 32 years old, presented with a misterious lesion affecting the chin and lips without a diagnostic after 10 years of searches. Local examination relates a “scar like” lesion with lack of all layers of soft tissues in the chin area with regular edges, painless, hyperpigmented, fibrotic. A team of plastic surgeon ,rheumatologist and dermatologist, raised the suspicion of the localised sclerodermia. This diagnostic was certified through biopsy and histopathological exam, antibodies (SCL 70, anticentromere +). Therapeutic plan was plastic regenerative surgery such as: lipofilling, PRP, laser CO2, in serial or simultaneous combination.

Conclusions
The regenerative plastic surgery is a valuable option. It contains different tools like fat graft, adminstration of PRP and Laser therapy . Its effect is to produce the missing tissues and to diminish surgical trauma, especially in this case where we must avoid the rebound effect of the illness due to trauma .The patients are seeking the treatment because the results are: long lasting, visible positive, natural with minimal to 0 complications, minimal inavsivity.

Keywords
regenerative plastic surgery, linear scleroderma, lipofilling, PRP, laser CO2

References
Clinical case.

THAT SMALL NASAL DORSUM HUMP FOR NATURAL LOOKING DRIVE THE PATIENTS CRAZY

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Objectives
Rhinoplasty is one of the most popular procedures all over the world. Although most of the time is a simple procedure, the revision rate is reported to be as high as 10% in several reports. Asymmetries is one of the reasons for this. Dorsal hump small bumps are part of the reason of unhappiness for most of the patients.

Materials
In the last three years, 14 patients (1.6 %) with small residual dorsal small hump were reoperated after rhinoplasty. Five patients previously had secondary rhinoplasty. The reason for surgery was the unhappiness of the patient with that small dorsal hump. All reinterventions were performed after one year since last procedures. 95% were closed rhinoplasty.

Results
The cause for small dorsal residual humps were found to be cyst in single patient, graft displacement in 6 cases and upper lateral cartilage asymmetries for the rest. Secondary closed rhinoplasty was the treatment of choice and the intercartilaginous incision was preferred. Rasping of the nasal dorsal area was performed in all cases. Partial resection of the prominent upper lateral cartilages was done as needed. In single case morselized cartilage graft was place on the dorsum. There was no recurrence after treatment.

Conclusions
Although a "natural looking small dorsal hump" is advocated by some authors, it does not fit my patients. Those who have a thick skin, this small hump is well hidden, and the patients feel it at palpation. In these cases, I strongly encourage them not to have surgery. In order to reduce the possibility of residual small dorsum hump I separate the upper lateral cartilage from the septum, and I rasp very well the area. In certain cases when resection of the upper lateral could compromise the internal valve, I use spreader grafts. When nasal dorsum grafts are needed, I always use morselized cartilage.

Keywords
Dorsal hump, rhinoplasty, revision

DOUBLE LEVEL OSTEOTOMIES: A USEFUL TOOL IN CROOKED NOSE

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Objectives
The primary element in crooked nose is a midline deviation of the nasal pyramid but sometimes less attention is paid to the configuration of lateral nasal walls, that could be tilted, convex, concave or partially burried. In this study we analyze our 10 years of experience with this technique, from 2011 to 2021 the authors focusing on complex crooked noses in primary, secondary and congenital cases.

Materials
We analyze 284 patients between years 2011 to 2021 diagnosed with crooked nose, who undewent primary and secondary procedures who needed straightening of nasal pyramid in accordance to our concept of double level osteotomies. We describe the tools, the tecnique and the levels needed for the bone osteotomies. Patients' age varies from 14 yo to 59 yo and the mininum followup for 1 year (range 1 to 8 years postop followup).

Results
Mean axal deviation was 7.48 degrees preop and 1.14 postop with a consistent correction of crooked nose. Based on our follow-up questionnaire, of 284 patients, 210 were very satisfied, 68 very satisfied, 3 were neutral and 3 were unsatisfied. We analyze the reasons for unsatisfaction.

Conclusions
The authors' opinion is that association of double level osteotomies with crooked nose is sometimes needed in order to achieve the best result possible. Precise preoperative planning and technical execution have a paramount importance in order to achieve the desired result. Long term follow-up shows the stability and importance of this technique.

Keywords
#rhinoplasty #crookednose #deviatednose #deviatedseptum

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RHINOPLASTY PHOTOGRAPHY: ENHANCING PICTURES OR ENHANCING RESULTS?

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Objectives
Rhinoplasty is considered one of the most challenging procedures in plastic surgery. As the most common way to show the results is by showing the pictures with different angles of the patient, we consider of paramount importance how pictures are taken in order to assess the postop results, as by different ways to do it, we may enhance or not the pictures, but that does not mean necessarily we enhance the results as well.

Materials
We analyze different methods of pictures taking, with compact camera full frontal flash (the most common way pictures are taken nowadays) or with professional photo studio with special lights conditions.

Results
By different ways of taking the pictures, we can improve the results and "hide" some of postop flaws or we can highlight every minor imperfection, especially at the keystone area, where deformities like open roof or inverted V deformity can not be hidden with incorporated direct flash compact camera.

Conclusions
The way of taking pictures is paramount and the philosophy that comes with it as well, as we have two option: one is to improve our pictures in order to show better results, or two is take the "worst" pictures without covering any flaws and to improve ourselfs as surgeons and try to get better results that don't need pictures enhancing.

Keywords
#rhinoplasty #photograpy #beforeandafter #rhinoplastybeforeandafter

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FACIAL VASCULAR MAPPING USING THERMAL SCANNING AND DOPPLER ULTRASONOGRAPHY FOR PERFORMING COMPLICATION-FREE DERMAL FILLER INJECTIONS

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Objectives

The aging process leads to the loss of volume of specific facial regions due to soft tissue redistribution and bone resorption1. When it comes down to rejuvenating these areas (e.g. perioral, nasolabial, zygomatic, temporal, frontal), there are techniques that enhance the volume through filler injections. Safe and effective aesthetique manoeuvres rely on a clear understanding of the facial anatomy, as

insufficient knowledge of this aspect can lead to improper administration of the substances and consequently to complications2.

Materials
We performed thorough layer-by-layer dissections on ten freshly formalinized cadaveric heads. The dissections were carried out in the dissection laboratory of the Anatomy Discipline and the data obtained were digitally photographed and edited, without altering the scientific content. We also conducted a thermographic and an ultrasonographic study, where we highlighted vascular routes by thermal scanning and performing Doppler ultrasound on 40 subjects and we proposed a correlation between the information acquired and the anatomical ones.

Results
By performing detailed dissections, a considerable amount of attention has been paid to the trajectory and variability of the main vasculo-nervous bundles of the face and their relationship with the surrounding structures. We created then a facial danger zones map based on the data gathered through thermal scanning and Doppler ultrasonography which can be useful for the practitioner to reduce the risk of intravascular injections. Practically, we introduced a new work object, the thermal camera, whose values have not been exploited so far in the clinic. We also highlighted the versatility of the duplex ultrasonography which can be used to assess the variations of the vascular routes before injecting the filler, during the procedure, offering guidance to avoid complications, or even after if hyaluronidase should be injected in a specific vessel.

Conclusions
Safe and complication-free procedures in terms of facial rejuvenation require exact knowledge of the main neuro-vascular bundle of each facial region and their anatomical variability should be emphasized.
The relevant anatomical descriptions correlated to the thermal scanning images and ultrasonographic findings will serve as crucial information for plastic surgeons to diminish the vascular risk during procedures for facial rejuvenation.

Keywords
Facial Vascular Mapping, Doppler Ultrasonography, Thermal Camera, Anatomy

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CASE REPORT – DRAMATIC COMPLICATION FOLLOWING BLEPHAROPLASTY. MANAGEMENT AND FINAL RESULT

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Objectives
Management options and surgical options after post-op blepharoplasty complication

Materials
Trauma swab was sent
Antibiotic usage
Operation

Results
A 59 year old woman after primary upper and lower eyelid blepharoplasty by a different surgeon had developed upper and lower eyelid soft tissue infection. Discussion about potential causes, initial unsuccessful management by the 1st surgeon will be presented. Initial dramatic presentation in our unit, step by step management including surgical procedures and final result will be analysed and displayed.

Conclusions
Surgical complication step by step management algorithm

Keywords
Post-blepharoplasty surgical complication

References
Centre's experience

MODIFIED INTERNAL MASTOPEXY TECHNIQUE IN MUSCLE SPLITTING BIPLANE BREAST AUGMENTATION

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Objectives
The technique of muscle splitting biplane breast augmentation associated with internal mastopexy to correct breast hypoplasia, ptosis and asymmetry was reported in 2014. Our hypothesis was that if a single layer of mastopexy sutures could achieve good aesthetic correction of asymmetry and minor ptosis, then an even better correction of Grade I breast ptosis with a loose skin envelope could obtained with two layers of sutures and complete subfascial dissection. The purpose of this article is to present recent modifications and results of this technique.

Materials
Since 2016, 40 patients with breast hypoplasia associated with excessive or loose skin envelope or breast ptosis grade I have benefited from a new and improved technique of internal suture mastopexy combined with the muscle splitting biplane breast augmentation (muscle splitting biplane breast augmentation with internal mastopexy type II or MSBBA – IM2).

Results
Excellent long-term results have been obtained by using the muscle splitting biplane breast augmentation with internal mastopexy type II, which maintains a natural breast shape and a smooth transition between the soft tissue and implant in the upper pole by redraping the breast parenchyma both at the level of the upper pole and at the level of the lower pole of the breast.

Conclusions

The new technique of muscle splitting biplane breast augmentation with internal mastopexy type II or MSBBA – IM2 offers improved long-term aesthetic results and is an effective alternative in selected patients requiring correction of breast hypoplasia associated with excessive or loose skin envelope or breast ptosis grade I.

Keywords

muscle splitting biplane, pocket, internal mastopexy, breast augmentation, ptosis

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LONG TERM RESULTS IN SUBFASCIAL BREAST AUGMENTATION

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Objectives
One of the most popular surgical cosmetic procedures, breast augmentation, has enjoyed large acceptance in the last few decades. One of the most important factors in the dynamics established between the implants and the soft tissues after breast augmentation is the pocket plane. Surgeons have been seeking the proper plane into which the implant might be placed. The subglandular approach resulted in implant edge visibility and was thought to result in a higher incidence of fibrous capsular contractures. Despite the advantage of concealing the implant edges using the subpectoral approach, implant displacement occurred with contraction of the pectoralis muscle. The use of the retrofascial plane seems to yield the benefits of both planes without the deficits.

Materials
Since 2006, more than 200 patients with hypomastia have undergone subfascial breast augmentation.

Results
Pleasing long-term results have been obtained by using subfascial breast augmentation, with maintenance of a natural breast shape and a smooth transition between the soft tissue and implant in the upper pole. There were no capsular contractures and no complaints regarding displacement of the implants with contraction of the pectoralis major muscle.

Conclusions
The subfascial breast augmentation technique offers improved long-term aesthetic results because the dynamics between the implant and soft tissues have been optimized. This technique is extremely versatile and may also be used in patients requiring removal and replacement of breast implants.

Keywords
Breast augmentation, pectoralis fascia

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THREE INNOVATIVE STEPS FOR OBTAINING STABLE ROUND SHAPE IN THE BREAST PEXY/ REDUCTION - OPTIMISATION OF A CLASSICAL TECHNIQUE

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Objectives
Breast reconstruction for aesthetic purposes is a challenging task for a plastic surgeon. This is due to the fact that it not sufficient to obtain the desired breast shape (round and projected), but also to offer a long term stable result. Furthermore, a technique which can be applied both in hypertrophic breasts as well as in breast ptosis could represent an ideal option for any plastic surgeon.

Materials
During 27 years of surgical activity we treated over 1000 cases of breast dismorphies requiring pexies (~35%) and reductions (resection of 70 gr-1000 gr/breast). 95% of the operations were performed using the central inferior pedicle technique (CIP) described by Popescu in 1980. [1]
The surgical technique consists of making a key shape incision, de-epithelialization of the periareolar skin, reinforcement of the lower pole using 4 non-absorbable sutures (creating a "hammock" to support the breast), perpendicular dissection on the medial, lateral and superior aspect of the areolar complex down to the pectoralis major muscle, half-moon excision of the extra tissue (fat and breast gland), suturing the remaining tissue on the thoracic wall, drainage, suture of the skin and underlying tissue in an inverted T and a circumareolar suture.

Results
The breast reduction/pexy technique had a low complication rate – 0,25% hematoma (2 cases), 0,38% seroma (3 cases), 0,6% wound dehiscence (5 cases) and 1 partial necrosis of the areola (0,12%). Postoperatory, the breast presented a round, full shape of the inferior pole; in 2 cases there was excess tissue on the lateral and medial side of the inferior pole of the breasts, one needing revision surgery while the other one corrected its lower pole shape in time.

Conclusions
The Popescu technique is a safe surgical intervention which can be used both for breast reduction and mastopexy. The refinement of this technique, by adding the 4 sutures in the infraareolar region to mimic a hammock, reinforces the inferior pole, preventing future ptosis. Proper tissue excision needs to be performed in order to obtain an aesthetic round shape of the inferior pole.

Keywords
Breast reduction, mastopexy, de-epithelialization, inferior pole

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BREAST IMPLANTS‘ SECONDARY SURGERY; SOME IMPORTANT CONCLUSIONS IN A PERSONAL SERIES OF LONG TERM PATIENTS

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Objectives
Long term breast implanted patients‘ presentations to the surgeon are becoming very frequent. In order to contribute with more data about this complex issue, the author and the team decided in 2017 to start a prospective study for the long term breast implanted patients (more than 7 years) with the aim to check different hypothesis.

Materials
From a large series of patients operated for primary breast augmentation between 1999 - 2010 - in majority by the same surgeon, 31 patients met the inclusion criteria: to present themselves for secondary breast surgery; the term of implants’ bearing to be equal or more to 7 years; not to have a history of breast cancer; to agree for all the required preoperative and intraoperative documentation. Patient demographics and a series of individual data were analyzed. This data is corroborated with patient’s physiological or pathological events (pregnancies, breast feeding, milking).

Results
Our prospective study revealed:
Most of the patients (77.5%) opted for secondary breast augmentation rather than explantation.
The most used breast implant shape was round, placed predominantly subpectoral, equal or slightly larger, the initial brand being preferred in most of the cases.
Capsular contracture is not dependent on the time of bearing the implants but rather on implant type and trauma during milking.
The most used brand both for primary and secondary augmentation was EuroSilicone.
The rate of ruptures did not increase proportional with time.
A uniform decrease in the degree of capsular contracture can be observed in the case of breasts with intact implants.
The imaging diagnostic was an important indicator for implant impairement (87.1 %)
Sub total (extended) or limited capsulectomy were performed when/ where fibrosis was important, capsulotomies were very often performed.
The histopathological changes in all cases proved to be benign and no case of BI-ALCL was found.

Conclusions
The evidence-based practice is able to provide information on the long-term safety of silicone breast implants, thus participating in strengthening the scientific community by providing valid and powerful information, but also in increasing patients' confidence in the results of surgery and their health.

Keywords
breast surgery, long term breast implants, evaluation, explantation, revisional breast augmentation, capsulectomy, capsulotomy, BI-ALCL, breast capsule, histopathology, prospective study, capsular contracture, milking

TRANSAXILLARY ENDOSCOPIC BREAST AUGMENTATION (TEBA): CONCLUSIONS AFTER 15 YEARS OF EXPERIENCE

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Objectives

Currently there is an increasing demand from the patients having aesthetic surgery not to bear the tell signs of the surgery: e.g. visible scars.
In this presentation we will expose our 15 years experience, from 2006 to 2021, with transaxillary approach, with different brands of implants, and the conclusions that have evolved during that experience.

Materials

We analyze 764 patients, treated with this method between 2006 to 2021, aged between 18 to 65 years old. We used different techniques by transaxillary approach: retroglandular, subfascial, totally retropectoral and dual plane regarding the implant pocket position.
We used transaxillary technique for aestetic augmentation both primary and secondary and for reconstruction purpose in Poland syndrome.
We used both round and anatomic implants, silicone and saline filled implants from different FDA and/or CE approved brands.

Results

Patients were followed up for an average of 18 months (range 6 months to 87 months). We used both anatomical and round shape with a mean implant size of 325 cc (range 200cc to 550cc). We discuss aesthetic results, reoperation rate, complications incidence and overall satisfaction rate with this technique.

Conclusions

Transaxillary endoscopic breast augmentation (TEBA) is a very safe method for breast augmentation, has the advantage of not having scars on the breasts and also many other advantages compared with the classic techniques, but also a main disadvantage that it requires a significantly longer learning curve compared with inframammary approach.
Refinements with the technique enable patients with a faster recovery, usually within a few hours after surgery.

Keywords

#transaxillary #transaxillarybreastaugmentation #breastaugmentation

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BREAST IMPLANT ILLNESS: A STEP FORWARD IN UNDERSTANDING THIS COMPLEX ENTITY AND THE IMPACT OF SOCIAL MEDIA

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Objectives
The number of implant-related complaints is constantly rising, a phenomenon probably accentuated by the extensive use of social media by patients. Our aim was to identify and classify the most common symptoms described by patients in the online environment where they are free to express themselves and to verify in the literature the medical correlation between these symptoms and the existence of a breast implant.

Materials
A group of signs and symptoms considered to be caused by mammary implants is known as “Breast Implant Illness”. This paper analyzes the increased number of posts by patients on social media in which they describe their symptoms, their disappointment with the decision of using breast implants, and the beneficial effects of explantation. The case of a patient with breast implants who visited our clinic is reported here. The patient complained of two palpable masses, located in the left axilla and in the superolateral quadrant of the left breast. The pathophysiological mechanism by which lymphadenopathy occurred after a long period of time remains uncertain.

Results
A review of the literature was conducted to identify the underlying causes of implant-related complaints, allowing evaluation of the presence of local complications, cancer with large anaplastic cells, and autoimmune diseases. The possibility of a somatization effect has also been considered.

Conclusions
Plastic surgeons must remain the best source of information, taking on the role of educating the patient in order to better understand this condition.

Keywords
Breast implant illness, anaplastic large cell lymphoma, social media

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FAST RECOVERY BREAST AUGMENTATION: THE SMART MASTOPLASTY

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Objectives
Implant based breast augmentation is the most performed procedure worldwide. Several surgical techniques have been described in order to insert the mammary implants, although one of the primary endpoints for the patients is to get a safe procedure and a quick recovery. The authors retrospectively evaluated patients undergone breast augmentation via IMF approach operated on last 5 years with a standardized protocol.

Materials
Three-hundred and thirteen consecutive female patients, age ranging 18- 56 year's old, were operated for implant based breast augmentation between January 2017 to January 2022; exclusion criteria were: breast ptosis and breast asymmetry. In all the cases an IMF approach was performed. Surgical incision was performed, according to patients features, from 0.5 to 1.5 cm below the IMF; as soon as the incision was performed Scarpa fascia was identified and followed up to the lower edge of Pectoralis Major muscle. At this point the whole muscle was used in order to harvest the implant pocket, avoiding to dissect the breast glaundula from the Pec Major in order to preserve breast vascularization coming from toraco-acromyal artery perforating vessels. After careful bleed control and antibiotics pocket washing, the implants were inserted carefully into the pockets and a triple layers continue suture was performed to close the surgical access.

Results
All the patients were discharged after 6 hours from surgery on average. Post operative bleeding and/or seroma were never recorded. Wound dehiscence was recorded in 6 cases although without implant

exposure; wounds healed by secondary intention without post operative problems. Mean operative time was 27 minutes and drains were never used.

Conclusions
Based on the experience collected during last 5 years, in patients requiring breast augmentation with implants, an IMF approach avoiding breast glandular dissection, harvesting a sub-pectoral pocket from the lower edge of Pec Major, let to have a really quick surgery having a fast recovery with a really low rate of complications

Keywords
Breast augmentation; breast implant; smart mastoplasty

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INJECTION OF AQUAFILLING® FOR BUTTOCKS AUGMENTATION – FROM COMPLICATIONS TO RESOLUTION – A (HAPPY) CASE REPORT

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Objectives
Hydrogel fillers such as polyacrylamide gel (PAAG) or Aquafilling® have been commonly used in some countries for buttocks augmentation. The complications of Aquafilling® injections are well-known by now because of their high incidence, being associated with high morbidity, which can even lead to exitus.

Materials
This is a case report describing a patient that suffered complications after Aquafilling® gel injection for buttocks augmentation, being treated by the same medical team from the first manifestation until the resolution.

Results
A 27-year-old female patient was referred to our plastic surgery department with labial abscess and subsequent bilateral gluteal abscess. Surgical debridement of necrotic infected tissue and filler in association with massive irrigation were performed for five consecutive interventions, followed by vacuum therapy and wound closure. After the resolution of the complications and a 2-year follow-up period, the patient was treated for the esthetic morbidities by retractile scar removal, fat-grafting and two buttock lifts, with an acceptable final cosmetic result.

Conclusions

Complication management is a difficult and long process. Due to medical tourism and changing healthcare providers, it cannot be exactly appreciated neither the cause nor the moment of the onset nor the adequacy of the received treatment. Therefore, patient compliance and adherence to the same medical team has a higher rate of success. Moreover, the patient needs to be well-informed about the potential risks and the poor esthetic result that might occur after the resolution of the complications when choosing Aquafilling®

Keywords

Aquafilling®, buttocks, augmentation, complications

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MODERN APPROACH TO GYNAECOMASTIA TREATMENT-COMBINING THE BODY CONTOURING PRINCIPLES OF HIGH DEFINITION BY LIPOSCULPTURE AND LIPOPLASTY WITH OUR NEW CLASSIFICATION OF THE 6 GYNAECOMASTIA TYPES

MIHAI CHERTIF

COMPLICATIONS AFTER BUTTOCK AUGMENTATION WITH POLIAMIDE BASED GEL

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Objectives

Buttock augmentation has become one of the most frequent procedures in esthetic surgery in our country. Most of the augmentations are done using a hydrophilic poliamide based gel. Complications after this type of procedure are the object of this presentation.

Materials

Patients with inflammation of the buttocks or gel migration treated in our hospital in the last 5 years were included in the study. A large series of data including number of surgeries, number of general anesthesias, duration until full healing were collected.

Results
Thirteen patients were included in the study. The number of surgeries per patient varied between 2 and 15, the number of admissions from 1 to 10, while the number of general anesthesias reached over 20 in some patients. Only aggressive surgical debridement followed by secondary suture led to healing, but with impressive esthetic deformities.

Conclusions
This type of procedures should be used with great caution because treating late complications is difficult and spans over a long period of time and produces important esthetic impairment.

Keywords
buttock augmentation, gel, complications

HORIZONTALLY INSERTED ANATOMICAL BUTTOCK IMPLANT: IS IT A GOOD CHOISE?

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Objectives
Anatomical (shaped) gluteal implants give surgeons new ways to augment the buttocks, but their orientation varies among surgeons. A horizontal position is proposed by the authors for selected cases.

Materials
A classical intramuscular buttock augmentation was performed in female patients with A or rectangular shaped buttocks and significant upper lateral depressions and anatomical implants were inserted with the long axis horizontally oriented.

Results
Seven patients were included in the group. In 3 patients additional fat transfer was used in order to improve the shape of the buttocks. Esthetic results were found to be pleasant by the patients and the surgeons. Complications consisted in one partial wound breakdown and one seroma, both treated conservatively.

Conclusions
Positioning the anatomical implants in a horizontal fashion permitted a good fill of the upper lateral depressions (in 3 patients fat transfer was added), maintaining the original buttock height and a pleasing augmentation of the buttocks' projection, proving that this method is worth taking into account when planning buttock augmentation in selected cases.

Keywords
anatomical buttock implants, horizontal position

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TOTAL BODY LIFTING AFTER POSTBARIATRIC SURGERY, A CHALLENGING TEAM OPERATION

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Objectives

The post-bariatric body contouring patient is not the classic cosmetic body contouring patient and total body lifting represents the best option for these cases, including the in one surgery abdominoplasty, mastopexy arm and tight lift.

Materials

In 2016 more than 1.9 billion adults aged 18 years were overweight and Overall, about 13% of the world's adult population (11% of men and 15% of women) were obese in 2016. By pass gastric & gastric sleeve with minim invasive approach: laparoscopic & endoscopic change totally the life of obese patients with remiion of type 2 diabetes, hypertension, and gastro-esofagian reflux disease. But also redundant & amorphous skin in abdomen, arms, breast and tightsLoose skin can cause difficulty in performing simple activities-walking, physical exercises, physiologic problems urinating, sexual activity, intertrigo.

Post- bariatric patients have higher complications rate that non weight patients: wound healing problems, wound infections, seromas, hematomas

Results

Time management of the team and some strong principles as simultaneous operation of different areas as well as only excision does not undermine- except abdominoplasty, carefully embolism prophylaxis. Simultaneous surgical treatment of different areas has a major impact of QOL of the post-bariatric patients, with a single period of recovery.

Conclusions

Body contouring after bariatric surgery is a challenging operation and a dedicated surgeons team, as well as good planning and preparation of operation, are the key of success for total body lifting.

Keywords

Body contouring, post-bariatric, body lifting, abdominoplasty, mastopexy, tight lift, arm lift

References

Body Contouring after Massive Weight Loss, Al Aly

SHORT-TERM ADVANTAGES AND LONG-TERM COMPLICATIONS FROM BUTTOCK AUGMENTATION BY INJECTED POLYACRYLAMIDE HYDROGEL

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Objectives
No doubt nowadays a lot of Aesthetic Surgery patients requires belong to Soft Tissue fillers for Breast/Buttock augmentation procedures. Regarding the local statistics of Turkish Society of Plastic Reconstructive and Aesthetic Surgeons, daily Aquafilling/Los Deline Google requests quantity is bigger than Breast Augmentation. But do we really know about this treatment, its complications and can we really explain to our patients all Whys, risks and alternatives?

Materials
Taking our personal professional experience of the foreign patients who had an unfortunate result of Soft Tissue filler injected by another MD as an example, we would like to share our own thoughts, principals, reasons and consideration of this cases since probably dearest colleague did a proper short-term treatment when both (Patient/Surgeon) were satisfied and as a result Patients had incredibly bad complications afterwards. These interesting cases has forced myself for a research which definitely has been before.

Results
The patients that was treated in our clinic were women aged 33-45 years. They addressed to us after 5 and 10 years after injecting the hydrogel. Complications that were at the time of addressing: pronounced tissue ptosis, encapsulations, hypertrophy of encapsulated areas, solution migration with trophic complications at the level of buttock, legs and infection. Surgical removal of the injected fillers was performed at both patients, the amount removed was approximately 90%. Post.op. at the one of the patients was developed a seroma, which disappears at about 50 days.

Conclusions
It is always more desirable to choose the easiest ways to achieve the best results. However, this is not always possible. The best procedure to achieve the best result should be chosen. We need to realize that sometimes we have huge responsibilities in front of the patient.

Keywords
polyacrylamide, Aquafilling, complications

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E-POSTER SESSION

COMPLEX CRUSH-AVULSION INJURY OF THE RADIO-CARPAL JOINT AND TENARIAN REGION WITH COMPLETE DISSOCIATION OF THE CARPAL BONES AND HEAVILY CONTAMINATED WOUND IN A 32 YEARS OLD PATIENT- A MULTISTEP MANAGEMENT

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BACTERIOLOGICAL PROFILE OF INITIAL SCREENING IN BURN PATIENTS FROM A SPECIALIZED INTENSIVE CARE UNIT

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Objectives
Burn wound infections are common and associated with delayed healing. Annually, there are about 180.000 deaths caused by various types of burns, with infections being the main complication. Superficial bacterial contamination may be responsible for sepsis or septic shock development in patients with critical burns [1, 2]. We performed bacterial screening in all patients admitted in the "Severe Burns Care Unit" of the Emergency Clinical Hospital of Bucharest from 1st of January to 31th of December 2021 in order to identify the most frequent germs and sites responsible for contamination/infection, among other characteristics regarding the initial bacteriological profile.

Materials
Ninety-three patients had swab taken from various sites, according to our intensive care unit (ICU) protocol, to identify the bacterial profile of the colonized wounds. Demographic data were also collected.

Results
In our study group, 34,4% of patients were female. The general mean age was 55,8±17,1 SD years. Over 60% of patients were directly admitted into the ICU, around 40% of them being from rural areas. Third degree burns were present in more than 60% of cases. 57.9% of patients presented with contaminated conjunctival secretions and 54,6% with contaminated ear secretion. Regarding cultures from pharyngeal exudate, 89,6% of cases were uncontaminated, as well as for the tracheal secretion. 90 of patients had negative urine cultures. As for wound colonization, in about 80% of cases more than one germ was identified, coagulase-negative staphylococci, staphylococcus epidermidis, staphylococcus aureus and klebsiella species being the most frequent.

Conclusions
Bacterial colonization is common in burn patients, while screening protocols are helpful in providing information about bacterial profile in order to ensure proper control measures and to guide first-line antibiotic therapies.

Keywords
burns, bacterial contaminations, infection site, bacterial screening

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RECONSTRUCTION OF TRICEPS TENDON RUPTURE USING GRACILIS TENDON AUTOGRAFT

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Objectives

Triceps tendon injuries are relatively rare and it typically occurs in the distal segment, at the insertion on the olecranon.[1] Mechanisms of triceps tendon tearing include falling on an outstretched hand, direct posterior trauma on the elbow, weightlifting – on anabolic steroid users.[2][3] The initial diagnosis can be missed, even in complete ruptures, leading to delayed surgical treatment. In partial tear cases, nonoperative treatment is an option- posterior splinting of the elbow in 30-degree flexion for 4 to 6 weeks, with successful results and full range of motion and normal strength regain.[3] Primary repair can be done in partial or complete ruptures, typically within 2 weeks from the injury.[4] Reconstruction is usually indicated in patients that exceeded the primary repair window due to lack of diagnosis or if the conservative treatment was ineffective. [5][6]

Materials
The authors report the case of a 41-year-old man who suffered a complete rupture of the right distal triceps tendon 2 years prior the surgical treatment. The patient presented with impossibility of arm extension against resistance and palpable triceps tendon gap. During surgery we found poor quality soft tissue, scarring, triceps muscle hypotrophy and a 10 cm tendon gap. Therefore, triceps tendon reconstruction was performed, using a gracilis tendon autograft, followed by 4 weeks of splinting of the elbow in 30-degree flexion.

Results
Passive extension started 1 day postoperative. After removing the cast, the patient underwent physical therapy with satisfying results.

Conclusions
The successful outcome given by this technique suggest that in patients that are not suitable for primary repair, triceps tendon reconstruction with gracilis tendon autograft, offers good range of motion and strength.

Keywords
Tendon injury, Triceps tendon reconstruction, Gracilis tendon autograft

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COMPLEX WOUND MANAGEMENT FOR AN EXTENSIVE TORACIC WALL DEFECT - CASE REPORT

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Objectives

Adjuvant radiotherapy plays an important role in the local control of early-stage breast cancer. Radiation induced sarcoma is a rare aggressive malignancy and breast cancer survivors treated with radiotherapy constitute a large portion of these patients. The rate of survival in patients with breast cancer is improving and thus, the long-term consequences of their treatment can be assessed.
Due to the surge in patients with diabetes, hypertension and obesity, complex wounds with poor healing capabilities are seen more often.

Materials

We present the case of a 64-y old patient diagnosed with pleomorphic undifferentiated sarcoma of the right breast. From her history we note that she had right lumpectomy for ductal carcinoma in 2010, followed by adjuvant radiotherapy and chemotherapy. Current recommended treatment was surgical resection with 4 cm safety margins (total mastectomy, including the sternal part of pectoralis major muscle, complete axillary lymphadenectomy), resulting in an extensive soft tissue and skin defect (exposed muscle, fat, and bone) on the right anterior chest wall. Other important comorbidities should be noted like type II diabetes, hepatocarcinoma, hepatitis C, Cushing syndrome and obesity. Considering her history of abdominal surgical interventions, we decided not to use any abdominal flaps and to pursue a safe approach towards chest wall reconstruction: 3 rounds of negative pressure wound therapy right after the tumoral excision to promote wound bed granulation, followed by the placement of an acellular dermal substitute and split thickness skin graft (sealed by NPWT dressing), after histopathological examination certified that the excision margins were clear of tumor cells.

Results
The results were quite satisfactory with 90 % skin graft take and complete healing of the donor area within 2 weeks. This combination proved to be an effective method for chest wall reconstruction in this case, where the patient wasn't a candidate for other type of approach. Although the defect was quite extensive, the NPWT promoted skin graft take and a satisfactory result.

Conclusions
The combined use of acellular dermal substitute and split thickness skin graft was very reliable and proved to be effective in single-stage coverage of complex wounds.

Keywords
complex wound, breast, NPWT, chest wall, sarcoma

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MANGLED UPPER LIMB – WHETHER TO APPLY OR NOT SEVERITY SCALES

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Objectives
Crushing injuries to the forearm and the hand have a strong impact both in terms of functional impairment and the aesthetic, psychological and especially social implications, therefore, the surgical treatment used requires increased attention and dedication.

Materials
We applied different scales to evaluate the severity of the lesions to the patients hospitalized with crush injuries in the Clinical Emergency Hospital Bucharest, Plastic Surgery Department, correlating the severity of the crush injuries with the results of the surgery (outcome).

Results
The most used severity assessment scales depending of the surgical treatment were: PSI (Predictive Rescue Index), MESS (Severity Score of Mutilated End), GHOISS (Severity Score of Open Injuries

compiled by Ganga Hospital) and NISSSA (Score of Nerve Injury, Ischemia, Soft Part Injury, Bone Damage, Shock, and Patient Age). In 26 cases, out of 104 patients, representing 25%, the PSI score was used, 23 patients were evaluated using the MESS scale, with 22%, the GHOISS score was used in the evaluation of 19 patients, total of 18%, and 36 patients have been evaluated using the NISSSA score, obtaining a percentage of 35%.

Conclusions

The use of international scales to assess the crush injuries and the possibility of limb salvage, adapted to the profile of each patient can be a useful tool in developing a clear treatment plan and configuring the risk / benefit ratio for each type of trauma and patient. Thus, an initial, temporary classification of the type of injury in a risk category, as well as a clear mentioning of the indications or contraindications for reconstruction of the affected limb, can help both the patient and the attending physician in terms of expectations and postoperative results. Establishing a premise and an end goal uncorrelated with the severity of the injury can create unrealistic postoperative expectations.

Keywords

Mangled hand, trauma, vascular, extremity, amputation

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GOOD OUTCOME TO POLLICIZATION OF FOURTH FINGER AFTER A TRAUMATIC THUMB AMPUTATION

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Objectives

Thumb amputation is a serious impediment. The loss of a thumb leads to a decrease of 40% of hand functionality. Thumb amputation should be managed with reimplantation in an emergency scenario. If reimplantation is not possible or fails, a variety of thumb reconstruction techniques can be applied, depending on the circumstances. (1)

Materials

We present the case of a 46-year-old patient, who presented in the emergency department after he sustained a mutilating injury to his dominant right hand. The result of the trauma was amputation from the metacarpal level of his right thumb, a deep wound with skin defect on the dorsal side of the second metacarpal-phalangeal articulation, with lesions of the articular capsule and extensor tendons of the second finger. Due to the absence of the amputated thumb, replantation couldn't be performed, thus a pollicization technique was approached. After revision and preparation for osteosynthesis of the amputated first metacarpal, a skin incision was performed on the volar side of the 4th finger. It

was followed by isolation of the neurovascular bundles. The next step was to section the flexor and extensor tendons, and osteotomy at the base of the first phalange. The 4th finger was mobilized through a mediopalmar passage to the first metacarpal and fixated with two Kirschner wires. Tendon sutures were then performed. The skin defect on the dorsal side of the hand was covered with a rotated flap from the metacarpal side and the secondary defect was covered with a full thickness skin graft.

Results
The follow postoperative days were optimistic, with no vascular compromise of the pollicized finger, good perfusion of the rotated flap and good integration of the skin graft. He was discharged one week postoperative and began physical therapy two weeks after.

Conclusions
In patients with hand damage, creating a functional and aesthetically acceptable thumb is a difficult task. For thumb amputations at or near the metacarpal level, pollicization is the preferred reconstructive approach. Adjacent finger pollicization is a safe and quick operation that yields early functional effects. However, if the index finger is also wounded, the 4th finger should be used for pollicization. (2)

Keywords
Thumb, amputation, pollicization

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ISCHIAL OSTEOMYELITIS MANAGEMENT IN A YOUNG WHEELCHAIR BOUND PATIENT-CASE REPORT

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Objectives
Ischial pressure sores are the most common type of sores to appear in paraplegic wheel chair bound patients, and there is always a risk of recurrence despite successful treatment.
The aim of this case report is to present our surgical approach in the management of an ischial pressure sore with underliyng osteomielitis.

Materials
A 40-year-old paraplegic man, with traumatic spinal cord injury due to a work related accident from 20 years ago, developed an ischiatic pressure ulcer with unstable healing after a prolonged admission in the hospital for a femural fracture. Despite the rigorous conservative treatment, he presented with a 2x2 cm chronic skin fistula evolving for about 10 months. CT scans revealed sclerosis and cortical irregularity of the left ischial tuberosity, suggesting a high suspicion for ischial osteomyelitis.

Microbiology cultures from an adequate bone biopsy specimen were positive. Treatment implied a series of local surgical debridement, negative-pressure wound therapy and the use of broad-spectrum antibiotics.

Results
After 6 weeks of intravenous antibiotic therapy and after negative cultures were achieved, we decided to cover the remaining complex defect with a rotational gluteal musculocutaneous flap in which we divided the muscle from the subcutaneous tissue and used it to cover and fill the bone defect. Full healing was achieved at 3 weeks, without any complications.

Conclusions
It is important to achive good coverage of the defect with a thick flap in order to provide more support and protection in active, young patients, especially in areas with high incidence recurrence rates.

Keywords
pressure sore, ischiatic, osteomyelitis, local flap, wheelchair

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THE TREATMENT OF THE DIAPHYSEAL BONES DEFECTSOF THE LOWER LIMBUSING THE METHOD OF THE INDUCED MEMBRANE

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Objectives
To investigate the morphological properties and characteristics of induced membrane which was modeled in an experimental group of rabbits in order to asses and to optimize the effectiveness of the Masquelet method in the clinic.

Materials
Experimental work was done using a group of rabbits (n=10) with the weight 5,5±0,5kg and the age – 5 months. The investigation had 3 steps. The first step of the study consisted in creating the bone defect, filling it up with an antibiotic-impregnated cement spacer and stabilizing it with a plate. The second step of the study was 21 days later, consisting in incision of the induced membrane, removing the spacer and filling up the space with cancellous bone chips collected from iliac crest. At this stage we sacrified 5 rabbits in order to perform the histological and morphological examination. At the sixth week we switched to the third step – ablation of metal construction and the radiological control exam. At this stage we sacrified 5 rabbits to study the morphological aspect of the healed bone.

Results
Thehisto-morphological examination performed at the 21 days demonstrated the presence of an inflamator process characterized by neutrophilic, eosinophilic elements and regeneration's elements

– fibroblasts. Also, it was determined a pseudo-synovial metaplasia and a villous hyperplasia with formation of synovial epithelium on the internal face of the induced membrane. The histo-morphological exam performed at the 6 weeks has demonstrated the continuation of the neoformating process and of the bone modelation, the regeneration process prevailed over the inflammatory one. The morphological aspect was formed by agglomerations of fibroblasts, myoblasts and collagen and numerous vascular buds, that promotes a good neoangiogenesis and osteogenesis of the bone.

Conclusions
Themorphological study demonstrated an intense process of cell proliferation and differentiation, which highlights the biological role of induced membrane by foreign body with secretion of the osteoinductive factors, promoting the vascularizationand corticalization of the bone. The Masquelet method is an effective method that allows getting the consolidation of the bone in case of critical size bone loss.

Keywords
Themorphological study demonstrated an intense process of cell proliferation and differentiation, which highlights the biological role of induced membrane by foreign body with secretion of the osteoinductive factors, promoting the vascularizationand corticalization of the bone. The Masquelet method is an effective method that allows getting the consolidation of the bone in case of critical size bone loss.

CLINICAL EXPERIENCE WITH THE USE OF NEGATIVE PRESSURE WOUND THERAPY

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Objectives
Management of full-thickness wounds involving large defects, soft tissue loss, infection, wound dehiscence and pressure sore ulcerations is still debated. Negative pressure wound therapy (NPWT) has widened its applications over time and continues to evolve across a broad spectrum of medical and surgical specialties. NPWT expedite wound healing by removing wound exudate due to continuous suction, negative pressure acting on the foam helps with wound retraction, increasing microcirculation, oxygenation, reduction of interstitial oedema, stimulation of granulation tissue formation and regeneration(1-5). Furthermore, a statistically significant decrease in tissue bacterial counts has been achieved, suggesting that vacuum-assisted devices improved wound bioburden(6).

Materials
We retrospectively collected data on patients admitted in our Plastic and Reconstructive Surgery Department between 2012 to 2021 with full-thickness wounds that were not deemed suitable for primary closure. For bed preparation, sharp surgical debridement was performed in order to remove the necrotic tissue, bacteria and foreign material from the wound. Deep wound swab has been done to identify the presence of critical colonization. After all nonviable tissue was removed the Vivano negative pressure wound therapy system has been applied.

All cases were followed up after the procedure to detect the response, associated pain, complication rate and wound closure rate or what surgical procedure was needed for closure. The process of healing in wounds with bradytrophic tissue exposure such as tendons and bone has been particularly assessed.

Results

From January 2012 through February 2022, sixty-seven patients with wounds not amenable to primary closure were eligible for NPWT in our service. Sixty-four patients responded favourable to vacuum therapy with production of granulation tissue, decreasing oedema and exudates, increasing microcirculation and softening of the surrounding tissues. In this study we demonstrate that the use of vacuum therapy in population with full-thickness wounds results in improved wound healing, reflected by an average healthier wound conditions and significant diminished wound size, which reduces the complex surgical procedures requirement. In almost all cases vacuum therapy made possible to take a step back on the reconstuctive ladder, converting the initial necessity of a flap into a graft.

Conclusions

In conclusion, we found that NPWT improves the wound healing and it is an effective, cost-efficient and comfortable alternative to standard methods in treatment of complex infected and full-thickness wounds.

Keywords

NPWT, wound healing, vaccum therapy, plastic surgery

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THE USE OF THIN SPLIT-THICKNESS TOENAIL BED GRAFT TO COVER NAIL BED DEFECT AFTER SUBUNGUAL EXOSTOSIS EXCISION

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Objectives

Subungual exostosis is a relatively uncommon benign bony outgrowth of the distal phalanx of the toes that grows progressively, leading to nail deformity and eventually produces pain as well as has a negative influence on the quality of life of the affected individuals.

Materials
We report a case of a 44-year-old otherwise healthy female patient that presented a firm, painful, nodular lesion on the medial aspect of the left hallux, measuring 1.5/1.5 cm in diameter, with approximatively one-year history of duration. Physical examination revealed the elevation and destruction of the nail plate in the affected area. Vascular ectasia, hyperkeratosis, onycholysis and ulceration were observed on dermoscopic examination. X-ray examination of the foot showed a bony projection from the distal end of the second phalanx of the left hallux.

Results
The protruding bony exostosis along with the pathologic nail bed were excised in digital block anesthesia and a thin split-thickness toenail bed graft from the adjacent nail bed was used to cover the defect. The excised tissue was sent for histopathologic examination which confirmed the diagnosis of subungual exostosis.

Conclusions
Complete excision of the lesion and the use of a thin split-thickness toenail bed graft to cover the nail bed defect led to a satisfactory cosmetic result, with no recurrence of the lesion at the 4-month follow-up.

Keywords
subungual exostosis, thin split-thickness toenail bed graft

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INFRARED THERMOGRAPHY IN THE DETECTION OF PERFORATORS FOR FOREARM PERFORATOR FREE FLAPS

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Objectives
The versatile application of perforator free flaps for coverage of hand and fingers has been well proven. Preoperative localization of the perforators allows precise planning of the flap and improves surgical results. Infrared thermography (IRT) is a noninvasive imaging technique that can provide indirect and real-time information on skin perfusion by measuring skin temperature. This study aims

to assess the usefulness of IRT in preoperative perforator mapping of the forearm perforator free flaps.

Materials
This prospective study comprised 27 patients (27 flaps) whom underwent reconstructive surgery with a forearm perforator free flap. Perforator mapping was done by IRT preoperatively and were marked on the forearm region. Further were evaluated with the color Doppler ultrasound to confirm the presence of a perforator. The accuracy of the method was analyzed according to the intraoperative findings.

Results
A total of 27 forearm perforator free flaps were included. Perforator detection with IRT showed that first-appearing bright hot spots were associated with suitable perforators intraoperatively in all cases. Twenty five "hot spots" were identified by infrared thermography, which corresponded to intraoperative findings during obligatory exploratory incision. The infrared thermography has a sensitivity of 93.2% and a specificity of 85.7% compared with CDU. Twenty-five perforators marked by IRT were selected for designing the flap. Anatomical findings showed that the accuracy rate of infrared thermal was 93.2% (25 of 27).

Conclusions
Infrared thermography can be used on any patient preoperatively to identify preferable perforators or “hot spots” within the desired donor site territory. It is noninvasive, not expensive and easy to handle. Based on our study, infrared thermography can be a useful technique for perforator preoperative mapping.

Keywords
infrared thermography; free perforator flaps; perforator mapping.

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COLOR DOPPLER ULTRASOUND IN THE MAPPING OF PERFORATORS FOR ANTEROLATERAL THIGH FLAP

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Objectives
The use of perforator flaps improves reconstruction options and quality of the results for patients undergoing defects' coverage. The anterolateral thigh (ALT) free flap is frequently used for soft tissues' defect coverage. Despite its advantages, ALT flap has a variability in position and nature of its perforators. This study aims to assess the application of color Doppler ultrasound (CDU) in preoperative perforator mapping of the anterolateral thigh (ALT) perforator flap.

Materials
A prospective cohort study involving patients for whom reconstruction was planned with ALT perforator flaps was conducted. CDU was applied on 20 patients to locate the perforators originated from lateral circumflex femoral artery preoperatively. The perforators identified were marked on the anterolateral thigh area. The accuracy of CDU mapping was analyzed according to the intraoperative findings.

Results
CDU accurately identified the emergence of the perforators in the fascia in all cases. Fifty one perforators were identified. The dominant perforator was correctly identified in all cases. The sensitivity, positive predictive value, and accuracy of CDU were 95.36%, 96%, and 90.15%.

Conclusions
Preoperative perforator mapping has become mandatory in almost all reconstructive procedures. By using CDU as a preoperative examination, we can locate perforators of ALT flap efficiently to perform reconstruction which may lead to improved clinical outcomes.

Keywords
Anterolateral thigh, perforator mapping; color doppler.

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WIDE-AWAKE SURGERY WITH LOCAL ANESTHESIA IN HAND SURGERY

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Objectives
The wide awake local anesthesia in hand surgery has gained popularity during last years. It involves the use of a local anesthetic and epinephrine, and the patient remains awake during whole procedure. The purpose of this study was to assess the advantages, diverse application, outcomes, cost benefits,

use in challenging environments, patient considerations, and contraindications associated with this technique.

Materials
A 3-year prospective chart study was conducted of consecutive patients undergoing wide-awake surgery performed by 2 surgeons at a single institution. All procedures were performed with local anesthesia and epinephrine. Data collected included patient demographics, procedure volume, procedure type, surgical setting, functional and aesthetic outcomes and complications related to epinephrine use.

Results
During the study period, 3141 consecutive patients underwent 3374 wide-awake procedures with local anesthesia and epinephrine. Average patient age was 61 years, and 84% of patients were male. No complications related to use of epinephrine occurred, and no tissue necrosis, phentolamine reversal, anaphylaxis. No patients required conversion to general anesthesia or monitored anesthesia care. All patients were satisfied with functional and aesthetic results.

Conclusions
Wide awake local anesthesia in hand surgery is a safe technique, with no reported cases of tissue necrosis, reversal, readmission, anaphylaxis, or anesthetic conversion. It confers particular advantage in surgeries such as tendon repairs, tendon transfers, and soft tissue releases in which intraoperative active motion can used to optimize outcomes. The wide awake approach also confers significant benefit due to efficiencies and cost savings.

Keywords
hand surgery; no tourniquet; wide awake anesthesia.

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CHRONIC TIBIALIS ANTERIOR TENDON RUPTURE – A CASE REPORT OF DELAYED RECONSTRUCTION WITH AN EXTENSOR HALLUCIS LONGUS TENDON TRANSFER

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