BREAST REDUCTION:  
A RETROSPECTIVE ANALYSIS ON 139 PATIENTS

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Gigantomastia represents a disabling condition characterized by excessive breast growth. Breast reduction can be performed with some techniques such as inferior pedicle reduction and superior pedicle reduction. Aim of this retrospective study is to assess the clinical outcome of a series of 139 patients underwent to breast reduction and discuss the pertinent literature. One hundred and thirty nine patients underwent to breast reduction during the period between September 2005 and December 2010. Treatments were grouped into three classes: 1 - inferior pedicle breast reduction, 2 - superior pedicle breast reduction and 3 - scars corrections. Eight out of 139 cases had failures such as keloids and poor aesthetics results. Chi square test was used to detect those variables (i.e. surgeon, type of surgery) potentially associated with failures. None of studied variables correlated with failures. Breast reduction is a worldwide use to correct gigantomastia and several surgical techniques are available. Proper diagnosis is of paramount importance to avoid potential complications such as hematomas or sieromas. In addition the patient’s psychological habitus has to be evaluated at admission. Since very few cases failed in our series, breast reductions are considered reliable surgical techniques to cure gigantomastia.
ABDOMINOPLASTY SURGERY:
A RETROSPECTIVE ANALYSIS ON 186 PATIENTS

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Massive weight loss for high percentage of patients means cutaneous skin folds that cause important functional and hygienic problems. In these patients body contouring with removal of the excessive skin fold becomes necessary to improve their new quality of life. One hundred and eighty six patients during the period between September 2005 and December 2010 underwent to abdominoplasty surgery at the Plastic Surgery Unit, S. Anna Hospital, Ferrara. Surgery performed was lipectomy for 99 patients, fascial plastic in 75 cases, scars review for 5 patients and lipectomy with fascial plastic in 7 cases. There had been 3 cases of bleeding and 18 cases of keloids. Chi square text was used to detect the variables (i.e. surgeon, type of surgery and diagnosis) potentially associated with failures. However, despite of possible methodological difficulties and the limited complications in our series, abdominoplasty can be considered essential option for post-bariatric patients and for all those patients that have lost massive weight, because it can improve lifestyle and even psychological status.
EVALUATION OF PULSED LIGHT FOR HAIR REMOVAL: CLINICAL STUDY IN MICE

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The presence of excessive perioral hair in women is associated with psychological and emotional distress, and causes significant impairment of their quality of life. The aim of the present study is to show the efficacy of intense pulsed light (IPL) device in a mouse model. Thirty female, 6-8 weeks-old black-haired mice were selected. Mice were divided into five groups, each of six subjects, and were anaesthetized; the first five groups were only shaved with electric razor and waxing, while the other groups, after shaving of back, they were treated with the light of an intense pulsed light source device (590-1200 nm, spot size 20x50 mm-pulse duration 5-105 msec) (MED-LITE device, Dermal Medical, Bologna-Italy). All mice (Test group) received 12 sessions of treatment at 1 week interval. Hair counts and photographic evaluation of skin sites were made at baseline and at the last follow-up after the following time intervals: 4, 8, 12 weeks. All mice were evaluated after the following time intervals: 4, 8, 12 weeks. A statistically significant difference was present between hair reduction after treatment in control group vs. test (control vs. test) p-value = 0.08 after 4-8 and 12 weeks. We suggest that both intense pulsed light sources could reduce the hair even.
TREATMENT OF XANTHELASMA PALPEBRARUM WITH VOLTAIC ARC DERMABRASION

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Xanthelasma palpebrarum is a benign condition and almost never limits functioning; its appearance is often seen as cosmetically disturbing. Surgical excision has been the treatment of choice for decades. However, this normally effective measure bears a considerable risk of side effects, especially an ectropion, which could lead to additional procedures, e.g., full thickness skin graft. 13 patients with bilateral 26 xanthelasma with an voltaic arc dermoabrasion device (EL-Abras, TECNOSE s.r.l., Roma, Italy). Photographs were taken before and after treatment and were then evaluated by an independent observer. The evaluation of the results was made 2 months after this single treatment. The final evaluation assessed the presence or absence of hypochromic or achromic scars. The patients were given a single sessions to remove the lesions. Two months after treatment, the result was scored as 4 (i.e. with a clearing of lesions evaluated as being > 75% and in fact assessed by the independent observer as complete resolution) in six patients for a total of 12 lesions; scored as 3 in four patients for a total of 8 lesions, and as 2 in three patients for a total of 6 lesions. No patient presented a result scored as 0, 1 or 2. Eight lesions showed slight erythema in the treated areas and this persisted for 1 month. The visible and unsightly nature of xanthelasma has led to the proposal of numerous treatments. Reconstruction by a flap or full-thickness skin graft may be necessary in the presence of excessively large lesions or lesions involving the medial canthus. The possibilities of surgical resection appear to be more limited in the lower eyelid, as the more limited skin laxity rapidly induces a risk of ectropion. On the basis of our results, we would like to recommend xanthelasma treatment with the voltaic arc dermoabrasion as an excellent therapeutic alternative to the hitherto described approaches.
LOP EARS: A RETROSPECTIVE STUDY

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Congenital “lop ears” are a deformity include varying degrees of turning down (lidding) of the helix, reduction in the fossa triangularis, scapha compression, reduction of the superior crus of the antihelix and an associated reduction in vertical height of the external ear. **Aim of this retrospective study is to assess the clinical outcome** in a series of patients affected lop ears and discuss the pertinent literature. In the period between January 2003 and December 2009, 32 patients underwent to lop ears correction at the Pediatric Surgery Unit, S Anna Hospital, Ferrara, Italy. Patients included 4 (33.3%) females and 8 (66.6%) males. Age ranged from 5.6 to 18 years with a mean value of 11 at the time of admission. Lop ears were treated with Mustarde’ surgical technique under general anesthesia. No complications were detected in the follow-up period. The **goal standard of surgery treatment for prominent ears is to obtain symmetrical and natural ears with not sign of being operated.** More than 200 surgical techniques have been described for its correction indicating the lack of an ideal technique. These techniques can be classified into two categories: with conservation of cartilage and with cartilage section. Section methods attend to eliminate the inherent memory of the cartilage so that the shape of the ear can be modified. These techniques may leave significant asymmetries. In contrast, methods which shape the cartilage are based on the Mustardé technique, which consists of placing 3 or 4 horizontal mattress sutures with permanent suture material along the ridge of the helix, to create an antihelix fold. **Our clinical results are similar to those reported in the English literature.**
MUCOCELE IN PEDIATRIC PATIENTS: CASE SERIES ANALYSIS

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The mucocele, a mucus accumulation from the salivary gland, represents a common lesion of the oral cavity. From 44% to 79% of mucoceles occur on the lower lip. There is no gender predilection and it can arise at any age. Mucoceles do not cause direct obstruction of salivary flow, and the amount of secretion that can be extravasated is limited by the elasticity of the surround tissues. In the period between January 2001 December 2010, 21 patients underwent ulcer treatments at the Pediatric Surgery Unit, S Anna Hospital, Ferrara, Italy. Patients included 9 females and 12 males. Age ranged from 5 months to 13 years with a mean value of 7 years. All were located in the lower lip. Mucoceles were treated with surgical excision, 13 under general anesthesia and the remaining under local anesthesia. Several techniques have been proposed: initial cryosurgical approach, CO2 laser, marsupialization and complete resection: this last is in most cases the best option.
CONGENITAL MELANOCYTIC NEVI: A CASE SERIES

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Nevi represent benign melanocytic neoplasms that have importance as facultative precursors and predictors of cutaneous melanoma. In daily clinical practice high nevus counts help to identify person at risk. In the period between January 2008 and December 2010, 141 patients underwent to nevi excision at the Pediatric Surgery Unit, S Anna Hospital, Ferrara, Italy. Patients included 64 (45.4\%) females and 77 (54.6\%) males. Age ranged from 1.5 to 18 years with a mean value of 12.4 years at the time of admission. 29, 46, 75 and 19 nevi where located in arms, legs, trunk and head and neck, respectively. 19, 121 and 29 nevi were junctional, compound and dermal nevi, respectively. Nevii were treated with surgical excision: 35 under general anesthesia, 4 under sedation and the remaining under local anesthesia. Melanocytic nevi during the past have been treated with several techniques such as cauterization with carbon dioxide, snow, a heated platinum loop and even by x-ray. Most of these treatments result unsatisfactory because these cause scars whereas leaving few intact melanocytes in the derma. Surgical excision is the method of choice. If the lesion has been injured or infected antibiotic treatment could facilitate healing.
CONGENITAL MALFORMATIONS OF THE EAR

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Malformations of the external ear can involve orientation, position, size and relief pattern of the pinna, anotia may also occur. To make a classification of ear malformations must be considered: size of auricle, shape of the ear and position of the ear. Aim of this retrospective study is to assess the clinical outcome in a series of patients affected by ear defects and discusses the pertinent literature. In the period between January 2001 and December 2010, 35 patients underwent to surgical correction of external ear malformations at the Pediatric Surgery Unit, S Anna Hospital, Ferrara, Italy. Patients included 23 (66%) females and 12 (34%) males. Age ranged from 1 months to 14.5 years with a mean value of 2.6 years at the time of admission. All cases were surgically corrected under general anesthesia. Successful correction of prominent ears and of all others kind of ear malformations requires a precise understanding of the normal anatomy and relationships of the external ear with the face. The surgeon should be familiar with the normal anatomy of the cartilaginous skeleton and the soft tissue features of the external ear. Abnormalities in ear dimensions will reveal themselves at an early age. The rapid development of the ear to approximately 90% of adult dimensions by age 3 years allows for early surgical intervention for auricular anomalies. Many surgeons recommend performing surgical correction of prominent ears when children are aged 3 to 6 years, before the start of school. The goal is to minimize the malformation before the period of socialization to avoid ridicule by other children.
Branchial anomalies are masses located in children’s neck. They are composed of an heterogeneous group of congenital malformations mainly fistulae, cysts, sinus tracts and cartilaginous remnants. Females and males are affected equally and many lesions are diagnosed before child reaches adulthood. Aim of this retrospective study is to asses the clinical outcome in a series of patients affected by branchial anomalies and discuss the pertinent literature. In the period between January 2001 and December 2010, 31 patients underwent to surgical correction of branchial anomalies at the Pediatric Surgery Unit, S Anna Hospital, Ferrara, Italy. Patients included 15 (48.4%) females and 16 (51.6%) males. Age ranged from 5 months to 15.6 years with a mean value of 5.1 years at the time of admission. There were 16 fistulae 5 cysts and 10 branchial remnants All cases were surgically corrected under general anesthesia. Cervical cysts occur in children and adolescents as a mass situated anterior to the sterno-cleid muscle and near the angle of the mandible. Cervical symptoms may consist of drainage from a pit-like depression at the angle of mandible. The definitive treatment of all branchial anomalies is the surgical for a complete excision. Complete surgical resection through a wide transverse cervicotomy results in good prognosis. Identification during operation, of the internal and external carotid arteries and of the vagus, hypoglossal, glossopharingeal and superior laryngeal nerves will avoid injury of these structures.
CLEFT LIP AND PALATE: 
A CASE SERIES ANALYSIS

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Orofacial clefts (OFC) are common birth defects of complex aetiology resulting in disruptions of normal facial structure. They represent one of the most usual birth defects and occur in 1 per 500 to 2,500 births depending on ancestry, geographic residential location, maternal age and prenatal exposures, and socioeconomic status. Aim of this retrospective study is to assess the clinical outcome in a series of patients affected cleft lip and palate and discuss the pertinent literature. In the period between January 2001 and December 2010, 56 patients underwent to cleft lip and/or palate correction at the Pediatric Surgery Unit, S. Anna Hospital, Ferrara, Italy. Patients included 25 females and 23 males. There were 7 cleft lip, 24 cleft palate and 17 cleft lip and palate. All patients were surgically corrected under general anesthesia. Millard and Skoog techniques were used for cleft lip anomalies, whereas Langebeck, Vidmayer-Perko and Furlow techniques were used for cleft palate defects. In our series a multidisciplinary approach was used and several surgical techniques were performed. Functional and aesthetic results were satisfactory in most cases. The need of a specific dedicated team is mandatory for treating this group of patients.
ORTHODONTIC TOOTH MOVEMENT AND DISTRACTION OSTEOGENESIS

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The purpose of this preliminary study was to compare the rate of orthodontic tooth movement into bone regenerate created after mandibular DO with the rate of orthodontic tooth movement in patients in which extraction was performed and followed by traditional orthodontic treatment. The rate of orthodontic tooth movement into bone regenerate created after mandibular DO in 14 Class II subjects (5 males and 9 females, mean age 25.0±1.1 years) treated with Distraction Osteogenesis appliance was compared with the rate of orthodontic tooth movement in 20 subjects (mean age 19.9±3.8 years), in which extraction was performed and followed by traditional orthodontic treatment for space closure. Teeth movements (amount and rate) were evaluated by measuring the distance between the distal wing of the canine and the mesial wing of the first premolar bracket with vernier callipers (dentaurum). Readings were noted every 2 weeks until space closure was completed. In the present study the mean duration of the Post-distraction orthodontic treatment (orthodontic tooth movements, finishing) was 10±5 months. The mandibular posterior teeth were moved into the edentulous segment created by distraction using active tieback in 8±1 months; the average time to complete space closure was 3.34±.94 months in the traditional orthodontic treatment. The average space closure was 4.24±1.32 mm in the traditional orthodontic treatment and 5.46±0.35 mm in the patients treated with DO. The mean rate of tooth movement was 1.27±0.23 mm/month in the traditional orthodontic treatment and 0.68±0.20 mm/month in the patients treated with DO (Table I). Unpaired t test showed a significant difference between tooth movement in the study sample and in the control group (p>.05). As suggested by most scientific literature, in our sample, dental movement was started at the end of the latency and consolidation time. However, the amount and rate of space closure in the distraction area were higher than with traditional orthodontic treatment. In conclusion, the purpose of this study was to highlight the need for careful assessment of working time on patients undergoing distraction osteogenesis. Undoubtedly, this approach can be used for treatment of very severe skeletal malocclusions and maxillofacial deformities, but it cannot be considered an alternative to traditional orthodontic surgery to speed up treatment since the process of tooth movement requires its time.
IMMEDIATE LOADING VERSUS TRADITIONAL APPROACH
IN FUNCTIONAL IMPLANTOLOGY

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Immediate loading in implantology brings various benefits to the patient both esthetical and functional. The aim of this study was to evaluate the efficiency of the Nobel Replace® implant while applying a functionalization implant protocol with fixed prostheses immediately loaded after their placement and to compare the results of this technique with the traditional loading. The study sample consisted of 202 subjects who had 198 delayed-loaded dental implants and 187 immediate-loaded implants. A total of n.385 implants were placed in the study sample. The primary stability was evaluated through the measurement of the insertion torque values. The torque value at 35 N was considered the key factor while choosing whether or not to perform an immediate load procedure. A resonance frequency analysis (RFA) was used for measuring implant stability quotient (ISQ). Throughout the first year 10 implants failed, thus the cumulative success rate of all the implants was 97.04%. Six of the failed implants (3%) were of the immediate load type (placed 1 in the antero-superior, 3 in the postero-superior, and 2 in the postero-inferior area) while the remaining 4 (2.1%) were of the non-immediate load type. The 2-year prosthetic survival rate was equal to 100%. Three of the six immediate load implants that had failed had a torque value slightly above the crucial value (35 N) at the moment of the implantation. Amongst the implants that survived the first year there was no significant statistic difference between the immediate-loaded implants (ISQ 60.95±0.26) and the traditional delayed-loaded implants (ISQ 61.01±0.29). As well as no significant statistical difference was registered in the rate of the marginal bone reabsorption between the immediate-loaded implants (0.46±0.20 mm/1 year) and the traditional delayed-loaded implants (0.50±0.23 mm/1 year). No implants placed using bone grafting technique failed. These results suggest that the immediate loading protocol implant is to be considered a predictable and safe treatment choice, as long as the implant presents an appropriate primary stability and are strongly stabilized together.
EFFECT OF ALGIPORE®
ON BONE MARROW STEM CELLS: AN IN VITRO STUDY

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Cell-based bone and cartilage replacement is an evolving therapy aiming at the treatment of craniofacial and orthopedic defects (limb amputation, damaged tissues, bone and cartilage-related disorders and dental and maxillofacial reconstructive surgery). Autologous cell transplantation in combination with a biodegradable scaffold is a useful and safe option. Algipore, a hydroxyapatite ceramic obtained from red alga, is largely employed as scaffolds in bone regeneration. Here we studied how this biomaterial promote osteoblast differentiation in stem cells derived from bone marrow, measuring the expression levels of bone related genes and mesenchymal stem cells marker by Real Time Reverse Transcription-Polymerase Chain Reaction. Algipore induces osteoblast differentiation in stem cells derived from bone marrow, as indicated by the activation of osteoblast related genes SPP1, ALPL, RUNX2 and SP7.
ALLOGRO® INDUCES OSTEOBLAST DIFFERENTIATION IN HUMAN BONE MARROW STEM CELLS

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Synthetic and biological materials are increasingly used to provide temporary or permanent scaffolds for bone regeneration. Allogro, a demineralized freeze-dried bone allograft is an optimal scaffold used worldwide to fill bone defects and to restore bone loss in orthopedic and maxillofacial surgery. To study how Allogro can induce osteoblast differentiation in mesenchymal stem cells, the expression levels of bone related genes and mesenchymal stem cells marker were analyzed, using real time Reverse Transcription-Polymerase Chain Reaction. The obtained results demonstrated that Allogro influences the osteo-differentiation of stem cells as demonstrated by the activation of osteoblast related genes RUNX2, ALPL and SPP1.
BIO-OSS® ACTS ON BONE MARROW DERIVED STEM CELLS PROMOTING OSTEObLAST DIFFERENTIATION

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Bio-Oss® a deproteinized anorganic bovine bone is widely used as scaffold for autologous cells in several bone regeneration procedures. To study how Bio-Oss® can induce osteoblast differentiation in mesenchymal stem cells, the expression levels of bone related genes and mesenchymal stem cells marker were analyzed, using real time Reverse Transcription-Polymerase Chain Reaction. Bio-Oss® caused an induction of osteoblast related genes ALPL, FOSL1 and SPP1. The obtained results can be relevant to better understand the molecular mechanism by which Bio-Oss® induce osteoblast differentiation and bone regeneration.
OSTEOBLAST® DIFFERENTIATION IN BONE MARROW STEM CELLS AFTER CALCIUM SULFATE TREATMENT

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Calcium Sulfate is a highly biocompatible material largely employed to treating periodontal disease, alveolar bone loss, and maxillary sinus augmentation. It is completely biodegradable, osteoconductive, cheap, easy to handle, and able to support the defect area until bone growth. However, how Calcium Sulfate acts on osteoblast promoting bone formation is poorly understood. To study how Calcium Sulfate can induce osteoblast differentiation in mesenchymal stem cells, the expression levels of bone related genes and mesenchymal stem cells marker were compared in Normal Osteoblasts and Bone Marrow Stem Cells, using real time Reverse Transcription-Polymerase Chain Reaction. The obtained results demonstrated that Calcium Sulfate strongly influences the behavior of Bone Marrow Stem Cells in vitro enhancing proliferation, differentiation and deposition of matrix.
OSTEOBIOL® ENHANCES OSTEOGENIC DIFFERENTIATION IN BONE MARROW DERIVED STEM CELLS

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OsteoBiol® (OsteoBiol, Tecnoss Dental, Turin, Italy) a cortical collagenated porcine bone is largely employed in oral implant techniques for bone regeneration thanks to its biocompatibility and osteoconductivity. To study the mechanism by which cortical porcine bone promotes osteoblast differentiation and bone regeneration, changes in expression level of bone related genes were investigated by real time RT–PCR, in bone marrow derived stem cells and human osteoblasts cultivated with OsteoBiol®.
OSTEOPLANT® ACTS ON STEM CELLS DERIVED FROM BONE MARROW INDUCING OSTEOCLASTS DIFFERENTIATION

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Osteoplant, an equine flexible cortical and spongy bone tissue, is a promising material for bone grafting in orthopedic, maxillofacial and dental surgery. Osteoplant is completely resorbable, inducing osteoclast activation and promoting the substitution of the scaffold with new bone. To study how Osteoplant can induce osteoblast differentiation in mesenchymal stem cells, the expression levels of bone related genes and mesenchymal stem cells marker were analyzed, using real time Reverse Transcription-Polymerase Chain Reaction. Osteoplant is an inducer of osteogenesis on human stem cells, as showed by the activation of bone related genes ALPL, SPP1 and RUNX2, and by the down-regulation of the mesenchymal stem cells marker ENG.
Peptide-15 (P-15) is. P-15 an analog of the cell binding domain of collagen, has been shown to facilitate physiological process in a way similar to collagen, to serve as anchorage for cells, and to promote the binding, migration and differentiation of cells. However, how P-15 alters osteoblast activity to promote bone formation is poorly understood. In this study we investigated the osteo-inductives properties of P15 on stem cells derived from bone marrow. In Real Time Reverse Transcription-Polymerase Chain Reaction (real time RT-PCR) we quantified the mRNA expression of specific genes, like transcriptional factors (RUNX2 and SP7), bone related genes (SPP1, COL1A1, COL3A1, ALPL, and FOSL1) and mesenchymal stem cells marker (ENG). Gene expression in BMSC was then compared with the gene expression in Human Osteoblasts (HOb) treated with P15, to evaluate the potential effect of this biomaterial in osteoblasts differentiation.
BISPHOSPHONATES-RELATED OSTEONECROSIS OF THE JAW: MULTICENTRE STUDY

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Bisphosphonate-related osteonecrosis of the jaw is defined as an ‘exposure of necrotic bone in maxillofacial region, which persists more than 8 weeks in patients treated or, in course of treatment with bisphosphonates, not been subjected to radiation therapy of the jaw. Bisphosphonates are compounds used to treat osteoporosis and malignant bone metastasis. Despite the benefits related to the use of these medications, osteonecrosis of the jaws is a significant complication in a subset of patients receiving these drugs. This complication occurs either spontaneously or after a simple dento-alveolar surgery. This study was conducted to evaluate the correlation between the onset of ONJ and bisphosphonate treatment, through descriptive and statistical data analysis, extracted from our study population, and correlation with data offered by literature.