

implanted in mouse subcutaneous connective tissue. The animals were sacrificed 3, 7, 20 and 30 days after the implantation procedure and the specimens were prepared for histological evaluation. The results showed that Papacárie® caused a moderate inflammatory response up to the 20th day, which decreased at 30 days. The gel base showed a discrete inflammation, which increased at 30 days. Papacárie® and its gel base were proved biocompatible with the connective tissue, although the alterations caused for these materials were statistically different (Mann Whitney; $p < 0,05$).

Oral Surgery

Postsurgical stability of counter-clockwise maxillomandibular advancement surgery: influence of articular disc repositioning

Peixoto, A.P.; Cassano, D.S.; Wolford, L.M.; Pinto, A.S.; Gonçalves, J.R.

A skeptical attitude has developed towards temporomandibular joint (TMJ) surgery because of the unpredictable and sometimes devastating outcomes resulting from TMJ surgical techniques performed in the 1980's and 1990's. However, significant advancements in TMJ diagnostics and the development of procedures to predictably treat and surgically rehabilitate the dysfunctional and pathological TMJ have provided good outcomes. The purpose of this study was to evaluate the stability following surgical counter-clockwise rotation and advancement of the maxillomandibular complex and the influence of disc displacement and articular disc repositioning. Seventy-two patients (59 females, 13 males) were allocated in 3 groups: G1 (n=21) – patients with healthy TMJs underwent double-jaw surgery only; G2 (n=35) – patients with articular disc displacement underwent articular disc repositioning concomitantly with orthognathic surgery; and G3 (n=16) patients with articular disc displacement underwent orthognathic surgery only. Each patient's lateral cephalograms were traced, digitized twice and averaged to estimate surgical changes (T2-T1) and postsurgical changes (T3-T2). During surgery, the occlusal plane angle decreased significantly in all groups. The maxillomandibular complex advanced and rotated counter-clockwise similarly in all groups, with advancement at the mentum. Postoperatively, the occlusal plane angle increased in G3 (2.6 ± 3.8) while G1 and G2 remained stable. Mandibular postsurgical changes in the horizontal direction had a larger relapse in G3 at the mentum (-3.8 ± 4.1 mm), B point (-3.0 ± 3.4 mm), and lower incisor edge (-2.3 ± 2.1 mm) while G1 and G2 remained stable. Maxillomandibular advancement with counter-clockwise rotation of the occlusal plane is a stable procedure for patients with healthy TMJs or for patients with simultaneous TMJ disc repositioning. Patients with preoperative TMJ articular disc displacement who underwent double-jaw surgery and no TMJ intervention experienced significant relapse.

Reconstruction of atrophic edentulous ridge: initial history of the results obtained with five different surgical techniques

Flores, S.M.; Sant'Ana, A.C.P

The deficiency of bone height or thickness may be limiting factor to implant placement. Several surgical techniques for reconstruction of atrophic ridges have been proposed, with lower success rates for non-grafted areas. The objective of this study was to evaluate the viability and effectiveness of different grafting techniques for reconstruction of atrophic ridges and placement of osseointegrated implants. Thirty-nine patients aged 13-68 years assisted at FOB-USP were enrolled and consecutively treated with the following techniques: onlay with immediate or delayed implants, inlay with or without Le Fort I and combined inlay-onlay with immediate or delayed implants, using blocks of cool bone removed from the iliac crest, tibia, mento and external oblique line of the mandible. The patients were evaluated with respect to the painful symptomatology on the donor and recipient sites, accidents and complications in the immediate postoperative period and implant survival in the short-stated period after insertion, in accordance with the clinical criteria of immobility, absence of radiolucency on the peri-implant region and painful symptomatology. A total of 217 implants were installed, of which 28 (13%) were lost within 1 year after prosthetic installation. The results showed that the onlay technique with delayed implants presented the highest implant survival rate (100%), followed by the inlay technique without Le Fort (92%), inlay with Le Fort (86.7%) and onlay with immediate implants (60%). Regarding the origin of the graft material, the best results were obtained with grafts removed from the mentum (100% of survival). These data suggest that autogenous grafts constitute a viable and adjusted treatment for the rehabilitation of patients with alveolar ridge deficiency, as in these cases the implants are installed in a session subsequent to graft removal.

Handling of bone and gingival tissue previous to implant installation: Case Report

Freitas, R.M.; Neto, R.S.; Bedran, T.B.L.; Junior, E.M.

Implantology has developed remarkably in the last decades, although the presence of hard and soft tissue surrounding the implant area is still a limiting factor to esthetic prediction in oral rehabilitation. To overcome tissue deficiency, a wide array of techniques is currently available, among which the use of autogenous bone graft for bone correction, and use of acellular dermal matrix (Alloderm) for soft tissue corrections. This work reports the case of a young patient with lower central incisor agenesis, insufficient alveolar bone and gingival recession, who was referred to our clinic. The outline treatment plan comprised correction with autogenous bone graft from the retromolar region and use of acellular dermal matrix, in order to provide bone thickness and soft tissue increase on the region intended to receive the implant. After 6 months, the area was reopened followed by titanium implant installation. Four months later, the area was reopened for installation of the healing cap, and after 2 months, the prosthesis was constructed. The results showed bone thickness and soft tissue increase in the treated region, with functional and esthetic success in patient rehabilitation. In conclusion, the association between autogenous bone graft and acellular dermal matrix in an excellent treatment option for that the practitioners have for patient rehabilitation with implants.

TMD symptomatology manifestation in groups of different ages

Ferreira, C.L.P.; Silva, M.A.M.R.; Felício, C.M.

Although temporomandibular disorders (TMD) have a prevalence peak, there are controversies about its relation with the different ages. The purpose of this study was to analyze the prevalence of TMD signs and symptoms in four different age groups. A total of 1000 protocols of randomly selected TMD patients were analyzed, among which 948 had all required information. Of these, 110 subjects belonged to the group of adolescents (12 to 18 years), 585 were young adults (19 to 40 years), 232 adults (41 to 64 years) and 21 elderly (65 years or more). Analysis of the association between age group and signs/symptoms was carried out by qui-square test and odds ratio (OR) values. Significance level was set at 5%. Young adults predominated in the sample. The group of adolescents differed significantly from the groups of young adults and adults, but was statistically similar to the elderly group. Adolescents presented lower risk for manifestation of the following signs/symptoms: in relation to young adults: TMJ pain (OR=0.60), cervical pain (OR=0.49), chronic headache (OR=0.56), fatigue (OR=0.52), earache (OR=0.57); in relation to adults: muscle pain (OR=0.51), cervical pain (OR=0.29), chronic headache (OR=0.49), fatigue (OR=0.54), tooth sensitivity (OR=0.51), earache (OR=0.37) and vertigo (OR=0.44). There was statistically significant difference between young adults and adults, the former presenting greater risk for TMJ noises (OR=1.46), difficulty to close the mouth (OR=3.19), limited mouth opening (OR=1.59) and lower risk for cervical pain (OR=0.60), tinnitus (OR=0.64), earache (OR=0.66) and vertigo (OR=0.59). Young adults and elderly did not differ significantly to each other. There was statistically significant difference between the adult group and the elderly group only regarding bruxism (OR=2.59), the adult patients presenting greater occurrence. In conclusion, in the studied population, young adults and adults presented more TMD signs/symptoms than adolescents and elderly patients.

Immediate implants: a new perspective

Soriani, N.C.; Coppede, A.R.; Bersani, E.

Initially, a surgical protocol with a healing period of 3 to 6 months was proposed to grant success in implant therapy, which patients considered a too long period. Recently, the interest in the immediate loading concept has increased because, clinically, the results are similar to those of the conventional protocol. It is important to consider the possibility of extracting hopeless teeth with immediate implant installation and activation, providing comfort, function, esthetics and reducing treatment time. To make this concept possible, some techniques have been developed, such as simultaneous bone grafting, and use of membranes. These techniques require flap reflections, and the implant is not always activated immediately. This case report shows the installation and activation of an implant immediately after extraction of a condemned molar. Patient MLA, 36 years, healthy, presented with fractured tooth 36. Atraumatic extraction was performed, preserving the adjacent structures. Implant installation was done with a surgical guide. The abutment and an anatomically adjusted provisional restoration were installed immediately. No suture was done, and the original topography of the soft and hard tissues was preserved. It is possible to conclude that extraction followed by implant installation immediately activated is a feasible alternative that can be indicated in cases of tooth loss rehabilitated with osseointegrated implants.

Complications in extraction of unerupted teeth in patients of advanced age: case report

Quezada, D.E.R., Yaedú, R.Y.F.; Ávida, L.D.; Santana, E.; Mandaliti, A.C.; Júnior, O.F.

The indication of extraction of unerupted tooth is widely known and the presence of these teeth is not always diagnosed at adult age. In the recent years in Brazil, the elder population has increased at a significant rate and unerupted teeth have been found in patients of advanced age. This is a group of greater risk during surgical treatment and more susceptible to systemic involvement. In this context, the present study discusses the complications in the indication and accomplishment of exodontias of unerupted teeth in elderly patients. Two cases are presented, the pros and cons of the indication are addressed and performance of this surgery in patients of advanced age is discussed.

One-stage single implant rehabilitation: case report

Duarte, B.G.; Nary, P.E.; Gonçalves, E.S.

Since the first Branemark publications in the late 1960's (1), Implantology has revolutionized Dentistry, especially the fields of Oral Surgery, Prosthodontics and Periodontology. The concepts issued by Branemark (1) originated a 2-stage procedure: the first for fixture installation and the second placement of the abutment connections, with a 4-6 month interval between them, called osseointegration period. Adell et al. (2) (1981) defined osseointegration as the "direct and close contact between a living bone and a titanium fixture". In 1976, Schroeder et al. (3) published the outcomes of a study using titanium implants with treated surface placed in the mandible of monkeys and observed a process of ankylosis between bone and titanium. From these studies, another implant system was developed (Strumman Dental Implant System), presenting treated surface implants, reduced osseointegration period and the possibility of eliminating the second stage, meaning a 1-stage procedure. The present study presents the macro and micro structure of this implant system, addresses its advantages and describes a clinical case. 1. Branemark, et al. Intra-osseous anchorage of dental prostheses I. Experimental studies. *Scand. J. Plast. Reconstr. Surg.*, 2. Adell, R., Lekholm, U., Rocker, B., Branemark, P.I. A 15-year-study of osseointegrated implants in treatment of edentulous jaws. *Int. J. Oral Surg.*, v. 10, p. 387-416, 1981. 3. Schroeder, A.; Pohler, O.; Sutter, F. (1976). Tissue reaction to a implant of a titanium hollow cylinder with a titanium surface sprayer layer. *Schweiz Monatsschr Zahnheilkg*, 86:713-727.

Morse Cone system: abutment connection option to posterior unitary immediate loading: case report.

Izumida, F.E.; Chávez, O.F.; Júnior, F.A.M.; Barros, L.A.B.

Originally, Branemark protocol for dental implant treatment was based on submerged healing prior to loading. However, immediate loading has been proved possible for multiple and/or unitary cases, giving patients an esthetic appearance during the whole treatment period. The success of immediate loading is achievable, provided that good bone quality and quantity are present. These factors help better maintaining primary implant stability, micro movement reduction and good bone repair and remodeling. Several implant types are available and Morse Cone connection might provide advantageous results in unitary implant and posterior area, showing high screw loosening and screw fracture resistance, adequate cementation, esthetic properties and standard-diameter options. Moreover, Morse Cone components used in immediate loading are safe, practical, rapidly placed and low cost. The purpose of this case report was show the clinical and laboratorial procedures of the 2 immediate loading implant installation, in the region of teeth 36 and 46. After implant installation, solid abutments (Neodent) were used and laboratorial provisional prostheses were adapted. Three months postoperatively, (osseointegration confirmation and peri-implant tissue remodeling), definitive prostheses were constructed. Actual dentistry needs practical, economic, esthetic and non invasive procedures to offer resolution of oral problems to the population.

Immediate loading on single implant inserted at grafted alveolar cleft – case report

Domingues, R.S.; Amado, F.M.; Gregghi, S.L.A.; Sant'Ana, A.C.P.; Passanezi, E.; Rodrigues, M.G.S.; Rezende, M.L.R.

Congenital alveolar cleft represents a particularly complex challenge for esthetic prosthetic rehabilitation. The treatment protocol for this anomaly requires an early secondary bone graft (at 8-10 years of age) aiming at normal maxillary growth, canine eruption through the grafted bone and orthodontic treatment without edentulous space, among other objectives. When the absence of prosthetic space does not occur, implant installation is an advantageous treatment option. This case report presents

the consequences of implant placement before the end of facial growth, such as infra-occlusion of the implant with time, and the application of immediate load on single implant placed at low density maxillary bone. A 16-year-old female patient from the Hospital for Rehabilitation of Craniofacial Anomalies, University of São Paulo (Bauru) was provided with a rough surface screw-shaped titanium implant (3,75x15mm, titanium Fix, SP, Brazil) at the position of the congenitally missing left lateral incisor in the cleft area grafted with iliac bone and re-grafted with autogenous bone harvested from the mandible. Immediate load was applied to the implant by the installation of a provisional acrylic crown. The planning aimed at preserving the remaining local bone and obtaining optimal esthetic of peri-implant soft tissue, one of the main difficulties for reaching success on implant-supported prostheses in cleft patients. In conclusion, the clinical and radiographic success obtained after 3 years of follow-up, points out the advantages of the procedure, as an approach not invasive for the adjacent teeth allows the maintenance of bone quality and quantity and immediate esthetic rehabilitation.

Homogeneous bone graft obtained from bone tissue banks: preliminary clinical and histological evaluation

Bedran, T.B.L.; Freitas, R.M.; Neto, R.S.; Junior, E.M.

Reconstruction of bone defects represents a challenge in Implantology, and biomaterials capable to promote regeneration of such defects have been investigated. The use of autogenous bone graft in these regions is considered as the "golden standard". However, disadvantages of the technique, such as creation of a second surgical site, increase of surgical time and higher postoperative discomfort, show the need of other biomaterial with fellow regenerative characteristics, without such disadvantages. Therefore, the use of homogenous tissue, proceeding from bone tissue banks, appears as a viable alternative to most disadvantages of the use of autogenous grafts. In the presented case, a 46-year-old female patient presented to the Implantology Clinic of the School of Dentistry of Araraquara (FOAr – UNESP-Brazil) with insufficient maxillary bone thickness for implant installation and needing a bone graft in the region. Due to the impossibility of using autogenous bone, a homogenous bone graft was performed. Eight months after the graft surgery, the surgical site was reopened, titanium implants were installed and, during implant placement, the grafted bone tissue was biopsied. The outcomes showed that homogenous bone is a viable alternative to the lack for capitation of autogenous tissue because, clinically, this biomaterial was capable of providing primary lock to installed implants and histologically demonstrated potential to integrate to the berth similarly to the autogenous bone, though in a longer period of time. In conclusion, the homogenous bone presented potential to clinical application, resolving bone defects of difficult correction. However, further studies are necessary to better elucidate the principles of integration of this biomaterial, as well as the chronological alterations in treatments, searching for higher success rates in implant-based approaches.

Autogenous tooth transplantation: an alternative for dental loss

Barbisan, A.N.; Busa, M.J.O.; Barleto, C.V.; Júnior, R.J.A.

Tooth transplantation is the process of a inserting natural tooth with or without pulp vitality, in the alveolus of a recently extracted tooth, or serving to such purpose. The objective of the present study is to accomplish a survey on autogenous tooth transplantation addressing issues from the most appropriate moment for the accomplishment of the transplantation up to the correct surgical technique, always seeking the success of the intervention. The study material consisted of the examination and evaluation of cases of autotransplantation performed at the seat of the Association of São Paulo State Dentists at the city of Ourinhos, SP. The mandibular first molar was the tooth substituted in all cases, and third molars with incomplete root formation were the donor teeth. Until the present moment, all cases succeeded. The transplanted teeth present characteristics of naturally implanted teeth (considered as "normal"). In conclusion, autogenous tooth transplantation has demonstrated success in the replacement of lost teeth, becoming a quite viable option from both clinical and radiographic points of view.

Interdisciplinary approach of implant-supported prostheses: from periodontal disease to immediate loading

Souza, C.M.G.; Gregghi, S.L.A.; Sant'Ana, A.C.P.; Passanezi, E.; Rezende, M.L.R.

The development of implantology has led to progresses on treatment plans and techniques as well as claimed for specialization and knowledge of recent therapies. This makes it mandatory that interdisciplinary knowledge becomes part of the routine in diagnosis and treatment plans that meet the patients' expectations with efficiency, reliability and rapidness. This case report exemplifies the importance of the integration of periodontics, Prosthodontics and Implantology for well succeeded implant-supported rehabilitation. The crowded lower incisors of a non-smoking, healthy, adult male patient showed severe mobility due to advanced periodontal disease and

were scheduled for extraction. Aiming at implant-supported therapy, the teeth were extracted with a regenerative procedure, using a resorbable membrane covering the alveoli. This was made in order to prevent epithelial migration and to maintain osseous thickness and height. During the following 11 months, the patient was provided with an adhesive direct provisional prosthesis until the date of implant installation. The edentulous space was insufficient for replacing the four missing incisors, as they were crowded before. Then, two small diameter implants (3.3x13mm, Conexão Sistemas de Prótese, SP, Brazil) were placed at the position of teeth 42 and 32, with tooth 31 as a pontic. As the excellent bone quality was already expected, the immediate loading on the implants was chosen as therapeutic option. An acrylic fixed prosthesis was constructed and also used as a surgical guide and then fixed to UCLA abutments connected to the implants. The patient did not show any disturbances or symptoms in the postoperative period and felt extremely satisfied with the course of his rehabilitation. In conclusion, the interdisciplinary approach was the main element for the success of this case and emphasizes the importance of the integration among the specialties.

Immediate implants applied to endodontic failures

Naves, M.M.; Menezes, H.H.; Cherulli, T.L.; Borges, D.C.; Rodrigues, M.M.; Naves, M.M.

Despite the currently observed favorable therapeutic perspectives, failures still occur thus leading to dental loss, for example, the endodontic treatments. In these cases, it may be verified esthetics/functional integrity of the periodontal tissues associated with tooth loss. Immediate implants are installed after removal of hopeless teeth and became a viable option for the maintenance of the periodontal architecture because there is anatomic compatibility with alveolus and the possibility of eliminating the injury and local contamination. This work reports cases of immediate implant installation (SIN Implants Innovation) in teeth 12(SUR-3013), 11(SUR-4015) and 21(SUR-5013), which were condemned due to endodontic lesions resulting from failed parentodontic surgery. The surgical access was obtained on a conservative manner by means of an intrasulcular incision and removal of teeth with an extractor, aiming at the preservation of the anatomy and gingival esthetics. Then, a second access was gained at the apical level, allowing the debridement of the surgical chamber for elimination of the periapical injury, visual orientation for setting of the implants and filling of the surgical chamber with xenogenous bovine bone graft (Genox/Baumer). After this procedure, the bone chamber was covered with an absorbent membrane (Gendern/Baumer) and the healing screws were positioned on the implants. Later, a provisional partial removable prosthesis was installed and the implants were rehabilitated after 6 months. After 12 months of rehabilitation, the implants present satisfactory functional and esthetic conditions, without any type of alteration or pathology.

Evaluation of zygomatic complex fractures in the Residence Service in Surgery and Oral and Maxillofacial Traumatology of UEM between 2005 and 2006

Perón, M.F.; Ferreira, G.M.; Gomes, R.S.; Filho, L.I.; Pavan, A.J.

This work presents an epidemiologic survey of zygomatic complex fractures treated at the Service of Surgery and Oral and Maxillofacial Traumatology of the State University of Maringá (UEM) taking into account the period between January 2005 and July 2006. The evaluated aspects were: gender, age, etiology of the trauma, classification of the fracture and type of treatment. Of the 95 analyzed handbooks, there were 95 zygomatic bone fractures. There was predominance among the male patients (male-to-female ratio of 2.5:1), at the age range of 31 to 40 years. The fractures were classified according to Knight & North criteria (1961), and class 1 fractures were the most common type. The most frequent etiology was physical assault followed by car crash, mostly caused by motorcycles. The surgical treatment was the most frequent, being undertaken with the use of rigid internal fixation with plates and screws made from titanium (1.5 and 2.0 system).

Paracoccidioidomycosis: Clinical case report

Basso, T.L.D.; Diniz, M.A.; Sasdelli, M.D.M.; Tanimoto, H.M.

Paracoccidioidomycosis manifests in the granulate form and has attacked men in their 30s to 50s from rural areas in states like MG, SP, GO, RS, PR and RJ. The causative agent can be contracted through the air, contaminated foods, cutaneous injury and mucosa, which are extremely rare. The disease is divided in acute, subacute and chronic and the treatment is undertaken with systemic antifungal drugs. In the case hereby present, a 49-years-old, male Caucasian alcoholic, smoker ploughman sought treatment at the Clinic of Clinical and Radiographic Semiology of "Fundação Educacional de Barretos". the patient reported toothache, fever and had difficult to eat. He presented intraoral and extraoral injuries and was diagnosed as having paracoccidioidomycosis, which was confirmed after some complementary exams. Mycoses usually manifest during the patient's productive phase of life, and disease

has social and economic impact. Generally, the dentist is responsible for diagnosing the disease and the systemic treatment is prescribed by a physician. Discontinued of the treatment may progress to damage ad death.

Complications in Implant therapy

Junior, J.F.S.; Monteiro, F.A.; Greggi, S.L.A.; Sant'Ana, A.C.P.; Passanezi, E.; Rezende, M.L.R.

Dental implants constitute an auxiliary method in oral rehabilitation allowing for replacement of one or more missing teeth. In the last decades, osseointegration has promoted a significant impact on treatment plan and changed the professional profile, which became complex and multidisciplinary. However, the therapeutic limits of safety and predictability, when surpassed, may bring as consequences, failures and complications that cause injuries to the patients and legal and ethic concerns. Even though it is extremely difficult to identify the actual causes of implant failures, it is suggested that they are related to complications during the surgical insertion (local factors), immediate postoperative complications or events during the healing period. This work presents cases of patients who were treated with the placement of osseointegrated prostheses, which failed functionally and esthetically. The probable risk factors as osseous availability and quality, periodontal conditions at the adjacent teeth and quality of the surrounding soft tissues are discussed. In conclusion, the success of osseointegrated therapy is dependent on observation of established criteria for prognosis which, if neglected, may impair or even prevent the achievement of proper esthetic and functional rehabilitation.

Predictability of the level of difficulty in third molars extraction

Sampieri, M.B.S.; Pastana, P.M.; Cardoso, C.L.; Bernini, G.F.; Almonte, M.E.R.; Junior, O.F.

The objective of this study was to estimate the level of difficulty in third molar extraction by comparing the initial planning, based on clinical examination and panoramic x-ray, and the required procedures for accomplishment of the surgery. Forty-five third molars with indication for extraction were evaluated. Six dentists of the Program of Vocational Practice in Oral Surgery (PPPCB/FOB-USP) participated in the work following the proposed methodology. Before of the surgery, the dentists were requested to estimate the level of difficulty of the surgery, classifying it in: 1- simple extraction; 2- need of scraping; 3- need of scraping and ostectomy; 4- need of scraping, ostectomy and tooth sectioning. After completion of the surgery, the dentists reclassified the level of difficulty. The results revealed a higher percentage of cases classified as level of difficulty 1. There was a lower percentage of cases classified as level of difficulty 3. These facts show the importance of the correct planning of extraction of third molars, even though the surgery was carried out by experienced professionals. This planning needs attention for diverse aspects, anatomic or not, because an incorrect treatment planning can complicate the execution of the surgery.

Reposition of the pre-maxilla in patients with bilateral lip and palate malformation

Romanowski, M.; Strujak, G.; Gomes, K.; Biron, C.; Drechmer, M.; Carlini, J.L.

The benefits of the autogenous grafting in the treatment of lip and palate malformations have been described by many authors. In the patients with bilateral malformations, some peculiarities are observed, namely, bone and soft tissue deficiency, protrusion of the pre-maxilla and the functional and esthetic damages caused by bucconasal clefts. In addition, these peculiarities make difficult orthodontic and prosthetic rehabilitation. This study has the purpose of demonstrating the benefits of bone grafts in patients with palate malformations. At CAIF (Integral Care Center for the Patient with Lip and Palate Malformation), at the city of Curitiba, PR, Brazil, we evaluated 30 patients with bilateral trans-foramen clefts. They were submitted to surgery to position the pre-maxilla in a better occlusion with autogenous grafting. In the surgery, the pre maxilla is dislocated, with rupture of bone and soft tissues, positioning these tissues with a surgical guide. Fixation of the graft and the pre-maxilla in the proximal segments of the jaw were made with plates and screws (1.5 mm). The results showed that 86% of the patients succeeded, as observed by grafting success, better phonation and cleft closing; 14% of the patients did not succeed. The replacing of pre-maxilla allowed better palate shape, phonation and chewing. In addition, there was better follow up in the required orthodontic and prosthetic treatments.

The orthognathic surgery in the treatment of obstructive sleep apnea

Avila, L.D.; Júnior, O.F.; Rodrigues, M.T.V.; Neri, N.B.D.; Sant'Ana, E.

Obstructive sleep apnea is an event in which a periodic cessation of airflow occurs for 10 or more seconds. The number of abnormal respiratory events *per* hour of sleep characterizes the existence of mild, moderate and severe obstructive sleep apnea syndrome (OSAS). Treatment of OSAS includes from simple measures such as weight loss, reduction of alcohol consumption, dental appliances and nasal continuous positive airway pressure (CPAP) up to surgical procedures like uvulopalatopharyngoplasty, tracheostomy and anterior mandibular osteotomy with hyoid myotomy and suspension. The greatest disadvantage of nonsurgical treatments of OSAS is that they require a high level of patient compliance to be successful. The objective of this work is to present a case of a patient diagnosed with type 3 OSAS submitted the orthognathic surgery for increase of the airspace and esthetic face reestablishment. The cephalometric and facial analysis showed class II malocclusion, mandibular deficiency and obstruction of the pharyngeal airway space. The surgical procedure used for the treatment of OSAS was the technique of mandibular and genial tubercle advancement, which resulted in the increase of the airway space.

Distance between mental foramina: descriptive study in dry skulls

Silva, M.Z.M.; Molinari, S.L.; Amado, C.B.; Casaroto, A.R.; Gomes, R.S.; Moreschi, E.

On patient rehabilitation with osseointegrated implants, the size of the edentulous area (prosthetic space) causes direct influence on the prognostic because there is a visible relation between this area, the number, size and diameter of the implants. In the edentulous mandible, one of the indications are the protocol prosthesis, initially developed by Branemark and colleagues, according to which only 6 implants placed between the mental foramina were considered as sufficient to support 10 fixed prosthetic elements. The goal of this study was to evaluate the distance between the mental foramina of both antagonistic sides. After granting approval from the Ethics Committee, a study was performed on 120 mandibles of people of both sexes, different ages and racial groups. Sixty had teeth and the other 60 were edentulous. They all came from the Museum of the State University of Maringá, also known as "Museu Didático de Anatomia Humana da Universidade Estadual de Maringá". The distance between both mental foramina was measured using a high precision flexible millimeter tape. The Student's *t* test ($p < 0.05$) was applied and the results showed there was no statistically significant difference between the mean distance between the mental foramina regarding dentulous and edentulous mandibles. From the obtained results, it may be concluded that the loss of all mandibular teeth and the physiological bone resorption caused by it does not alter the transversal position of the mental foramina. The recorded means indicate the possibility of installing the maximum of 6 osseointegrated implants between the mental foramina.

Electromagnetic field use for evaluation of the osseointegration process of implants submitted to immediately load – a pilot study

Fernandes, F.H.C.N.; Mello, A.S.S.; Nascimento, C.; Issa, J.P.M.; Barbosa, R.E.S.; Júnior, R.F.A.

The aim of this work was to verify if mechanical stimulus induced by an electromagnetic field (1.5 MHz, 20 min/day, during 2 weeks) can accelerate the bone healing process around implants inserted immediately after tooth extraction. The crowns of the right and left mandibular first premolars of 2 adult dogs, weighing 17 kg were sectioned and the remaining roots were removed using forceps. The distal alveoli were prepared using drills with 2; 2.7; 3.0 and 3.25 of diameter, until a width of 7 mm was obtained. Two Nobel Biocare MKIII implants with TiUnit surface (3.75x7.0mm) were screwed on the left side, and the two others on the right side, up to 45/50N using a manual torquimeter. After implant adaptation, 5-m high healing pillars were inserted up to 35N. The implants placed on the right side received the electromagnetic field over the healing cap, using a special device developed for this purpose. The implants on the left side served as control. After 2 weeks, the bone blocks containing the implants were removed and submitted to histological processing. The results showed little quantity of newly formed bone around the implants to which the electromagnetic field was applied, being possible to affirm that this stimulus acts as a negative factor for the bone adjacent to the implant, in relation to bone repair promotion in this experimental model.

Zygomatic implantations in the oral rehabilitation of patients with cleft lip and palate

Sanches, R.S.L.; Pinto, J.H.N.; Padovam, L.E.M.; Filho, H.N.; Lopes, J.F.L.

In some situations, cleft lip and palate injuries severely the jaw, which makes complex its rehabilitation. In this context, the installation of prosthesis in totally edentate

individuals becomes a great challenge for dentistry. Aiming to rehabilitate these individuals, the implants anchored in the zygomatic bone allow the installation of fixed prosthesis, promoting a balance to the chewing system. This innovation is provided by diagnostic methods that appear as a great ally in the planning and execution of the technique, such as computed tomography scanning, which allow constructing an archetype of the area to be operated. This work presents the case of an individual with cleft lip and palate who presented severe upper and lower jaw discrepancy and severely atresic jaw, where four zygomatic implants and additional implants were installed. Subsequently, a protocol comprising the placement of a fixed prosthesis in immediate function was accomplished.

Surgical treatment of oroantral communications

Neri, N.B.D.; Avila, L.D.; Júnior, O.F.; Sant'Ana, E.

Extraction of posterior maxillary molars occasionally results in communication between the oral cavity and the maxillary sinus. Therefore, we performed this review to investigate the occurrence of this type of complication, its most frequent location and causes, discussing the surgical techniques used for its treatment.

Radiographic planning and postsurgical evaluation in patients submitted to installation of mini-implants with orthodontic purpose

Tanaka, C.E.; Kobayashi, E.T.; Tanaka, E.E.

Mini-implants are used in Orthodontics as a source of anchorage during the conventional orthodontic treatment, and have successfully replaced extra-buccal devices that demand the direct patient cooperation. The objective of this work is to demonstrate the possibility of using the interproximal radiographic technique as a reference in the intention to precisely install mini implants between the tooth roots, without causing injuries to them. The method consists of the taking interproximal x-rays of the region of installation of the mini-implants, with the surgical guide fabricated from orthodontic wire and settled in the arc. It locates the roots of the second premolar and first molar and the guide, and evaluates its image distortion for the variation of the length and diameter of the guide. Financial support: Program of Scientific Initiation of the State University of Londrina.

Intra-examiner agreement in the acquisition of measurements for implant planning in panoramic radiographs

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The success of treatments with implants depends on many factors, such as pre-surgical evaluation of the patient. In this phase, radiographs would allow acquisition of measurement similar to real ones. The panoramic radiographs have been used as a first-choice examination in these cases for providing great anatomic visualization. The aims of this study were to evaluate the intra-examiner agreement in the acquisition of measurements and to evaluate the accuracy of these measurements. Three examiners analyzed twenty-one panoramic radiographs. The examiners made a tracing on a paper fixed to the images and measured nine regions with caliper. Vertical measurements of spheres in the images were acquired in order to discount the magnifying factor of the technique. The statistical analysis revealed a good intra-examiner agreement. There was no accuracy of the measures in the anterior regions. It may be concluded that the panoramic radiographs allow the acquisition of measurements close to the real ones when the correct magnifying factor will be deducted.

Maxillary sinus floor augmentation with autogenous bone graft and simultaneous implant placement: case report.

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The main objective of maxillary sinus lift surgery is to correct the bone loss in the alveolar process due to maxillary atrophy and sinus pneumatization, allowing implant placement with an adequate length. Simultaneous implant placement in the grafted maxillary sinus is limited to patients with 4 to 5 mm of residual bone height to ensure implant stabilization. Autogenous bone graft is considered to be the gold-standard in oral and maxillofacial surgery because of its osteogenic, osteoinductive and osteoconductive properties. This work aimed to report a case in which maxillary sinus lifting was performed using autogenous bone graft and simultaneous implant placement, and also to discuss the long-term results described in the literature. A 49-year-old, female patient missing the superior-posterior teeth on both sides of the maxilla was referred for treatment. A panoramic radiography, a computed tomography scan and a cast were required for surgical planning. Two titanium implants (3i Implant Innovations Inc.), with dimensions of 3.75x11.5mm and 3.75x13mm were fixed in the premolar region on the left side of the maxilla, with no need of bone grafting. On the right size of the maxilla, initially presenting 5mm of bone height, 3 implants (3i

Implant Innovations Inc.), sized 3.75x11.5mm were placed in the canine and premolar regions simultaneously with sinus lifting and autogenous bone grafting, harvested from the mandibular symphysis. Following a healing period of 6 months, the site was reopened in order to expose the implants to the oral cavity and initiate the restorative phase of treatment. Results and grafting the maxillary sinus with autogenous bone and simultaneous implant placement resulted in implant osseointegration and an expressive gain of height in the alveolar process by means of radiographic and clinical assessments, allowing an appropriate anchorage for the fixed prosthesis.

Gingival papilla in critical Implantology: esthetic aspects

Frias, S.O.; Sant'Ana, A.C.P.; Passanezi, E.; Rezende, M.L.R.; Greggi, S.L.A.

The process of osseointegration and all the prerequisites for its attainment are essential for implant success. However, implant success cannot be analyzed only with respect to osseointegration and recovery of masticatory capacity, but the esthetic aspects should also be considered, especially in the jaw. The implant-retained prosthetic crowns should be similar to natural teeth regarding form, color, size, etc. It is mandatory that the gingival tissue has adequate conditions. The peri-implant gingival tissue must present characteristics, such as apical regular parabolic contour in the free surfaces compatible with that of natural teeth and more coronal in the proximal areas, a rose-pale coloration, amongst others. An aspect in particular that concerns periodontists and implantodontists is the need of having a gingival papilla completely filling the interdental spaces in the proximal areas, preventing the occurrence of voids ("black empty spaces"), which can undoubtedly compromise the final rehabilitative quality of the implant. Thus, some aspects must be analyzed in the planning phase of implants, such as: the periodontal condition of the adjacent teeth, space adjusted for the set of implants, excellent position in implant installation, implant diameter in relation to the existing space, etc.

Reconstruction of atrophic alveolar edge with allografts: case report

Filho, E.V.Z.; Farah, G.J.; Filho, L.L.; Pavan, A.J.; Jacob, J.; Camarini, E.T.

Although dentistry has greatly evolved in the past decades, the rehabilitation of severely reabsorbed edges continues to be a challenge. With the advent of osseointegrated implants, more attention has been given to this problem. Several techniques and materials have been developed aiming at reconstructing bone losses, the golden standard in these cases being the use of autogenous bone, due to its biological characteristics of osteogenesis, osteoinduction and osteoconduction. However, they present drawbacks and limitations that increase the risk of morbidity and the costs to the patient. To overcome these shortcomings, there is the option of bone transplantation with the use of a bone bank. These bone samples are removed from individuals who are organ donors, and go through a process to prevent immunogenic reactions and to ensure that they do not transmit any type of pathology to the recipient. They can be used for the reconstruction of the atrophic alveolar edges, avoiding the need for a second donating area and providing enough amounts of tissue in each case. This work had the objective to present a case of reconstruction of atrophic alveolar edge with a graft from a bone bank, as well as to discuss about its biological aspects.

Operative Dentistry

Harmonic esthetic rehabilitation in a patient with dental wear

Melo, J.C.P.; Furuse, A.Y.; Mondelli, J.

Tooth wear is one of the most complex processes and involves mechanical, thermal and chemical causes. Currently, tooth wear due to the bruxism is increasingly more present in daily clinical practice. This parafunctional habit has been related to stress and the current life style, which have led to an increase of its incidence in the worldwide population. To treat tooth wear resulting from bruxism, the dentist must have knowledge of the dental anatomy and optical behavior of tissue, as well as know how to evaluate and stabilize the temporomandibular joint in centric relation. In this way, the objective of this work was to report a case of generalized tooth wear with boarding for harmonic esthetic rehabilitation. Tooth wear was treated by restoration of the anterior guide with composite resin and further occlusal adjustment with the R.O.C.A system. This treatment allowed the attainment of a steady harmonic anteroposterior relation, with improvement of the maximal habitual intercuspation. Moreover, the adequate passage of the anterior guide was established. The treatment approach accomplished in the present case provided to the patient a pleasant and balanced esthetic smile by means of a reversible, conservative and less costly procedure.

Advantages and limitations of glass fiber posts

Oswaldo, M.V.A.; Melo, J.C.P.; Kegler, E.; Freitas, C.A.

One of the last levels of prevention, in the health field, is the limitation of the damage, which involves the preservation, as much as possible, of the healthful portion of a damaged tissue. In Dentistry, it occurs in the cases where little remaining dental structure exists, forcing the dentist to use a root canal post, which will make possible the subsequent setting of the respective crown. The posts can be metallic, casted and later cemented, or can be obtained from distinct materials (either metallic or not), but fabricated from different methods. Glass fiber posts are included in this last group. The objective in this work was to address the advantages and limitations of this type of post, as well as present some of its possible clinical applications. Glass fiber posts can substitute metallic post advantageously, when esthetics is important, as in case of transparency caused by little thickness of the dental remainder, in the buccal region. The advantages of glass fiber posts are their modulus of elasticity very close to that of dentin and low thermal and electric conductivity. Moreover, the material is easy to handle (during fabrication of the core as well as during its eventual removal) and has good cost-effectiveness relation. Although glass fiber posts have been extensively used, perhaps due to their clinical ease of fabrication, there are limitations imposed by their properties, such as the small shear and tensile strengths. Therefore, this material should only be used when there is a reasonable amount of remaining dentin.

Evaluation of marginal adaptation of indirect restorations using the resin-coating technique after load cycling and thermocycling

Correa-Medina, A.; Di Hipólito, V.; Góes, M.F.; Sinhoretto, M.A.C.

The aim of this study was to evaluate the marginal adaptation of indirect restorations, using different combinations of the "Resin Coat Technique" (RCT), after load cycling and thermocycling. Twenty human molars were used. In each tooth, two cavities were prepared, one on the mesial surface (margins in enamel-ME) and the other on the distal surface (margin in dentin- MD), adding to a total of 40 cavities, which were assigned to four groups. In G1ME and G2MD, a combination of 1-step self-etching adhesive and low viscosity resin (Clearfil S3/ Protect Liner) was applied. An association of 2-step self-etching adhesive and low viscosity resin (Clearfil SEBond/ Protect Liner) was applied to the specimens in G3ME and G4MD. After applying the RCT, impressions were taken from the cavities and poured with stone plaster. The fillings were fabricated using the Sinfony system (3M/ESPE) and were cemented with a resin-based cement (Rely X ARC). After 24 hours, the teeth were submitted to thermocycling (2,000 cycles/5-55°C) and load cycling (250,000 cycles – load 100N) followed by the application of Caries Detector (Kuraray) upon all restoration margins and washing for 30 s. Images were captured and evaluated using Image Tool 3.0 software for assessment of dye penetration and percent conversion. The results were submitted to ANOVA and Tukey's test ($p < 0.05$). The mean values (%) were: G1ME=36.42; G2MD=28.08; G3ME=15.21; G4MD=17.23. There was statistically significant difference among the groups. G3ME and G4MD had significantly better results than G1ME and G2MD ($p < 0.05$). It may be concluded that when the RCT was used in association with a 2-step self-etching adhesive + low viscosity resin there was a better marginal adaptation than that observed when instead a combination of 1-step self-etching adhesive + low viscosity resin was used. There was no statistically significant difference between the adaptation of the restorations with margins in enamel or dentin after load cycling and thermocycling.

Anterior Esthetic-Functional Rehabilitation: Multidisciplinary Approach

Brito, C.A.B.; Boaventura, J. M. C.; Padovani, G.C.; Queiroz, R.S.; Porto-Neto, S.T.; Candido, M.S.M.

Dentistry follows paths that go beyond the restorative techniques, looking for the reestablishment of function allied to dental esthetic, thus fulfilling the patients' expectations and welfare. The obtaining of a harmonious smile, in many cases, demands a multidisciplinary approach involving several dental specialties. The constant evolution of restorative materials (resin-based cements, dental ceramics, non-metallic pins and adhesive systems) and techniques make possible the achievement of an excellence esthetics, which has increased among patients' requests. The aim of this work was to emphasize the importance of a multidisciplinary approach for complete functional and esthetic rehabilitation, as exemplified with a case report. The patient B.A.S looked for treatment motivated by the need of improving the esthetics of his anterior teeth. During the past history review, the patient reported a root canal treatment of tooth 11 and placement of an acrylic crown, without painful symptomatology. The clinical exam revealed healthy periodontal tissues, absence of dental structure loss, esthetically unsatisfactory crown on tooth 11, as well as darkening of tooth 21. The radiographic examination of the area showed a periapical lesion associated with tooth 21, suggesting the need of endodontic treatment. Thereafter, the treatment plan comprised subsequent bleaching (immediate in-office technique) of tooth 21; placement of an intraradicular retainer in tooth 11 (non-