

POSTERS

Abstracts



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Barcelona, SpainChao-Bin Yeh, J Den Craniofac Res 2019, Volume 4
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Risk of cholecystitis in patients with periodontitis: A nationwide population-based study

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Background: The association between periodontitis and digestive diseases such as Crohn's disease, liver abscess and pancreatic cancer has been reported, but no studies have been conducted to investigate the relationship between periodontitis and cholecystitis. Since periodontitis is a microbial initiated chronic inflammatory disease, it may be linked with the gallbladder diseases.

Aim: The aim of this study was to investigate the risk of cholecystitis in patients with periodontitis.

Methods: We used the Longitudinal National Health Insurance Research Database for this nested case control study. A total of 7,366 patients who hospitalized or emergency visit for cholecystitis from 2010 to 2013 were included as the study group, and the 1:4 ratio matched control group comprised 29,464 age and sex-matched individuals. Both groups were classified according to different levels of periodontitis before the index date.

Results: No significantly higher risk of cholecystitis was noted in the patients with periodontitis. Compared to individuals without periodontitis, the adjusted odds ratio (aOR) of

cholecystitis was observed with exposure to mild (aOR=0.925, 95% C.I.=0.855-1.001), moderate (aOR=0.824, 95% C.I.=0.703-0.966), and severe (aOR=0.816, 95% C.I.=0.534-1.247) periodontitis.

Conclusions: Our findings indicate that there was no excess risk of cholecystitis in patients with periodontitis.

Biography

Chao-Bin Yeh has completed his PhD in the Institute of Medicine at Chung Shan Medical University, Taichung, Taiwan and Postdoctoral studies at Chung Shan Medical University. He has worked as Professor in the Department of Emergency Medicine, School of Medicine at Chung Shan Medical University. In addition, he has published more than 50 papers in medicinal journals including dental resource as "Periodontitis and dental scaling associated with pyogenic liver abscess: A population-based case-control study in Journal of Periodontal Research" in recently years and has been serving as a Director of Department of Emergency Medicine, School of Medicine at Chung Shan Medical University.

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Efficacy of CAR T-cell therapy in head and neck cancers: A meta-analysis

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Cancer, according to the World Health Organization is defined as a large group of diseases characterized by the growth of abnormal cells beyond their usual boundaries that can then invade adjoining parts of the body and/or spread to other organs. From extensive surgical excisions, radiotherapy, laser therapy to immunotherapies, various treatment strategies have been proposed and implemented so far but unfortunately none could improve the five year survival rate of the patients globally. Immunotherapy, being one amongst them, is a type of cancer treatment that boosts the body's natural defences to fight against cancer. The current concept of immunotherapy involves chimeric antigen receptor or the CAR T-Cell therapy which involves alterations and modifications of T cells to fight cancer cells better. Until recently, the use of CAR T-cell therapy has been restricted to small clinical trials, largely in patients with advanced blood cancers and has also shown a promising window of hope in head and neck (especially oral) cancers as well. But these treatments have nevertheless captured the attention of the people because of the remarkable responses they have produced in some patients for whom all other

treatments had stopped working. Aim of the study is to assess the CAR T-Cell therapy and to find its efficacy in head & neck malignancies. The research hypothesis is to find the effect of CAR T-Cell therapy in treating head and neck cancers? Study sample included review of research articles, based on scientific data bases from the English literature based COCHRANE collaboration having a definite RCT (Randomized Control Trial). The literature was studied, analyzed and assessed; comparison was made on their p (probability) values between various techniques in terms of their sensitivity and specificity. Since the study is still in progress, the result and conclusion will be discussed on the day of the presentation at the venue.

Biography

Avisesh Manohar is currently pursuing his internship (House Surgeon) at NSVK Sri Venkateshwara Dental College and Hospital, Bangalore, Karnataka, India. He attended eight CDE programmes and scientific conferences. He is the winner of best paper at the IAOMR UG Convention 2018.

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Management of extra-capsular temporomandibular joint ankylosis: Does conservative approach to treatment have a role?

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The conventional management of fibrous extra-capsular temporomandibular joint (TMJ) ankylosis is associated with surgical complication and financial burden on the patient. The study is to assess the outcomes of conservative approach in the management of fibrous extra-capsular TMJ ankylosis. This is a prospective study of patients who were presented at the Dental and Maxillofacial Surgery Clinic of the University of Calabar Teaching Hospital, Nigeria during the period January 1999 to December 2012 with the history of inability to open the mouth diagnosed as fibrous extra-capsular TMJ ankylosis. Fergusson's mouth gag and stacks of wooden spatula were used for the treatment. For patient the mouth opening is not big enough to accept the Fergusson's mouth gag initially, padded Coupland elevator and handle of dental extraction forceps were placed in between the incisor teeth and distracted until appreciable mouth opening was achieved. 21 subjects were treated and their ages ranged from 11 to 22 years with mean at 15.0 years. There were 13 (61.9%) males and 8 (38.1%) females with male: female ratio of 1.6:1. In all cases, the etiological factor that predisposed to formation of extra-capsular TMJ ankylosis was trauma. There was no facial asymmetry and

the side distribution of the affliction showed 1 (4.8%) was bilateral while 20 (95.2%) were unilateral. Eight cases (38.1%) were incomplete ankylosis while the rest (n=13, 69.9%) were complete. The duration of the lesions before treatment was between 2 to 11 months. The shorter the duration of fibrous ankylosis, and the greater the initial inter-incisal distances before treatment, the better is the treatment outcome. The outcome of treatment suggests that the conservative approach to management was beneficial to the patients because they presented early. However, randomized controlled clinical trials are needed to validate this treatment option.

Biography

Charles E Anyanechi has completed his Fellowship in Oral and Maxillofacial Surgery at West Africa Postgraduate Medical College, Lagos, Nigeria. He is an Associate Professor of Oral and Maxillofacial Surgery, in the Oral and Maxillofacial Unit, Department of Dental & Maxillofacial Surgery. He has published more than 60 papers in reputed journals and has been serving as Head of Department and Editorial Board Member of several journals within and outside Nigeria.

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Inflammatory morbidity due to compound mandibular body fractures: Does it have a relationship with treatment outcome?

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The inflammatory morbidities associated with mandibular fractures have led to the timing of the surgical repair of the fractured segments being a controversial issue in oral and maxillofacial surgical practice. To evaluate the relationship between the degree of pre-operative pain and trismus with the development of complications following repair of isolated unilateral compound mandibular body fractures using closed reduction technique. This was a 7 year prospective study carried out at the Dental and Maxillofacial Surgery Clinic of the University of Calabar Teaching Hospital, Calabar, Nigeria. Eighty three subjects (83; males: 66, females: 17), were evaluated for trismus and pain in a blinded manner by a single examiner pre-operatively, and complications recorded postoperatively. The data obtained were statistically analyzed with Environmental Performance Index (EPI) info 2008 version software. Out of the 97 patients that presented, 83/97 (85.6%) were treated, while 13 (15.7%) developed complications. The male-to-female ratio was 5:1. The fractures were commonest in the age range of 21-40 years (n=45, 54.2%). The age (p=0.02) and gender (p=0.01) distribution of subjects were significant. The

more severe the limitation of mouth opening (p=0.03) and pain (p=0.04) before treatment, the more complications develop; and these significantly affected treatment outcome. Impaired mastication and facial asymmetry (n=17, 41.5%) were the most common complications. This study showed that post-trauma pain and trismus due to unilateral mandibular body fractures may be associated with the development of complications. An adequately powered prospective study treating patients at 5 or 7 days is required in order to make the case for later intervention.

Biography

Charles E Anyanechi has completed his Fellowship in Oral and Maxillofacial Surgery at West Africa Postgraduate Medical College, Lagos, Nigeria. He is an Associate Professor of Oral and Maxillofacial Surgery, in the Oral and Maxillofacial Unit, Department of Dental & Maxillofacial Surgery. He has published more than 60 papers in reputed journals and has been serving as Head of Department and Editorial Board Member of several journals within and outside Nigeria.

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Occlusal Disease

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Occusl disease is a comprehensive term for various symptoms caused by occlusal discrepancy between the habitual occlusal position (HOP) and muscular (MP) positions. These are referred to as temporomandibular disorders (TMDs); however, we like to use the term "occlusal disease" because these symptoms are strongly related to the discrepancy between HOP and MP. In 1959, Brill et al. postulated that the coincidence of the muscle and tooth (intercuspal) position constitutes a physiological condition, whereas the lack of a coincidence of these two positions may be indicative of a pathological condition. MP is defined as the position when the jaw is closed by voluntary muscular activity with an upright posture. HOP is an arbitrary closed position (tooth position). Generally, MP is coincident with HOP; however, in

some individuals, it is not, which results in the manifestation of various symptoms in these individuals. To alter a patient's occlusal habits and obtain a physiological muscular position, the bite plate-induced occlusal position (BPOP) is used for reference during voluntary jaw closing, while in an upright position, and after wearing an anterior bite plate for a short period of time. It has been reported that these two positions do not coincide in patients with the temporomandibular joint (TMJ) clicking sounds. Symptoms associated with occlusal disease include oral dyskinesia, glossodynia (painful tongue), burning mouth syndrome, tension-type headache, tinnitus, earache, coxalgia and vertigo. Some cases will be reported and the mechanisms of these symptoms will be discussed.

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The implementation of antioxidant (glutathione) of golden sea cucumber (*Stichopus hermanni*) extracts in oral squamous cell carcinoma apoptosis

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One type of cancer is oral squamous cell carcinoma, which is the least studied due to lack of early detection and has become a serious problem in the field of oral health in Indonesia as a country which has a high number of active and passive smokers. The genus *Stichopus* has a great efficacy as an anticancer. A combination of amino acids that helps to synthesize the antioxidant glutathione can definitely reduce oxidant activity which causes cancer. The purpose of this research is to determine the effect of golden sea cucumber (*Stichopus hermanni*) extracts in apoptosis of oral squamous cell carcinoma. In this research, there were 25 of *Rattus norvegicus* strain wistar that were divided into five treatment

groups i.e., untreated rats, rats with induction of carcinogen (DMBA solution), rats with treatment dose 0.33 g/kg weight, 0.6 g/kg weight and 0.99 g/kg weight. The result of this research was the appearance of buccal epithelial cells of the *Rattus norvegicus* showed apoptosis from immuno histochemical staining. There was an increase in apoptosis on treatment with a dose of 0.99 g/kg weight so that it can be concluded that the induction of golden sea cucumber (*Stichopus hermanni*) extracts to a treatment group affect the oral squamous cell carcinoma apoptosis.

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Periodontitis associated with disease activity, immune aging and inflammatory cytokine of systemic lupus erythematosus patients

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Background: Periodontitis reported was more often found in SLE patients than healthy controls, 54.3% higher than that of patients with no systemic abnormality of 28.2% and the estimate was related to cytokine inflammatory because of the aging of immune system. Expression of IL-2 and IL-10 associated with immune aging as T cell CD28 and CD45RO, were associated with differentiation, cytotoxic activity, signaling and apoptosis of T cells were known as biomarker of immune aging.

Objectives: To analyze correlation between periodontitis severity with disease activity, IL-2, IL-10, CD28, and CD45RO expression in SLE patients.

Methods: Subjects were 45 patients with SLE (age 17-54 years; SLEDAI score 0-42) collected from Dr. Saiful Anwar General Hospital, Malang Indonesia. Periodontitis severity was measured using Periodontal Index (PI) criteria. Expression of IL-2 and IL-10 using ELISA and CD28, CD45RO was examined using flow cytometry.

Result: Clinical manifestations of periodontitis were bleeding gum 88.3%, high calculus index 44.9%, periodontal pocket 73.8% and loose teeth 13.2% among patients. PI score patients were 2.45 ± 0.82 . There was significantly positive correlation between PI score and SLEDAI score ($r=0.798$; $p=0.000$), with IL-2 ($r=0.512$; $p=0.000$), with IL-10 ($r=0.720$; $p=0.000$) with CD28 expression ($r=0.634$; $p=0.000$), and with CD45RO expression ($r=0.354$; $p=0.020$).

Discussion: CD28 expressed specific CD8+ cells and natural killer cells during the latent period of chronic infection, especially on SLE patient. Repeated and persistent stimulation of the antigen leads to increased CD expression in CD8+ T. T cell CD28+ CD8+ cells are more susceptible to activated cell-induced cell death, stimulated by mitogen. The evidence shows that this cell can be used as a SLE marker. Differentiated CD8+ T cells experience loss of CD28 expression and CD45RO re-expression. This cell effector capacity is evidenced by its high capacity to produce perforin, granzymes, IFN- γ , IL-2 and IL-10. In periodontitis, tissue damage also results from the production of various irregular and unregulated productions of inflammatory mediators and destructive enzymes in response to the presence of bacterial biofilms and the process of periodontitis.

Conclusion: Our study showed that periodontitis were associated with SLE disease activity and biomarker of immune aging. Furthermore, SLEDAI index and these markers could be predictor for periodontal condition, prognosis of periodontitis and best treatment for periodontitis on SLE patient.

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The blind crestal sinus lifting technique, where are we?

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Background: The simplicity of the crestal sinus lifting made all who perform the lifting, do it in a blind way without direct vision to the sinus lining. Many perforations may occur without being detected which may lead to failure of implants especially when associated with bone grafts.

Aim: The aim of the clinical study was to visualize the lining of the maxillary sinus from inside using the endoscope to evaluate the lifting procedures. Many unbelievable things were discovered during elevation. At the same time, if the endoscope is available as chair side equipment, it can be introduced from the same crestal osteotomy site of the implant to detect any minor perforation.

Results: Perforation may occur even if you are keen in the maneuver of the lifting especially in cases with thin Schneiderian membranes.

Conclusion: Crestal entrance of the endoscope to visualize the integrity of the sinus membrane is very efficient in detecting any minor perforation that might occur from crestal sinus lifting. Only thick membranes should be elevated using the crestal approach.

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Odonto/osteogenic differentiation and cytokine production by human stem cells of the apical papilla induced by biomaterials: A comparative study

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Introduction: Clinical applications of bioactive materials are increasing in biomedical tissue engineering. This study was sought to assess the effect of calcium enriched mixture (CEM) cement, biodentine, mineral trioxide aggregate (MTA), octacalcium phosphate (OCP) and Atlantik on proliferation, odontogenic/osteogenic differentiation and pro-inflammatory cytokine production by human stem cells of the apical papilla (SCAPs).

Methods: The SCAPs were cultured and exposed to CEM cement, Biodentine, MTA, OCP, Atlantik and no biomaterial (control group). Proliferation of SCAPs treated with different biomaterials was evaluated using trypan blue exclusion test and flow cytometry. Differentiation of cells was evaluated using alkaline phosphatase (ALP) activity, alizarin red staining and reverse transcription polymerase chain reaction (RT-PCR). The expression of genes of pro-inflammatory cytokines was also evaluated using RT-PCR.

Results: The SCAPs treated with 20 mg/mL CEM cement, 2 mg/mL Biodentine, 200 µg/mL OCP/MTA and 20 µg/mL Atlantik showed significantly higher proliferation, increased

ALP activity, higher number of calcified nodules and up-regulation of genes related to odontogenic/osteogenic markers [including ALP, runt-related transcription factor 2 (RUNX2), osterix (OSX), osteocalcin (OCN), bone sialoprotein (BSP) and dentin sialophosphoprotein (DSPP)] compared to the control group. The expression of pro-inflammatory cytokines namely interleukin (IL)-1 α , IL-1 β , IL-6 and tumor necrosis factor (TNF)- α significantly increased in all groups compared to the control group. The highest expression on day seven belonged to IL-1 α and IL-1 β in SCAPs treated with MTA, IL-6 in SCAPs treated with CEM cement, and TNF- α in SCAPs treated with Atlantik and OCP.

Conclusion: CEM cement, Biodentine, MTA, OCP and Atlantik can induce odontogenic/osteogenic differentiation in SCAPs. MTA had a greater potential to induce differentiation of SCAPs to odontoblast like cells while OCP had higher potential to induce differentiation of SCAPs to osteoblast-like cells.

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Periodontal muscle training can strength the periodontal support fit your teeth

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Previous research on periodontal structure and function has shown a significant relationship between periodontal tissue and teeth. This study assessed dentist's beliefs about the relative efficacy and the health of periodontal tissue. A total of 505 patients in general practice were asked to respond to a list of 25 obligatory nourishment for a child while going to have the first teeth, for its effectiveness in dealing with patient's periodontal health especially include chewing hard food. They were also asked to select three effective nutrients

for the periodontal tissue. The indices of patient perceived importance of the periodontal health were derived and each compared with actual effectiveness as determined from a sample of 250 patients. Although the majority of patient's rated 18 of 25 nutrients as being very effective and there was no significant association between patient perceived nourishment effectiveness and actual effectiveness. The implications for patient training are discussed.

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