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### Lunchtime Drop-in Sessions

**Literature Searching**

An in-depth guide on how to search the evidence base, including an introduction to UpToDate and Anatomy.tv.

Useful for anybody who wants to find the best and quickest way to source articles.

**How to understand an article**

How to assess the strengths and weaknesses of published articles.

Examining bias and validity.

**Medical Statistics**

A basic introduction to the key statistics in medical articles.

Giving an overview of statistics that compare risk, test confidence, analyse clinical investigations, and test difference.

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New From Cochrane Systematic Reviews

**Single dose oral analgesics for acute postoperative pain in adults - an overview of Cochrane reviews**

R Andrew Moore1, Sheena Derry1,*, Dominic Aldington2, Philip J Wiffen1

Published Online: 28 SEP 2015  Assessed as up-to-date: 4 MAY 2015

Abstract:

**Background:** This is an updated version of the original Cochrane overview published in Issue 9, 2011. That overview considered both efficacy and adverse events, but adverse events are now dealt with in a separate overview. Thirty-nine Cochrane reviews of randomised trials have examined the analgesic efficacy of individual drug interventions in acute postoperative pain. This overview brings together the results of those individual reviews and assesses the reliability of available data.

**Objectives:** To summarise the efficacy of pharmaceutical interventions for acute pain in adults with at least moderate pain following surgery who have been given a single dose of oral analgesic.

Current Awareness Database Articles on Oral and Maxillofacial Surgery

Below is a selection of articles on oral and maxillofacial surgery recently added to the healthcare databases, grouped in the following categories:

- Oral surgery
- Bisphosphonate-related osteonecrosis of the jaw
- Maxillofacial
- Cleft lip and palate

If you would like any of the following articles in full text, or if you would like a more focused search on your own topic, then get in touch: library@uhbristol.nhs.uk
Oral surgery

Title: Epithelioid Osteosarcoma of the Maxilla: A Case Report and Review of the Literature.

Citation: International journal of surgical pathology, Sep 2015, vol. 23, no. 6, p. 495-499 (September 2015)

Author(s): ALQahtani, Dalal, AlSheddi, Manal, Al-Sadhan, Ra’ed

Abstract: Epithelioid osteosarcoma is an uncommon variant; only 4 cases have been reported in the jaw area, 2 of which were in the maxilla. A 22-year-old woman, in the eighth month of pregnancy, presented to the oral surgery clinic with a mass in the right maxilla that had rapidly expanded over the past 3 months. Computed tomography scans showed an ill-defined sclerotic destructive lesion that formed bone matrix in its soft tissue extension. Microscopic examination of the lesion revealed malignant epithelioid cells with osteoid deposits. The tumor cells were shown to have pale cytoplasm, vesicular nuclei, and prominent nucleoli and to undergo frequent mitosis. In addition, the tumor was positive for epithelial membrane antigen and vimentin and negative for AE1/AE3, Melan-A, CD30, synaptophysin, NSE, CD45, CD99, desmin, and myogenin. The final diagnosis was epithelioid osteosarcoma, which is a rare aggressive variant of osteosarcoma. Few cases of epithelioid osteosarcoma have been reported in the literature, and more studies are required to determine the clinical behavior of this tumor. © The Author(s) 2015.

Title: Comparitive Evaluation of Propofol and Midazolam as Conscious Sedatives in Minor Oral Surgery.

Citation: Journal of maxillofacial and oral surgery, Sep 2015, vol. 14, no. 3, p. 773-783,

Author(s): Hari Keerthy, P, Balakrishna, Ramdas, Srungeri, Krishna Mohan, Singhvi, Nikhil, John, Joseph, Islam, Mueedul

Abstract: The objective of the study was to assess the efficacy of propofol and midazolam as an intravenous sedative agent in minor oral surgical procedures in terms of: (a) the onset of action, (b) heart rate, (c) oxygen saturation, (d) systolic and diastolic blood pressure, (e) respiratory rate, (f) pain during the injection of sedative agent, (g) recovery period, (h) side effects, (i) patient’s cooperation during the surgery. This was a double blind randomized study in which one group of 20 patients received propofol with the induction dose of 0.5 mg/kg and 50 μg/kg/min which was administered by syringe infusion pump as a maintenance dose and the other group received midazolam in a single dose of 75 μg/kg and no maintenance dose was given, instead 5 % dextrose was administered by syringe infusion pump at the rate of 50 μg/kg/min. Since propofol was milky white in colour, a green cloth was covered over the infusion pump in all cases. The surgeon, assistants and observers were blind about the medications which would be given to the patient for sedation. After the administration of the sedative, local anesthesia was achieved with 2 % lignocaine hydrochloride. The onset of action in propofol group was significant as onset of action was faster. The maximum increase in heart rate in propofol group was at 10 min intraoperatively (Mean ± 80.40 ± 12.73) and that in midazolam group was at 15 min intraoperatively (Mean 79.25 ± 13.44). Post operatively the heart rate decreased near to the baseline value in both the groups. The average oxygen saturation before induction in propofol group was 99.7 ±
73% and that of midazolam group was 99.15 ± 01.31 P = 0.314. None of the patients in this study developed apnea. The systolic blood pressure (Mean ± SD) before induction in both the groups decreased from the baseline value after the administration of sedatives. The diastolic blood pressure (Mean ± SD) before induction in both the groups decreased from the baseline value after the administration of sedatives and the decreased diastolic blood pressure was maintained throughout the procedure. The respiratory rate (Mean ± SD) before induction in both the groups decreased from the baseline value after the administration of sedatives. The decreased respiratory rate remained throughout the surgical procedure. Pain during the injection of the sedatives was reported by nine patients (45%) in the propofol group whereas none of the patients in midazolam group complained of pain during the injection. This is statistically significant (P = 0.001). The recovery time (Mean ± SD) in propofol group was 22.50 ± 3.04 (range 15-25 min) and that in midazolam group was 33.75 ± 3.93 (range 30-40 min), which was statistically significant (P < 0.001). Patients in the propofol group were significantly less co-operative than midazolam group at both 10 and 25 min intra operatively. The design of the present study permitted qualitative assessment of propofol and midazolam as sedative agents in minor oral surgical procedures. The ideal anesthetic agent should provide rapid onset of action, profound intra operative amnesia while ensuring rapid recovery without much complications. There were no significant differences in either patient demographics or surgical characteristics between the two groups. The propofol group was less co-operative than midazolam group. Pain during the injection of sedative was a significant adverse effect in the propofol group. Cardiovascular parameters remained stable throughout the procedure in both study groups and no intervention was required. However recovery and onset of action was faster in the propofol group as compared with the midazolam group.

Title: Indications and Frequency for the Use of Cone Beam Computed Tomography for Implant Treatment Planning in a Specialty Clinic.

Citation: The International journal of oral & maxillofacial implants, Sep 2015, vol. 30, no. 5, p. 1076-1083 (2015 Sep-Oct)

Author(s): Bornstein, Michael M, Brügger, Odette Engel, Janner, Simone Fm, Kuchler, Ulrike, Chappuis, Vivianne, Jacobs, Reinhilde, Buser, Daniel

Abstract: To analyze the indications and frequency for three-dimensional (3D) imaging for implant treatment planning in a pool of patients referred to a specialty clinic over a 3-year period. All patients who received dental implants between 2008 and 2010 at the Department of Oral Surgery and Stomatology at the University of Bern were included in the study. The influence of age, gender, and time of treatment (2008 to 2010) on the frequency of use of two-dimensional (2D) radiographic imaging modalities alone or in combination with 3D cone beam computed tomography (CBCT) scans was analyzed. Furthermore, the influence of the indication, location, and need for bone augmentation on the frequency of use of 2D imaging modalities alone or in combination with CBCT was evaluated. In all, 1,568 patients (792 women and 776 men) received 2,279 implants. Overall, 633 patients (40.4%) were analyzed with 2D imaging procedures alone. CBCT was performed in 935 patients (59.6%). There was a statistically significant increase in CBCT between 2008 and 2010. Patients older than 55 years received a CBCT scan in addition to 2D radiographic imaging statistically significantly more often. Additional 3D imaging was most frequently performed...
in the posterior maxilla, whereas 2D radiographs alone exhibited the highest frequency in the anterior mandible. The combination of 2D with CBCT was used predominantly for implant placement with simultaneous or staged guided bone regeneration or sinus elevation. Based on these findings from a specialty clinic, the use of additional CBCT imaging for implant treatment planning is influenced by the indication, location, local anatomy (including the need for bone augmentation), and the age of the patient.

Title: Pseudoepitheliomatous hyperplasia after diode laser oral surgery. An experimental study

Citation: Medicina Oral, Patologia Oral y Cirugia Bucal, September 2015, vol./is. 20/5(e554-e559), 1698-4447;1698-6946 (01 Sep 2015)

Author(s): Seoane J., Gonzalez-Mosquera A., Garcia-Martin J.-M., Garcia-Caballero L., Seoane-Romero J.-M., Varela-Centelles P.

Abstract: Background: to examine the process of epithelial reparation in a surgical wound caused by diode laser. Material and Methods: An experimental study with 27 Sprague-Dawley rats was undertaken. The animals were randomly allocated to two experimental groups, whose individuals underwent glossectomy by means of a diode laser at different wattages, and a control group treated using a number 15 scalpel blade. The animals were slaughtered at the 2nd, 7th, and 14th day after glossectomy. The specimens were independently studied by two pathologists (blinded for the specimens' group). Results: at the 7th day, re-epithelisation was slightly faster for the control group (conventional scalpel) (p=0.011). At the 14th day, complete re-epithelization was observed for all groups. The experimental groups displayed a pseudoepitheliomatous hyperplasia. Conclusions: it is concluded that, considering the limitations of this kind of experimental studies, early re-epithelisation occurs slightly faster when a conventional scalpel is used for incision, although re-epithelisation is completed in two weeks no matter the instrument used. In addition, pseudoepitheliomatous hyperplasia is a potential event after oral mucosa surgery with diode laser. Knowledge about this phenomenon (not previously described) may prevent diagnostic mistakes and inadequate treatment approaches, particularly when dealing with potentially malignant oral lesions.

Title: Spontaneous bone regeneration after enucleation of large jaw cysts: A digital radiographic analysis of 44 consecutive cases

Citation: Journal of Clinical and Diagnostic Research, September 2015, vol./is. 9/9(ZC84-ZC89), 2249-782X;0973-709X (01 Sep 2015)

Author(s): Chacko R., Kumar S., Paul A., Arvind

Abstract: Purpose: This study evaluated the healing in cystic defect of the jaw to substantiate our understanding of spontaneous bone healing after enucleation of jaw cysts subjectively and with analysis of digital postoperative panoramic radiographs. Materials and Methods: Forty four consecutive patients reporting to the Department of Dental and Oral Surgery, during the period between 2008-2012 having maxillary and mandibular cysts treated by either surgical enucleation or by marsupialization followed by enucleation were evaluated for subsequent bone formation at the site of cystectomy defect by subjective
clinical examination along with digital radiographic examination. Postoperative clinical and radiographic examinations were performed at 6, 9, 12, and 24 months. Bone regeneration was evaluated by reduction of the size of residual cavities at the cystectomy defect using digital orthopantomogram. Results: Out of 44 patients, 15 patients completed two years of follow-up with all the patients having 6 months follow-up. The maximum size of the cystic pathology was 150.40mm and minimum of 14.73mm at the time of presentation (average size of 58.16mm). Twenty patients were diagnosed with odontogenic keratocyst, with one patient having multiple OKC associated with Gorlin Goltz Syndrome, 17 patients had dentigerous cyst, 5 had Radicular cyst; solitary bone cyst and globulomaxillary cyst formed one each. Uneventful healing and spontaneous filling of the residual cavities were obtained in all cases. The digital analysis of the postoperative radiographs showed mean values of reduction in size of the residual cavity of 25.85% after 6 months, 57.13% after 9 months, 81.03% after one year and 100% after two year. Conclusion: Spontaneous bone regeneration can occur after surgical removal of jaw cysts without the aid of any graft materials even in large cystic cavity sufficiently surrounded by enough bony walls. This simplifies the surgical procedure, decreases the overall cost of surgery, and reduces the risk of postoperative complications associated with grafting.

Bisphosphonate-related osteonecrosis of the jaw

**Title:** New cancer therapies and jaw necrosis.

**Citation:** British dental journal, Sep 2015, vol. 219, no. 5, p. 203-207 (September 11, 2015)

**Author(s):** Patel, V, Kelleher, M, Sproat, C, Kwok, J, McGurk, M

**Abstract:** Osteonecrosis of the jaw (ONJ) has a number of causes, the most familiar being radiation or bisphosphonate induced. Various other novel anti-neoplastic and bone-targeting therapies that can also cause jaw necrosis have recently become available. This has led to the suggested acronym MRONJ for medication-related osteonecrosis of the jaw. This article summarises the available information on these drugs and their implications for the dental surgeon.

**Title:** Effect of different doses of zoledronic acid in establishing of bisphosphonate-related osteonecrosis.

**Citation:** Archives of oral biology, Sep 2015, vol. 60, no. 9, p. 1237-1245 (September 2015)

**Author(s):** Silva, Paulo Goberlânio de Barros, Ferreira Junior, Antonio Ernando Carlos, Teófilo, Carolina Rodrigues, Barbosa, Maritza Cavalcante, Lima Júnior, Roberto César Pereira, Sousa, Fabrício Bitú, Mota, Mário Rogério Lima, Ribeiro, Ronaldo de Albuquerque, Alves, Ana Paula Negreiros Nunes

**Abstract:** To establish osteonecrosis of the jaws in rats treated with different doses of zoledronic acid (ZA). Male Wistar rats (n=6-7) received three consecutive weekly intravenous ZA infusions at doses of 0.04, 0.20 or 1.00mg/kg ZA or saline (control). Four weeks after the last administration, the animals were submitted to simple extraction of the
lower left first molar. An additional dose of ZA was administered seven days later, and the animals were sacrificed 28 days after exodontia. Weight was measured and blood was collected weekly for analysis. The jaw was radiographically and microscopically examined along with the liver, spleen, kidney and stomach. All ZA doses showed a higher radiolucent area than the control (p<0.0001), but the dose of 0.04mg/kg did not show BRONJ. Doses of 0.20 and 1.00mg/kg ZA showed histological evidence of bone necrosis (p=0.0004). Anaemia (p<0.0001, r(2)=0.8073) and leucocytosis (p<0.0001, r(2)=0.9699) are seen with an increase of lymphocytes (p<0.0001, r(2)=0.6431) and neutrophils and monocytes (p=0.0218, r(2)=0.8724) in all the animals treated with an increasing dose of ZA. Haemorrhage and ectasia were observed in the spleen (p=0.0004) and stomach (p=0.0168) in a dose-dependent manner, and the animals treated with ZA showed a lower rate of weight gain (p<0.0001). We designed a bisphosphonate-related osteonecrosis of the jaw model that reproduces radiographic and histological parameters and mimics clinical alterations such as leucocytosis, anaemia and idiosyncratic inflammatory post infusion reactions. Copyright © 2015 Elsevier Ltd. All rights reserved.

Title: Methotrexate-related lymphoproliferative disorder arising in the gingiva of a patient with rheumatoid arthritis.

Citation: Australian dental journal, Sep 2015, vol. 60, no. 3, p. 408-411 (September 2015)

Author(s): Horie, N, Kawano, R, Kaneko, T, Shimoyama, T

Abstract: Methotrexate (MTX) is the primary drug used in the management of rheumatoid arthritis (RA) and other immune-mediated inflammatory diseases. MTX is a strong immunosuppressive agent and has been reported to cause iatrogenic immunodeficiency-associated lymphoproliferative disorders (LPDs). Stomatitis caused by MTX-related cytotoxicity may occur, but gingival MTX-related LPDs are rare. In this article we present a case of gingival MTX-related LPD in a 60-year-old male with RA. The local findings of the gingival ulceration and alveolar bone exposure were similar to those of bisphosphonate-related osteonecrosis of the jaw. However, he had never received bisphosphonate therapy. The biopsy specimen of the gingival lesion was diagnosed as diffuse large B-cell lymphoma with Epstein-Barr virus positivity. Immediate withdrawal of MTX resulted in marked remission of the LPD. © 2015 Australian Dental Association.

Title: Understanding bisphosphonates and osteonecrosis of the jaw: uses and risks.

Citation: European review for medical and pharmacological sciences, Sep 2015, vol. 19, no. 17, p. 3309-3317 (September 2015)

Author(s): Rosini, S, Bertoldi, I, Frediani, B

Abstract: Bisphosphonates are chemically stable analogs of pyrophosphate compounds, which have been used to treat multiple disorders of calcium metabolism. Although bisphosphonates have been employed for many years and have demonstrated an excellent safety profile, severe osteonecrosis of the jaw (ONJ) has been described in patients with bone metastases who have been treated with bisphosphonates. In this review we describe the reasons for ONJ and discuss the varying effects of different bisphosphonates on the development of ONJ. Bisphosphonates tend to accumulate in bone, subject to remodeling
such as the jaw) and can affect osteoclast-mediated bone resorption and osteoclast formation, leading to the osteonecrotic phenomenon. Risk factors for previously treated patients include the type of bisphosphonates (amino or non-amino), length of treatment and route of administration, the presence of co-morbidities and/or treatment with immune-suppressing drugs, and the presence of other risk factors in addition to the type of intervention required. In oncological patients currently in treatment with intravenous bisphosphonates, greater consideration must be taken depending on the length of treatment already undertaken and concomitant therapies. In these patients, a preventive dental surgery visit and examination of the case would be advisable prior to beginning treatment with bisphosphonates. Practical approaches in the prevention of ONJ include thorough pre-treatment evaluation and performing any preventative procedures (treat periodontal conditions, extract loose teeth, provide protective and endodontic therapies); initiating amino-bisphosphonates only after any gum tissue damage has healed; establishing a regimented check-up schedule and hygienic precautions the patient can take; and during bisphosphonate treatment conduct any dental procedures in the least invasive manner during bisphosphonate treatment.

**Title:** Important aspects concerning alendronate-related osteonecrosis of the jaws: a literature review.

**Citation:** Gerodontology, Sep 2015, vol. 32, no. 3, p. 169-178 (September 2015)

**Author(s):** Iglesias, Julia E, Salum, Fernanda G, Figueiredo, Maria A, Cherubini, Karen

**Abstract:** To conduct a literature review on sodium alendronate, focusing on osteonecrosis of the jaws, a serious potential side effect. Sodium alendronate is a bisphosphonate that is widely used for the treatment of osteopenia, osteoporosis and Paget's disease. Like other bisphosphonates, it inhibits bone resorption by inactivating osteoclasts. Alendronate has evident benefits in the treatment of these diseases, but it is associated with jaw osteonecrosis, although less frequently compared with intravenous bisphosphonates. Therefore, some preventive measures should be taken to avoid this side effect. We reviewed the literature regarding the pharmacological aspects, mechanism of action, indications of use and side effects of sodium alendronate, as well as the management of patients under this therapy. The benefits of sodium alendronate are scientifically proven, but a serious adverse effect is osteonecrosis. Therefore, it is crucial to prepare the oral cavity before bisphosphonate therapy, providing a careful dental evaluation and all needed dental treatment. © 2013 John Wiley & Sons A/S and The Gerodontology Society. Published by John Wiley & Sons Ltd.

**Title:** Bisphosphonate-related osteonecrosis of the jaw in a multiple myeloma patient: A case report with characteristic radiographic features.

**Citation:** Imaging science in dentistry, Sep 2015, vol. 45, no. 3, p. 199-203, 2233-7822

**Author(s):** Lee, Byung-Do, Park, Moo-Rim, Kwon, Kyung-Hwan

**Abstract:** A 59-year-old male who had suffered from multiple myeloma for nine years and had been administered bisphosphonates for seven years visited a dental hospital for pain relief due to extensive caries in his left maxillary molars. The molars were extracted, leaving
an exposed wound for three months. The radiograph showed sequestra formation and irregular bone destruction in the left maxilla. Sudden pain and gingival swelling in the right mandibular molar area occurred six months later. The interseptum of the right lower second molar was observed to be necrotic during surgery. These findings coincided with the features of bisphosphonate-related osteonecrosis of the jaw (BRONJ). In this case, the long intravenous administration of bisphosphonates and tooth extraction were likely the etiologic factors of BRONJ in a patient with multiple myeloma; moreover, the bilateral occurrence of BRONJ is a characteristic feature.

**Title:** Value of nonsurgical therapeutic management of stage I bisphosphonate-related osteonecrosis of the jaw.

**Citation:** Journal of cranio-maxillo-facial surgery : official publication of the European Association for Cranio-Maxillo-Facial Surgery, Sep 2015, vol. 43, no. 7, p. 1139-1143

**Author(s):** Bodem, Jens Philipp, Kargus, Steffen, Engel, Michael, Hoffmann, Jürgen, Freudlsperger, Christian

**Abstract:** There is still controversy about the best treatment strategy for patients with bisphosphonate-related osteonecrosis of the jaw (BRONJ) stage I. Therefore, the aim of the present study was to analyse the effect of a nonsurgical treatment protocol in patients with BRONJ stage I. During the study period we included 17 patients (11 male; 6 female) who presented with a total of 24 separate areas of BRONJ, stage I. All patients were exclusively treated with a monthly intravenous regime of zoledronic acid due to an underlying malignant disease. All patients were treated using a standardized nonsurgical protocol consisting of antimicrobial mouth rinsing with chlorhexidine (CHX) (0.12%) three times a day, and daily CHX gel application. In 11 patients (45.8%) the surface area of the exposed jawbone was completely healed by nonsurgical treatment. In seven patients (29.2%), nonsurgical treatment reduced the size of the exposed bone area by a mean of 64.7% (range 20.0-96.8%). None of the patients showed an increase in size of the area of exposed jawbone, or a worsening of the BRONJ from stage I to stages II or III. However, the duration of nonsurgical treatment or the duration of intravenous bisphosphonate therapy did not significantly influence the treatment outcome (p = 0.6628, p = 0.6077, respectively). The results of the present study support the beneficial role of nonsurgical treatment in patients presenting with BRONJ stage I. Surgical therapy of BRONJ should be restricted to patients with advanced stages with clinical symptoms and local signs of infection. Copyright © 2015 European Association for Cranio-Maxillo-Facial Surgery. Published by Elsevier Ltd. All rights reserved.

**Title:** Adipose-derived stem cells and platelet-rich plasma for preventive treatment of bisphosphonate-related osteonecrosis of the jaw in a murine model.

**Citation:** Journal of cranio-maxillo-facial surgery : official publication of the European Association for Cranio-Maxillo-Facial Surgery, Sep 2015, vol. 43, no. 7, p. 1161-1168

**Author(s):** Barba-Recreo, Paula, Del Castillo Pardo de Vera, Jose Luis, Georgiev-Hristov, Tihomir, Ruiz Bravo-Burguillos, Elena, Abarrategi, Ander, Burgueño, Miguel, García-Arranz, Mariano
**Abstract:** The main challenge in treating bisphosphonate-related osteonecrosis of the jaw (BRONJ) is the absence of an effective established treatment. We aimed to compare different potentially preventive treatments for BRONJ after dental extractions in zoledronic acid (ZA)-treated animals. We studied the local application of different combinations of adipose-derived stem cells (ASCs) with or without previous stimulation with bone morphogenetic protein 2 (BMP-2) and platelet-rich plasma (PRP) in rats. Fifty-six male Wistar rats were treated with ZA for 9 weeks. Dental extractions were performed in the eighth week, and the animals were divided into 4 groups. In group 1 (n = 14), alveolar coverage with mucoperiosteal flap was performed. In group 2 (n = 14), PRP was applied over the sockets and covered with the flap. In group 3 (n = 15), allogeneic ASCs with PRP were applied and covered with the flap. In group 4 (n = 13), animals were treated with ASCs cultured with BMP-2, PRP, and flap coverage. Histologic, fluorescence, and radiologic studies of the maxillae were performed. ASC-treated animals showed lower frequency of osteonecrosis (14% vs 50%, p = 0.007) and greater bone turnover (p = 0.024) and osteoclast count (p = 0.045) than those not receiving the ASC treatment. In this high-risk model, ASC-based treatments seem to prevent BRONJ more effectively than mucosal flap with or without PRP. The combination of ASCs and PRP appears to be synergistic, and the addition of BMP-2 could further improve the results. Copyright © 2015 European Association for Cranio-Maxillo-Facial Surgery. Published by Elsevier Ltd. All rights reserved.

**Title:** A Large National Cohort Study of the Association between Bisphosphonates and Osteonecrosis of the Jaw in Patients with Osteoporosis: A Nested Case-control Study.

**Citation:** Journal of dental research, Sep 2015, vol. 94, no. 9 Suppl, p. 212S

**Author(s):** Kwon, J-W, Park, E-J, Jung, S-Y, Sohn, H S, Ryu, H, Suh, H S

**Abstract:** The purpose of this study was to examine the association between bisphosphonate exposure and osteonecrosis of the jaw (ONJ) in Korean patients with osteoporosis. A nested case-control study was performed using the claims database during 2002 to 2010 provided by the National Health Insurance Service. We identified a cohort of individuals with diagnosis of osteoporosis during 2002 to 2010. Cases and controls were identified during 2004 to 2010, and the date of potential cases of ONJ was defined as the index date. Bisphosphonate exposure was evaluated during 2 y prior to the index date. The association between bisphosphonate exposure and ONJ was tested by performing a conditional logistic regression analysis for matched data, and odds ratios (ORs) with 95% confidence intervals (CIs) were presented. Subjects were classified as nonuser, recent user, past user, or continuous user, depending on the prescription of bisphosphonates in 2 periods (1 to 2 y and 0 to 1 y prior to the index date). Continuous users were defined as patients who were exposed to bisphosphonate in both periods. We also examined the impact of bisphosphonate medication compliance by measuring the cumulative duration of exposure (CDE) on the risk of ONJ. A total of 212 cases with ONJ and 2,120 controls matched by sex, age, income level, and insurance type were identified among 109,787 patients with osteoporosis out of 1,025,340 enrollees in the sample cohort. The odds of having ONJ after adjusting for patient comorbidities significantly increased in continuous users of bisphosphonates (OR, 3.9; 95% CI, 2.4 to 6.2) compared to nonusers. Increased odds of ONJ were observed as CDE increased. The adjusted OR in patients with 1.5 y < CDE ≤ 2 y prior to the index date was 7.8 (95% CI, 4.0 to 15.5) versus nonusers. Our study results support
significantly increased occurrences of potential ONJ in patients with osteoporosis who were exposed to bisphosphonates compared to those without exposure. © International & American Associations for Dental Research.

Title: Bisphosphonate-related osteonecrosis of the jaw: awareness and level of knowledge of Lebanese physicians.

Citation: Supportive care in cancer : official journal of the Multinational Association of Supportive Care in Cancer, Sep 2015, vol. 23, no. 9, p. 2825-2831 (September 2015)

Author(s): El Osta, Lana, El Osta, Badi, Lakiss, Sara, Hennequin, Martine, El Osta, Nada

Abstract: Bisphosphonate-induced osteonecrosis of the jaw (ONJ) is a potentially destructive complication, particularly encountered in oncology. It is supposed that awareness and good knowledge of this disease by physicians are important factors of its early detection and management. This study aims to evaluate the level of knowledge among a sample of Lebanese physicians with regard to this complication. An observational cross-sectional study was conducted at Hôtel-Dieu de France hospital between March and June 2013. Data were collected through a self-administered questionnaire distributed to 190 eligible physicians in the departments involved in prescribing bisphosphonates and managing the ONJ. A total of 136 valid responses were obtained (response rate 71.6 %). Eighty-six (63.2 %) physicians were treating patients with bisphosphonates: the most prescribed form being the weekly oral bisphosphonates for osteoporosis followed by zoledronate several times yearly for bone malignancies. Fifty-one (37.5 %) participants were unaware of bisphosphonate-related ONJ. Furthermore, the level of knowledge was relatively poor: the mean score of all participants was 12.42 ± 10.08, while 77 (56.6 %) had a global score more than 16 over 30. There were statistically significant associations between the level of knowledge and physicians' specialty (p value <0.0001), whether or not they prescribe bisphosphonates (p value = 0.039), the most frequently form prescribed (p value = 0.048), whether or not they attend patients already on bisphosphonate (p value = 0.047), whether or not they have observed (p value = 0.004) and treated (p value = 0.002) exposed necrotic bone of the jaw. Our study revealed a deficient knowledge regarding bisphosphonate-related ONJ among Lebanese physicians. Appropriate training strategies to increase their awareness are required.

Maxillofacial

Title: The reliability of tablet computers in depicting maxillofacial radiographic landmarks.

Citation: Imaging science in dentistry, Sep 2015, vol. 45, no. 3, p. 175-180, 2233-7822 (September 2015)

Author(s): Tadinada, Aditya, Mahdian, Mina, Sheth, Sonam, Chandhoke, Taranpreet K, Gopalakrishna, Aadarsh, Potluri, Anitha, Yadav, Sumit

Abstract: This study was performed to evaluate the reliability of the identification of anatomical landmarks in panoramic and lateral cephalometric radiographs on a standard
medical grade picture archiving communication system (PACS) monitor and a tablet computer (iPad 5). A total of 1000 radiographs, including 500 panoramic and 500 lateral cephalometric radiographs, were retrieved from the de-identified dataset of the archive of the Section of Oral and Maxillofacial Radiology of the University Of Connecticut School Of Dental Medicine. Major radiographic anatomical landmarks were independently reviewed by two examiners on both displays. The examiners initially reviewed ten panoramic and ten lateral cephalometric radiographs using each imaging system, in order to verify interoperator agreement in landmark identification. The images were scored on a four-point scale reflecting the diagnostic image quality and exposure level of the images. Statistical analysis showed no significant difference between the two displays regarding the visibility and clarity of the landmarks in either the panoramic or cephalometric radiographs. Tablet computers can reliably show anatomical landmarks in panoramic and lateral cephalometric radiographs.

Title: Accessibility to editorial information in Oral and Maxillofacial Surgery journals: The authors' point of view.

Citation: Journal of cranio-maxillo-facial surgery : official publication of the European Association for Cranio-Maxillo-Facial Surgery, Sep 2015, vol. 43, no. 7, p. 1078-1081 (September 2015)

Author(s): Castelo-Baz, Pablo, Leira-Feijoo, Yago, Seoane-Romero, Juan Manuel, Varela-Centelles, Pablo, Seoane, Juan

Abstract: To evaluate the accessibility to editorial information in Oral & Maxillofacial Surgery journals. A cross-sectional study using the WOS-Web of Science database in three categories: "Surgery," "Otorhinolaryngology," and "Dentistry, Oral Surgery & Medicine" was designed. Journals were filtered by title and classified under three headings: OMFS specialty; OMFS subspecialty and related sciences; and multidisciplinary journals. Specialty scope (OMFS vs. other); impact factor; path for the manuscript; blinding policy; accessibility to reviewers' criteria; and percentage of acceptance. Only 46 of 330 journals met the inclusion criteria. All OMFS journals provided comprehensive information about the review process, compared to 5 of 27 (18.5%) of Oral Surgery and related sciences periodicals. Most specialty journals do not inform about the blind review mode used (20 of 33; 60.6%). Generally, information about the reviewers' assessment criteria is scarce, but is available from all OMFS journals, which also state the percentage of manuscript acceptance (100% vs. 14.8%). OMFS JCR journals provide adequate information about their editorial process in terms of path for the manuscript, accessibility to reviewers' criteria, and percentage of acceptance. Additional efforts are needed to increase accessibility to information about blinding policy and average time from submission to acceptance. Copyright © 2015 European Association for Cranio-Maxillo-Facial Surgery. Published by Elsevier Ltd. All rights reserved.

Title: Sensitivity and specificity of cone beam computed tomography in thin bony structures in maxillofacial surgery - A clinical trial.
Citation: Journal of cranio-maxillo-facial surgery : official publication of the European Association for Cranio-Maxillo-Facial Surgery, Sep 2015, vol. 43, no. 7, p. 1284-1288 (September 2015)

Author(s): Thönissen, P, Ermer, M A, Schmelzeisen, R, Gutwald, R, Metzger, M C, Bittermann, G

Abstract: Cone-Beam Computed Tomography (CBCT) has become widely used in dentistry and maxillofacial surgery. Accuracy, sensitivity and specificity of thin bony structures below 0.5 mm have been subject of some in vitro studies. This prospective in vivo study investigates the correlation between preoperative CBCT-imaging and intraoperative clinical examination of thin bony structures. We hereby present results from daily clinical routine. A total number of 80 sites in 64 patients has been examined to differentiate between preoperative 3D imaging and clinical measurements on cystic lesions in maxilla and mandible. Different CBCT-devices with a voxel size ranging from 0.08 mm to 0.4 mm were used. Overall specificity found for detecting thin bony structures of the human jaw is 13.89%, overall sensitivity is 100%, positive predictive value (PPV) is 58.67% and negative predictive value (NPV) is 100%. Image quality is the key to make use of additional information CBCT provides and depends on spatial, temporal and contrast resolution. CBCT does not depict reliably thin bony structures of the jaw, even if high voxel resolution is used. In selected cases using high resolution protocols should be considered despite affecting the patient with higher doses of radiation. Copyright © 2015 European Association for Cranio-Maxillo-Facial Surgery. Published by Elsevier Ltd. All rights reserved.

Title: Tissue Engineering: Step Ahead in Maxillofacial Reconstruction.

Citation: Journal of international oral health : JIOH, Sep 2015, vol. 7, no. 9, p. 138-142, 0976-7428 (September 2015)

Author(s): Rai, Raj, Raval, Rushik, Khandeparker, Rakshit Vijay Sinai, Chidrawar, Swati K, Khan, Abdul Ahad, Ganpat, Makne Sachin

Abstract: Within the precedent decade, a new field of "tissue engineering" or "tissue regeneration" emerge that offers an innovative and exhilarating substitute for maxillofacial reconstruction. It offers a new option to supplement existing treatment regimens for reconstruction/regeneration of the oral and craniofacial complex, which includes the teeth, periodontium, bones, soft tissues (oral mucosa, conjunctiva, skin), salivary glands, and the temporomandibular joint (bone and cartilage), as well as blood vessels, muscles, tendons, and nerves. Tissue engineering is based on harvesting the stem cells which are having potential to form an organ. Harvested cells are then transferred into scaffolds that are manufactured in a laboratory to resemble the structure of the desired tissue to be replaced. This article reviews the principles of tissue engineering and its various applications in oral and maxillofacial surgery.

Title: "Vanishing Bone Disease" in Maxillofacial Region: A Review and Our Experience.

Citation: Journal of maxillofacial and oral surgery, Sep 2015, vol. 14, no. 3, p. 548-557, 0972-8279 (September 2015)

Author(s): Gulati, Ujjwal, Mohanty, Sujata, Dabas, Jitender, Chandra, Nidhee
**Abstract:** Vanishing bone disease (VBD) is a rare disease of unknown etiology which is characterised by progressive replacement of bony framework by proliferation of endothelial lined lymphatic vessels. It has been given numerous names like massive osteolysis, Gorham’s disease, phantom bone disease, and progressive osteolysis. It has no age, sex or race predilection. It may involve single or multiple bones and spread of the disease does not respect the relevant joint as boundary. The first report of the disease was published around two decades back but the mysterious nature of its etiology and ideal management strategy has still not been completely unfolded. The disease may functionally or aesthetically effect the patient and also has the potential to be life threatening. The first case of VBD in maxillofacial region was reported by Romer in 1924, Handbuch der speziellen pathologischen Anatomie and histology, Springer, Berlin. Since then, there have been few case reports of the same in maxillofacial region. We present a review of cases of VBD in maxillofacial region reported in literature along with our experience of a case.

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**Title:** Histological Comparison of New Biodegradable Magnesium-Based Implants for Maxillofacial Applications.

**Citation:** Journal of maxillofacial and oral surgery, Sep 2015, vol. 14, no. 3, p. 637-645, 0972-8279 (September 2015)

**Author(s):** Charyeva, Olga, Thormann, Ulrich, Lips, Katrin S, Heimann, Lydia, Sommer, Ursula, Szalay, Gabor, Alt, Volker, Hort, Norbert, Schnettler, Reinhard, Rauschmann, Michael, Schmidt, Sven

**Abstract:** A variety of materials have been used for bone augmentation, distraction osteotomy, and in post-cancer patients following tumor removal. However, a temporary metal implant that would resorb after successful treatment is a new concept. Magnesium was suggested as a suitable material for these purposes because it is biocompatible, has better mechanical properties than titanium, and stimulates new bone formation. This study evaluates histological appearance of magnesium-based implants and the surrounding bone. Three magnesium-based biomaterials were tested in a rabbit bone defect model: magnesium-hydroxyapatite (Mg-HA), W4 (96 % magnesium, 4 % yttrium), and pure magnesium (pure Mg). Animals were sacrificed after 6 and 12 weeks and the samples were analyzed histologically and histomorphometrically. Mg-HA had the highest mean amount of tartrate-resistant acid phosphatase (TRAP) positive cells at the implantation site of all groups. It had shown the fastest degradation rate already at 6 weeks but the least amount of new bone formation. New bone was seen forming in direct contact with pure Mg and W4. The mean gas volume was highest in W4 compared to pure Mg and Mg-HA but this difference was not statistically significant. W4 had the lowest mean number of TRAP-positive cells of all materials. Pure Mg and W4 were shown to be the most promising materials in this study in respect to the bone response to the implant material. They could be used for screws and plates in bone augmentation procedures.

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**Title:** Pediatric Maxillofacial Trauma Outcomes Based on a Survey of 65 Patients: A Prospective Study of Etiology, Incidence and Methods of Treatment.

**Citation:** Journal of maxillofacial and oral surgery, Sep 2015, vol. 14, no. 3, p. 687-692, 0972-8279 (September 2015)
**Author(s):** Bhardwaj, Yogesh, Kumar, Deepak

**Abstract:** The purpose of this study was to assess the etiology, incidence, and various methods of treatment of maxillofacial injuries in children presenting at our centre and to compare our findings with literature. We carried out prospective study of 65 pediatric maxillofacial trauma patients treated from January 2011 to October 2012 at our centre. Data was collected on age, gender, etiological factors, anatomic site and treatment methods. Follow-up was performed by recall survey. Out of 65 patients 17 (26.15 %) presented with isolated soft tissue injuries and 48 (73.84 %) patients reported with 81 craniomaxillofacial fractures. Falls were most common mode of injury with 53 fractures (81.53 %). Treatment for fractures in our series comprised of periodic observation for non-displaced fractures (46.15 %), closed reduction (maxillomandibular fixation with IMF screws, acrylic cap splints) for minimally displaced fractures (15.38 %) and open reduction and internal fixation (ORIF) for grossly displaced fractures (12.30 %). Paediatric maxillofacial trauma can be managed conservatively and surgical treatment by ORIF is required in a very small group of children with grossly displaced fractures as a result of high velocity injuries. Prognostic study, Level II.

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**Title:** Contribution of Ultrasonography to the Diagnosis of Submucosal and Subcutaneous Nodular Lesions of the Oral and Maxillofacial Region: Analysis of Cases.

**Citation:** Journal of maxillofacial and oral surgery, Sep 2015, vol. 14, no. 3, p. 706-712, 0972-8279 (September 2015)

**Author(s):** Martins, Felipe Leal, Salum, Fernanda Gonçalves, Cherubini, Karen, Oliveira, Roberto, de Figueiredo, Maria Antonia Zancanaro

**Abstract:** The aim of this study was to evaluate the contribution of ultrasonography in the establishment of the diagnosis of nonspecific nodular lesions of the oral soft tissues. We determined the indication of use and reliability of ultrasonography in the field of dentistry, considering whether it was of value in the conclusive diagnosis of these pathologies. We recruited 65 patients from the Oral Medicine Unit of São Lucas Hospital, who had submucosal and subcutaneous nodules, without established diagnosis. They were subjected to ultrasonography of the lesion, carried out with standardization of the protocol and equipment, utilizing a Doppler system. The ultrasonographic report was prepared by an experienced professional, noting the imaging characteristics as well as the possibility of diagnosis. Two calibrated examiners analyzed the data, comparing the ultrasonographic report with the final diagnosis. Accordingly, we used established scoring, where zero corresponded to no contribution to the final diagnosis, 1 helped in the management of the case, and 2 when imaging determined the diagnosis. A zero score was obtained for 12.3 % of the examinations performed, and 1 and 2 accounted for respectively 41.5 and 46.1 %, totaling a contribution of about 88 %. Ultrasonography was of value in the diagnosis of vascular lesions in 93.3 % and of neoplasms in 87.5 %. In the salivary gland diseases, it contributed to the final diagnosis in 75 %. The results demonstrated that ultrasonography is an effective tool in the determination of the definitive diagnosis of nonspecific nodular lesions of the soft tissues of the oral and maxillofacial region.
Title: Management and Treatment Outcomes of Maxillofacial Fibro-osseous Lesions: A Retrospective Study.

Citation: Journal of maxillofacial and oral surgery, Sep 2015, vol. 14, no. 3, p. 728-734, 0972-8279 (September 2015)

Author(s): Kumar, K A Jeevan, Kishore, P Krishna, Mohan, A P, Venkatesh, V, Kumar, B Pavan, Gandla, Divya

Abstract: Fibro-osseous lesions are a diverse group of bone disorders and include developmental, reactive or dysplastic diseases and neoplasms. They share overlapping clinical, radiographic and histopathologic features and demonstrate a wide range of biological behaviour. To evaluate the characteristics, treatment and outcome of benign fibro-osseous lesions of the jaws. All patients with fibro-osseous lesions of the jaws treated at the department of Oral and Maxillofacial Surgery of the Kamineni Institute of Dental Sciences from 2007 to 2013 were included in this study. Six males and four females were treated. Juvenile ossifying fibroma was most often encountered (40 %), and the mandible was the most frequent location (70 %). Main clinical feature in most of the cases was a painless expansile swelling with facial asymmetry, and radiologically mixed (radiolucent and radiopaque lesions) were seen in majority of cases. All cases were surgically treated and histopathologically confirmed. Segmental ostectomy was performed in six cases; maxillectomy was done in one case and excision along with margin in three cases. Mean follow-up was of 3.3 years with no recurrence. Fibro-osseous lesions, although sharing similar microscopic features, exhibit a variety of clinical behavior rendering their treatment highly individualized. Radical treatment is the choice to achieve an outcome without recurrence.

Title: The Faculty Educator Development Award: A 12-Year Perspective on Success, Excellence, and Impact on the Specialty of Oral and Maxillofacial Surgery.

Citation: Journal of oral and maxillofacial surgery : official journal of the American Association of Oral and Maxillofacial Surgeons, Sep 2015, vol. 73, no. 9, p. 1670-1671 (September 2015)

Author(s): Tiwana, Paul S, Larsen, Peter E

Title: Use of surgical loupes among oral and maxillofacial surgery specialist trainees/registrars in United Kingdom.

Citation: Microsurgery, Sep 2015, vol. 35, no. 6, p. 502-503 (September 2015)

Author(s): Farook, Shahme Ahamed, Patel, Chandni, Puri, Sophia, Maqbool, Arman, Sadiq, Zaid, Visavadia, Bhavin

Title: Application of a real-time three-dimensional navigation system to various oral and maxillofacial surgical procedures.

Citation: Odontology / the Society of the Nippon Dental University, Sep 2015, vol. 103, no. 3, p. 360-366 (September 2015)
**Author(s):** Ohba, Seigo, Yoshimura, Hitoshi, Ishimaru, Kyoko, Awara, Kousuke, Sano, Kazuo

**Abstract:** The aim of this study was to confirm the effectiveness of a real-time three-dimensional navigation system for use during various oral and maxillofacial surgeries. Five surgeries were performed with this real-time three-dimensional navigation system. For mandibular surgery, patients wore acrylic surgical splints when they underwent computed tomography examinations and the operation to maintain the mandibular position. The incidence of complications during and after surgery was assessed. No connection with the nasal cavity or maxillary sinus was observed at the maxilla during the operation. The inferior alveolar nerve was not injured directly, and any paresthesia around the lower lip and mental region had disappeared within several days after the surgery. In both maxillary and mandibular cases, there was no abnormal hemorrhage during or after the operation. Real-time three-dimensional computer-navigated surgery allows minimally invasive, safe procedures to be performed with precision. It results in minimal complications and early recovery.

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**Title:** Distraction histogenesis of the maxillofacial region.

**Citation:** Oral and maxillofacial surgery, Sep 2015, vol. 19, no. 3, p. 221-228 (September 2015)

**Author(s):** Gülses, Aydin, Sencimen, Metin, Ayna, Mustafa, Gierloff, Matthias, Açı, Yahya

**Abstract:** The changes in the surrounding soft tissues during long bone distraction in orthopedic surgery have been the subject of several reports, studies on changes in the craniofacial region, in which various tissues, including the skin, muscle, tendon, blood vessel, and gingiva are rare. Therefore, there is a need for studies on the soft tissue aspects of bone lengthening of the craniofacial region. The aim of this review was to address this issue by reviewing the literature about the distraction histogenesis of various tissues, including skin, muscle, blood vessel, nerve, and gingiva.

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**Title:** Factors affecting scientific productivity of German oral-maxillofacial surgery training centers: a retrospective cohort study.

**Citation:** Oral and maxillofacial surgery, Sep 2015, vol. 19, no. 3, p. 259-265 (September 2015)

**Author(s):** Pausch, Niels Christian, Neff, Andreas, Subbalekha, Keskanya, Dhanuthai, Kittipong, Sirintawat, Nattapong, Pitak-Arnnop, Poramate

**Abstract:** To identify factors associated with scientific productivity (SP) of German oral-maxillofacial surgery (OMFS) training centers. This retrospective cohort study was composed of a set of data from German OMFS training centers. A total of eight predictor variables were grouped into demographic, structural, and personal categories. The outcome variables were average publications in 2013 per senior staff, and percentage of OMFS trainees with >1 publications. Descriptive and univariate statistics were computed using P < 0.05. The sample included outputs from 62 OMFS departments (34 [54.8 %] university-based; 46 [74.2 %] in large cities). Average publications were 2.4 ± 3 per senior staff (range, 0-27), and 160
trainees (31.7 %) published >1 papers. The number of publications and productive trainees was not linked to department name and number of female senior staffs, but publication count was significantly increased when the hospital was in a metropolis (P = 0.018) or university-based (P < 0.0001), the OMFS' chairperson and >3 staffs within the department had a postdoctoral degree (German "Habilitation") (P = 0.013 and <0.0001), and the chairperson had h-index >10 or the first/last authorship in 2013 (P < 0.0001). Female senior surgeons were less scientifically productive than the male ones (P = 0.01). SP of German OMFS training centers is greatly different across the country and influenced by city size, university base, educational backgrounds, and research activities of chairpersons and senior staffs. This helps students, trainees, and young surgeons to reach the career choice that is personally appropriate. The involved organizations may need to encourage research output of less productive surgeons/centers. Increasing postdoctoral-qualified staffs will increase SP of the department.

Title: Severe maxillofacial renal osteodystrophy in two patients with chronic kidney disease.

Citation: Oral and maxillofacial surgery, Sep 2015, vol. 19, no. 3, p. 321-327 (September 2015)

Author(s): Lopes, Maria Luiza Diniz de Sousa, Albuquerque, Assis Filipe Medeiros, Germano, Adriano Rocha, Queiroz, Lélia Maria Guedes, Miguel, Márcia Cristina da Costa, da Silveira, Éricka Janine Dantas

Abstract: Renal osteodystrophy (ROD) is the bone pathology that occurs as an uncommon complication related to the several alterations in mineral metabolism present in patients with chronic kidney disease (CKD). This paper describes two cases of severe ROD affecting the maxilla and mandible and causing facial disfigurement of a young and a middle-aged female patient with CKD. Both patients had a history of secondary hyperparathyroidism, previously treated by surgery. The pathogenesis of the disease, as well as its clinical, imaging, and histopathological features, and management of the patient are discussed.

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Cleft lip and palate

Title: Kabuki syndrome: Expanding the phenotype to include microphthalmia and anophthalmia

Citation: Clinical Dysmorphology, September 2015, vol./is. 24/4(135-139), 0962-8827;1473-5717 (18 Sep 2015)

Author(s): McVeigh T.P., Banka S., Reardon W.

Abstract: Kabuki syndrome is a rare genetic malformation syndrome that is characterized by distinct facies, structural defects and intellectual disability. Kabuki syndrome may be caused by mutations in one of two histone methyltransferase genes: KMT2D and KDM6A. We
describe a male child of nonconsanguineous Irish parents presenting with multiple malformations, including bilateral extreme microphthalmia; cleft palate; congenital diaphragmatic hernia; duplex kidney; as well as facial features of Kabuki syndrome, including interrupted eyebrows and lower lid ectropion. A de-novo germline mutation in KMT2D was identified. Whole-exome sequencing failed to reveal mutations in any of the known microphthalmia/anopthalmia genes. We also identified four other patients with Kabuki syndrome and microphthalmia. We postulate that Kabuki syndrome may produce this type of ocular phenotype as a result of extensive interaction between KMT2D, WAR complex proteins and PAXIP1. Children presenting with microphthalmia/anophthalmia should be examined closely for other signs of Kabuki syndrome, especially at an age where the facial gestalt might be less readily appreciable.

Title: Surgical repair of the cleft palate

Citation: Operative Techniques in Otolaryngology - Head and Neck Surgery, September 2015, vol./is. 26/3(121-126), 1043-1810;1557-9395 (01 Sep 2015)

Author(s): Cervenka B., Setabutr D., Rubinstein B.K.

Abstract: The cleft palate is an important craniofacial defect resulting in direct functional deficits and is related to a variety of genetic syndromes. It varies in degree and clinical setting. Repair is important for oral and nasal function. This article describes methods for repair including 2-flap palatoplasty and V-Y pushback. Patient evaluation, postoperative care, and potential complications are discussed. Multidisciplinary team care is vital for these patients because of the variety of functions affected by this entity, and the need for timely diagnosis and intervention.

Title: Closure of palatal fistulae

Citation: Operative Techniques in Otolaryngology - Head and Neck Surgery, September 2015, vol./is. 26/3(161-167), 1043-1810;1557-9395 (01 Sep 2015)

Author(s): Lighthall J.G., Sidman J.D.

Abstract: The occurrence of palatal fistulae in children with a cleft palate deformity after primary palatoplasty remains a relatively common complication. Symptomatic fistulae may cause problems with nasal air escape, nasal regurgitation, decreased speech intelligibility, articulation errors, and halitosis. A thorough understanding of the multiple reconstructive options, ranging from local flaps to free tissue transfer, is important in obtaining good patient outcomes. In this article, we describe some of the most commonly used methods for palatal closure.

Title: Unilateral cleft lip repair

Citation: Operative Techniques in Otolaryngology - Head and Neck Surgery, September 2015, vol./is. 26/3(115-120), 1043-1810;1557-9395 (01 Sep 2015)

Author(s): Patel H.H., Samson T.D., Mackay D.
Abstract: In the United States, cleft lip occurs in approximately 1 child of every 1,000 live births. Cleft lip can be complete or incomplete. Complete cleft lip involves the entire vertical length of the lip and incomplete cleft lip can be any fraction of the length. Classification of cleft lip also entails defining unilateral or bilateral involvement. Repair is directed based on the type of lip deformity. The focus of this article is on the repair of unilateral cleft lip repair.

Title: Neonatal mandibular distraction osteogenesis
Citation: Operative Techniques in Otolaryngology - Head and Neck Surgery, September 2015, vol./is. 26/3(131-135), 1043-1810;1557-9395 (01 Sep 2015)
Author(s): Tsang C., Adil E., Scott A.R.
Abstract: Mandibular distraction osteogenesis is a surgical technique used in the management of tongue base obstruction in patients with micrognathia. Judicious and early application of this procedure has been shown to negate the need for tracheostomy and gastrostomy tube placement in select neonates with micrognathia and glossoptosis with and without cleft palate (Pierre Robin sequence). This article describes the operative technique using an external distraction system, with an emphasis on the importance of preoperative assessment and patient selection, as well as the expected postoperative course. Current data on short- and long-term outcomes and new technologies within this growing field are also highlighted.

Title: Redo double-opposing Z-plasty is effective for correction of marginal velopharyngeal insufficiency
Citation: Journal of Plastic, Reconstructive and Aesthetic Surgery, September 2015, vol./is. 68/9(1215-1220), 1748-6815;1878-0539 (01 Sep 2015)
Author(s): Hsu P.-J., Wang S.-H., Yun C., Lo L.-J.
Abstract: Objective: Double-opposing Z-plasty (DOZ) of the Furlow method has been successfully used for the correction of marginal velopharyngeal insufficiency (VPI) by reconstructing the levator muscle and lengthening the soft palate. For a recurrent or residual marginal VPI, it was questioned whether redo DOZ could be applied to correct the problem and minimize surgical morbidity. This study reported the outcome of the redo DOZ. Materials and methods: The DOZ procedure was the method of choice for marginal VPI in the authors' center. To evaluate the effectiveness of the redo operation, patients with cleft palate with or without cleft lip treated from 2005 to 2014 were reviewed. Inclusion criteria were non-syndromic patients who underwent the second DOZ for the correction of marginal VPI. Clinical information, speech assessment, and nasopharyngoscopic findings were reviewed. Results: The velopharyngeal function was improved from marginal to adequate in all 13 patients either subjectively or objectively. The resonance became normal in nine patients after the surgery, and the change was statistically significant. Preoperative audible nasal emission improved in four out of five patients. Complications were minor or transient including one patient with snoring. No patient complained of airway or sleep problems. Conclusion: Although the levator muscle sling might be disturbed by the redo DOZ procedure, the surgery was effective in correcting the residual VPI with low morbidity.
Title: Evaluation of the efficacy of tranexamic acid on the surgical field in primary cleft palate surgery on children-A prospective, randomized clinical study

Citation: Cleft Palate-Craniofacial Journal, September 2015, vol./is. 52/5(e183-e187), 1055-6656;1545-1569 (01 Sep 2015)

Author(s): Durga P., Raavula P., Gurajala I., Gunnam P., Veerabathula P., Reddy M., Upputuri O., Ramachandran G.

Abstract: Objective: To assess the effect of tranexamic acid on the quality of the surgical field. Design: Prospective, randomized, double-blind study. Setting: Institutional, tertiary referral hospital. Participants: American Society of Anesthesiologists physical status class I patients, aged 8 to 60 months with Group II or III (Balakrishnan's classification) clefts scheduled for cleft palate repair. Interventions: Children were randomized into two groups. The control group received saline, and the tranexamic acid group received tranexamic acid 10 mg/kg as a bolus, 15 minutes before incision. Main Outcome Measures: Grade of surgical field on a 10-point scale, surgeon satisfaction, and primary hemorrhage. Results: Significant improvements were noted in surgeon satisfaction and median grade of assessment of the surgical field (4 [interquartile range, 4 to 6] in the control group vs. 3 [interquartile range, 2 to 4] in the test group; P=.003) in the tranexamic acid group compared to the control group. Conclusion: Preincision administration of 10 mg/kg of tranexamic acid significantly improved the surgical field during cleft palate repair.

Title: Clinical management of BCLP with a severe hypoplastic and retruded premaxilla

Citation: Cleft Palate-Craniofacial Journal, September 2015, vol./is. 52/5(e180-e182), 1055-6656;1545-1569 (01 Sep 2015)

Author(s): Nemes B., Fabian G., Nagy K.

Abstract: Bilateral cleft lip and palate with a severe hypoplastic and backward rotated premaxilla and lack of soft tissues is a rare congenital facial deformity. No treatment protocol for this type of cleft is widely accepted. In patient with bilateral cleft lip and palate, the premaxilla was protracted by nasoalveolar molding before lip surgery. The nasal tip was elevated and the columella lengthened by nasal components incorporated into the palatal guidance plate. After 4 months of nasoalveolar molding, surgery could be performed without complications. Postoperative use of a guidance plate prevented relapse of the premaxillary segment, the nasal conformers maintained the nostril form.

Title: Acute liver failure and hepatic encephalopathy after cleft palate repair

Citation: Cleft Palate-Craniofacial Journal, September 2015, vol./is. 52/5(629-631), 1055-6656;1545-1569 (01 Sep 2015)

Author(s): Kocaaslan N.D., Tuncer F.B., Tutar E., Celebiler O.

Abstract: Paracetamol is the most commonly used analgesic after cleft palate repair. It has rarely caused acute hepatic failure at therapeutic or supratherapeutic doses. Only one case of therapeutic paracetamol toxicity after cleft palate repair had been reported previously. Here, we present a similar patient who developed acute liver failure and hepatic encephalopathy after an uncomplicated cleft palate surgery. Lack of large prospective trials
in young children due to ethical concerns increases the value of the case reports of acetaminophen toxicity at therapeutic doses. The dosing recommendations of paracetamol may need to be reconsidered after cleft palate surgery.

**Title:** Maxillary expansion and midline correction by asymmetric transverse distraction osteogenesis in a patient with unilateral cleft lip/palate: A case report

**Citation:** Cleft Palate-Craniofacial Journal, September 2015, vol./is. 52/5(618-624), 1055-6656;1545-1569 (01 Sep 2015)

**Author(s):** Shintaku Y., Tanikawa C., Iida S., Aikawa T., Kogo M., Yamashiro T.

**Abstract:** This case report presents the management of a female patient with unilateral cleft lip and palate presenting with skeletal Class III malocclusion and a narrow upper dental arch with a midline deviation. The treatment plan involved asymmetric transverse distraction osteogenesis of the maxilla to make the upper dental midline coincident with the facial midline. After the treatment, a good facial profile and a close intercuspati on of teeth were achieved. Occlusion remained stable with normal overjet and overbite after 2-year retention.

**Title:** Bilateral alveolar distraction for large alveolar defects: Case report

**Citation:** Cleft Palate-Craniofacial Journal, September 2015, vol./is. 52/5(614-617), 1055-6656;1545-1569 (01 Sep 2015)

**Author(s):** Aravindaksha S.P., Batra P., Sadhu P.

**Abstract:** Distraction osteogenesis has become a very popular technique, as the ability to reconstruct combined deficiencies in bone and soft tissue makes this process unique and invaluable to all types of reconstructive surgeons. We document a case in which an intraoral tooth-borne distractor was designed and segmental alveolar distraction was performed in a large alveolar defect in a patient with bilateral cleft lip and palate. Cosmetic dentistry was performed to attain a pleasing result. This article aims at highlighting the use of distraction in large defects in which bone grafting only is not a suitable procedure.

**Title:** Nasopharyngeal airway volume for different GOSLON scores in patients with unilateral cleft lip and palate

**Citation:** Cleft Palate-Craniofacial Journal, September 2015, vol./is. 52/5(e176-e179), 1055-6656;1545-1569 (01 Sep 2015)

**Author(s):** Olmez Gurlen S., Aras I., Dogan S.

**Abstract:** Objective: The aim of this study is to evaluate the nasopharyngeal airway volumes of patients with unilateral cleft lip and palate (UCLP) with different GOSLON scores. Methods: The study sample consisted of 34 patients with UCLP and 20 controls with no cleft history. In the UCLP group, three experienced examiners used the GOSLON Yardstick to rate dental arch relationships, and the sample was divided into three groups as GOSLON 2 (G2) (n = 13), GOSLON 3 (G3) (n = 10), and GOSLON 4 (G4) (n = 11). Airway volumes were constructed using three-dimensional computed tomography data and divided into four
compartments named the nasal airway, and superior, middle, and inferior pharyngeal airways. Results: No statistically significant difference was detected among G2, G3, and G4 between the constitutive airway departments of the nasopharyngeal region. However, nasal airway volumes were significantly higher in the control group when compared with the UCLP group. Discussion: Although there was no correlation among the investigated parameters, it is also a fact that airway capacities display a great variability among patients when investigated three dimensionally. Conclusion: Although the severity of GOSLON scores might predetermine the extent of which the airways are affected from the cleft, a larger sample size is needed in future studies.

Title: Evolution of postoperative edema in alveolar graft performed with bone morphogenetic protein (rhBMP-2)

Citation: Cleft Palate-Craniofacial Journal, September 2015, vol./is. 52/5(e168-e175), 1055-6656;1545-1569 (01 Sep 2015)

Author(s): Leal C.R., Calvo A.M., De Souza Faco R.A., Da Cunha Bastos J.C., Yaedu R.Y.F., Da Silva Dalben G., Carvalho R.M.

Abstract: Objective: To evaluate the evolution of facial edema in the postoperative period after alveolar graft surgeries performed with collagen membrane soaked with recombinant human bone morphogenetic protein-2 (rhBMP-2) in individuals with cleft lip and palate. Design: Longitudinal prospective. Setting: Tertiary craniofacial center. Participants: One hundred fifty individuals submitted to alveolar graft. Interventions: In the preoperative consultation and 4 days after surgery, the individuals were assessed as to age, professional performing the surgery, duration of the procedure, type of cleft, measurement of facial edema, mouth opening, and global evaluation of the postoperative period. Main Outcome Measures: Statistical analysis was performed to compare the facial edema and different variables, at a significance level of .05. Results: The maximum facial edema occurred between 3 and 4 days postoperatively, was inversely proportional to age and mouth opening, greater for female patients compared with male patients, for incomplete unilateral cleft lip and palate compared with other types of clefts, and for surgeon 1 compared with the other surgeons at some moment postoperatively. The surgeries were longer for complete unilateral and bilateral clefts. The difference was statistically significant for these variables. Conclusions: The facial edema was influenced by the rhBMP-2 used in alveolar graft, and trismus was proportional to the intensity of facial edema.

Title: Novel mutations in the IRF6 gene on the background of known polymorphisms in Polish patients with orofacial clefting

Citation: Cleft Palate-Craniofacial Journal, September 2015, vol./is. 52/5(e161-e167), 1055-6656;1545-1569 (01 Sep 2015)

Author(s): Charzewska A., Obersztyn E., Hoffman-Zacharska D., Lenart J., Poznanski J., Bal J.

Abstract: Objective: To examine the role of the IRF6 mutations in Polish families with Van der Woude syndrome and popliteal pterygium syndrome and to determine the effect of IRF6 single nucleotide polymorphisms (rs7552506, rs2013162, and rs2235375) on cleft lip and/or palate susceptibility. Design: IRF6 mutation screening was performed by direct
sequencing of all coding exons of the gene and their flanking intronic regions. Cosegregation analysis was performed to establish the relation of single nucleotide polymorphisms and cleft lip and/or palate phenotypes. Patients: We screened the IRF6 gene in eight families with clinical recognition of Van der Woude syndrome and popliteal pterygium syndrome. Results: In five families we identified pathogenic mutations, all affecting the DNA-binding or the protein-binding domain of IRF6. Two of the mutations were novel-A missense mutation Arg31Thr and a small deletion Trp40Glyfs*23. In most cases we found also a haplotype of three single nucleotide polymorphisms-rs7552506, rs2013162, and rs2235375. The association of the single nucleotide polymorphisms and cleft lip and/or palate susceptibility has been previously published. The variants did not cosegregate with phenotype in examined families nor did they cosegregate with pathogenic mutations. The single nucleotide polymorphisms were deemed not causative, due to their presence in unaffected family members. Conclusions: Two novel mutations (Arg31Thr and Trp40Glyfs*23) in the IRF6 gene were identified to be causative for Van der Woude and popliteal pterygium syndromes. In the present study no association between the single nucleotide polymorphisms rs7552506, rs2013162, and rs2235375 and the cleft lip and/or palate phenotype was found. The hypothesis, whether the haplotype of the three single nucleotide polymorphisms was correlated with IRF6 expression level, demands further investigation.

Title: The effect of cleft size in infants with unilateral cleft lip and palate on mixed dentition dental arch relationship

Citation: Cleft Palate-Craniofacial Journal, September 2015, vol./is. 52/5(605-613), 1055-6656;1545-1569 (01 Sep 2015)

Author(s): Russell L.M., Long R.E., Romberg E.

Abstract: Objective: To determine the relationship between infant cleft size and dental arch relationship in the mixed dentition in patients with complete unilateral cleft lip and palate. Design: Retrospective analysis of mixed longitudinal records. Patients: A total of 29 consecutively enrolled patients with unilateral cleft lip and palate participated in a longitudinal study that included dental casts prior to lip surgery (T1: age 1 month), prior to palate surgery (T2: age 10 months), and in mixed dentition (T3: age 9 years). Interventions: All infants were managed with lip repair (2.5 months), hard palate repair (12 months), and soft palate repair (16 months) but without any presurgical orthopedic treatment and no orthodontic intervention prior to mixed dentition records. Main Outcome Measures: The outcome measures included determination of an infant cleft severity ratio, defined as the ratio of palatal cleft area to palatal surface area, at both T1 and T2, and the 9-year-old (T3) dental arch relationship as determined using the GOSLON Yardstick. The correlation between the infant cleft severity ratio at T1 and T2 and the later GOSLON Yardstick score at T3 was determined using Pearson r. The intrarater reliability of the infant cleft severity ratio was assessed with Pearson r and the interrater reliability of the GOSLON Yardstick ratings, by weighted kappa. Results: Reliability for the infant cleft severity ratio method was r = .92 to .95, and for GOSLON ratings kappa=.81 to .91. There was no significant correlation between 1-month infant cleft severity ratio and GOSLON (r = .3) and 10-month infant cleft severity ratio and GOSLON (r = .1). Conclusions: Cleft size versus the amount of palatal tissue available for repair and concern over more scarring with a greater infant cleft severity ratio were not factors in affecting the eventual dental arch relationship.
**Title:** Bridging the gap: Sella turcica in unilateral cleft lip and palate patients

**Citation:** Cleft Palate-Craniofacial Journal, September 2015, vol./is. 52/5(597-604), 1055-6656;1545-1569 (01 Sep 2015)

**Author(s):** Sundareswaran S., Nipun C.A.

**Abstract:** Objectives: The aims of this study were to analyze the prevalence of sella turcica bridging and to measure the size of the sella turcica on profile cephalograms in a homogenous group of surgically repaired unilateral cleft lip and palate (UCLP) patients. Setting: Tertiary care center. Design: Retrospective cross-sectional study. Patients: Preorthodontic lateral cephalometric radiographs of 64 UCLP individuals between the ages of 16 and 29 years along with an equal number of age- and sex-matched skeletal Class I controls. Main Outcome Measures: The extent of calcification of the interclinoid ligament was quantified (completely calcified, partially calcified, no calcification) and mean values compared. Length, depth, and diameter of the sella turcica were also measured. The results were statistically analyzed using paired t test and Wilcoxon signed ranks test. Results: Complete sella bridging of both type A (4.6%) and type B (21.7%) was significantly higher in UCLP patients. This has not been reported previously. Partial sella bridging was also higher in cleft patients as evaluated by two methods (42.18%, 39.06%). This study demonstrated a statistically significant decrease in all dimensions of sella turcica in UCLP patients. Conclusions: The UCLP patients apparently had higher predilection for sella turcica bridging. The dimensions of sella turcica were also seen to be significantly smaller than the control group. Defective proliferation and deviated pathways of neural crest cell migration as well as premature rupture of contact between neuroepithelium and oral ectoderm as postulated causes are discussed.

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**Title:** Occlusal classification in relation to original cleft width in patients with unilateral cleft lip and palate

**Citation:** Cleft Palate-Craniofacial Journal, September 2015, vol./is. 52/5(574-578), 1055-6656;1545-1569 (01 Sep 2015)

**Author(s):** Huang A.H., Patel K.B., Maschhoff C.W., Huebener D.V., Skolnick G.B., Naidoo S.D., Woo A.S.

**Abstract:** Objective: To determine a correlation between the width of the cleft palate measured at the time of lip adhesion, definitive lip repair, and palatoplasty and the subsequent occlusal classification of patients born with unilateral cleft lip and palate. Design: Retrospective, observational study. Setting: Referral, urban, children’s hospital Participants: Dental models and records of 270 patients were analyzed. Interventions: None. Main Outcome Measure: Angle occlusion classification. Results: The mean age at which occlusal classification was determined was 11 +/- 0.3 years. Of the children studies, 84 were diagnosed with Class I or II occlusion, 67 were diagnosed with Class III occlusion, and 119 were lost to follow up or transferred care. Mean cleft widths were significantly larger in subjects with Class III occlusion for all measures at time of lip adhesion and definitive lip repair (P < .02). At time of palatoplasty, cleft widths were significantly greater at the alveolus (P = .025) but not at the midportion of the hard palate (P = .35) or posterior hard
palate (P = .10). Conclusion: Cleft widths from the lip through to the posterior hard palate are generally greater in children who are diagnosed with Class III occlusion later in life. Notably, the alveolar cleft width is significantly greater at each time point for patients who went on to develop Class III occlusion. There were no significant differences in cleft widths between patients diagnosed later with Class I and Class II occlusions.

Title: Risk and protective factors at age 16: Psychological adjustment in children with a cleft lip and/or palate

Citation: Cleft Palate-Craniofacial Journal, September 2015, vol./is. 52/5(555-573), 1055-6656;1545-1569 (01 Sep 2015)

Author(s): Feragen K.B., Stock N.M., Kvalem I.L.

Abstract: Objective: Explore psychological functioning in adolescents with a cleft at age 16 from a broad perspective, including cognitive, emotional, behavioral, appearance-related, and psychosocial adjustment. High-risk groups were identified within each area of adjustment to investigate whether vulnerable adolescents were found across domains or whether risk was limited to specific areas of adjustment. Methods: Cross-sectional data based on psychological assessments at age 16 (N=857). The effect of gender, cleft visibility, and the presence of an additional condition were investigated on all outcome variables. Results were compared with large national samples. Measures: Hopkins Symptom Checklist, Harter Self-Perception Scale for Adolescents, Child Experience Questionnaire, and Satisfaction With Appearance scale. Results: The main factor influencing psychological adjustment across domains was gender, with girls in general reporting more psychological problems, as seen in reference groups. The presence of an additional condition also negatively affected some of the measures. No support was found for cleft visibility as a risk factor except for dissatisfaction with appearance. Correlation analyses of risk groups seem to point to an association between social and emotional risk and between social risk and dissatisfaction with appearance. Associations between other domains were found to be weak. Conclusions: The results point to areas of both risk and strength in adolescents born with a cleft lip and/or palate. Future research should investigate how protective factors could counteract potential risk in adolescents with a cleft.

Title: "It doesn't all just stop at 18": Psychological adjustment and support needs of adults born with cleft lip and/or palate

Citation: Cleft Palate-Craniofacial Journal, September 2015, vol./is. 52/5(543-554), 1055-6656;1545-1569 (01 Sep 2015)

Author(s): Stock N.M., Feragen K.B., Rumsey N.

Abstract: Background: Cleft in the lip and/or the palate (CL/P) is considered to be a lifelong condition, yet relatively little is known about the long-term outcomes for patients. Existing literature is largely outdated and conflicted, with an almost exclusive focus on medical aspects and deficits. Objective: To explore the psychological adjustment and possible support needs of a large number of adults born with CL/P from their own perspective. Design: Fifty-two individual telephone interviews eliciting qualitative data. Results: Qualitative analysis identified five themes. Participants reported a range of challenges in
relation to discharge from the service, additional surgery as an adult, social and romantic relationships, higher education, vocational achievement, and access to psychological support. The findings imply that most adults with a cleft adjust well to these challenges and report many positive outcomes. For a minority of patients, issues attributed to the cleft may continue to cause distress in adulthood. Conclusions: Adults with CL/P may require psychological support, information about the heritability of cleft, signposting and referrals from nonspecialists, support regarding further treatment, and opportunities to take part in research and activities. New issues arising in adulthood, such as entering the workplace, forming long-term relationships, and starting a family, may warrant both further investigation and additional support. Further work is needed to identify the factors that contribute to psychological distress and resilience, as well as the timing of particular points of risk and opportunity for personal growth.

Title: Primary palatoplasty for unilateral cleft lip and palate using mucosal grafts and flaps

Citation: Cleft Palate-Craniofacial Journal, September 2015, vol./is. 52/5(532-542), 1055-6656;1545-1569 (01 Sep 2015)


Abstract: The mucosal graft and flaps method (MG method) is a palatoplasty technique that was developed for the purpose of improving maxillary growth in patients with cleft palate. In the MG method, full-thickness buccal mucosa is grafted onto the raw surface created by pushback palatoplasty. The method is unlikely to result in severe scarring and has a favorable effect on maxillary growth. In addition, it is unlikely to result in oronasal fistula and provides good speech results. Overall, positive long-term treatment results have been obtained. Although the MG method is technically difficult and requires a lengthy surgery, the technique is considered to be effective for palate closure in terms of speech and maxillary growth.

Title: Double-opposing Z-palatoplasty for secondary surgical management of velopharyngeal incompetence in the absence of a primary furlow palatoplasty

Citation: Cleft Palate-Craniofacial Journal, September 2015, vol./is. 52/5(517-524), 1055-6656;1545-1569 (01 Sep 2015)

Author(s): Chim H., Eshraghi Y., Iamphongsai S., Gosain A.K.

Abstract: Objective: The present study was performed to identify factors that lead to a favorable outcome of postpalatoplasty velopharyngeal incompetence using the double-opposing Z-palatoplasty. Design: A retrospective analysis was performed on 23 consecutive nonsyndromic patients who underwent secondary surgical management of velopharyngeal incompetence using a double-opposing Z-palatoplasty technique following primary, non-Furlow palatoplasty for overt cleft palate. Main Outcome Measures: All subjects were evaluated preoperatively using a perceptual speech assessment scale, nasendoscopy, and videofluoroscopy. Inclusion criteria consisted of a velopharyngeal gap of 9 mm or less on phonation. Patients were followed with perceptual speech assessment for at least 1 year following secondary surgery. Results: The perceptual speech assessment score for all
patients decreased from 6.48 +/- 2.26 (mean +/- standard deviation; range, 3 to 11) to 1.90 +/- 1.51 (range, 0 to 6) at 6 months or more postoperatively (P < .0001). Of the 21 patients with follow-up data 1 year or more post-op, 16 (76%) achieved velopharyngeal competence and five (24%) had borderline competence. Preoperative assessment factors associated with compromised outcome included a large velopharyngeal gap of 7 to 9 mm, poor lateral wall motion of 40% or less, and an elevated perceptual speech assessment score. Conclusion: Double-opposing Z-palatoplasty is a surgical technique that can be used successfully to correct velopharyngeal incompetence in selected secondary palatoplasty patients. This technique permits correction of velopharyngeal incompetence and restoration of the velopharyngeal mechanism irrespective of prior intravelar veloplasty and without accompanying loss in the nasal airway. Preoperative assessment can better identify those patients who are less likely to achieve velopharyngeal competence following double-opposing Zpalatoplasty alone.

Title: Nasal airway dimensions of children with repaired unilateral cleft lip and palate

Citation: Cleft Palate-Craniofacial Journal, September 2015, vol./is. 52/5(512-516), 1055-6656;1545-1569 (01 Sep 2015)

Author(s): Trindade I.E.K., De Oliveira Camargo Gomes A., De Braganca Lopes Fernandes M., Trindade S.H.K., Da Silva Filho O.G.

Abstract: Objective: To measure cross-sectional areas of the main nasal constrictions as a function of the distance into the nose in children with repaired unilateral cleft lip and palate, as compared with children without cleft, by acoustic rhinometry. Design: Prospective analysis. Setting: Craniofacial anomalies hospital. Participants: A total of 39 children with repaired unilateral cleft lip and palate and 34 healthy controls without cleft, of both genders, aged 6 to 9 years. Interventions/Variables: Nasal cross-sectional areas measured at the three main deflections of the rhinogram (CSA1, CSA2, CSA3) and distances from the nares (dCSA1, dCSA2, dCSA3) were assessed by means of an Eccovision Acoustic Rhinometer, before and after nasal decongestion. Differences were analyzed at a significance level of 5%. Results: At the cleft side, mean CSA1, CSA2, and CSA3 values +/- standard deviation obtained before nasal decongestion were 0.17 +/- 0.12, 0.29 +/- 0.20, and 0.40 +/- 0.28 cm2, respectively, and dCSA1, dCSA2, and dCSA3 values +/- standard deviation were 2.02 +/- 0.40, 3.74 +/- 0.51, and 5.50 +/- 0.44 cm, respectively. At the noncleft side, these were 0.33 +/- 0.11, 0.65 +/- 0.28, and 0.90 +/- 0.43 cm2, respectively, and 1.69 +/- 0.48, 3.67 +/- 0.53, and 5.60 +/- 0.70 cm, respectively. Increased cross-sectional area means were seen after nasal decongestion in the control and cleft groups. Mean cross-sectional area values at the cleft side were significantly smaller than noncleft side and control values, and the mean dCSA1 value was smaller at the noncleft side before and after decongestion. Conclusions: Objective assessment of internal nasal dimensions has shown that children with unilateral cleft lip and palate have a significant impairment of nasal patency due to the reduced cross-sectional areas seen at the cleft side.

Title: The management of otitis media with effusion in children with cleft palate (mOMEnt): A feasibility study and economic evaluation
Abstract: Background: Cleft lip and palate are among the most common congenital malformations, with an incidence of around 1 in 700. Cleft palate (CP) results in impaired Eustachian tube function, and 90% of children with CP have otitis media with effusion (OME) histories. There are several approaches to management, including watchful waiting, the provision of hearing aids (HAs) and the insertion of ventilation tubes (VTs). However, the evidence underpinning these strategies is unclear and there is a need to determine which treatment is the most appropriate. Objectives: To identify the optimum study design, increase understanding of the impact of OME, determine the value of future research and develop a core outcome set (COS) for use in future studies. Design: The management of Otitis Media with Effusion in children with cleft palate (mOMEnt) study had four key components: (i) a survey evaluation of current clinical practice in each cleft centre; (ii) economic modelling and value of information (VOI) analysis to determine if the extent of existing decision uncertainty justifies the cost of further research; (iii) qualitative research to capture patient and parent opinion regarding willingness to participate in a trial and important outcomes; and (iv) the development of a COS for use in future effectiveness trials of OME in children with CP. Setting: The survey was carried out by e-mail with cleft centres. The qualitative research interviews took place in patients' homes. The COS was developed with health professionals and parents using a web-based Delphi exercise and a consensus meeting. Participants: Clinicians working in the UK cleft centres, and parents and patients affected by CP and identified through two cleft clinics in the UK, or through the Cleft Lip and Palate Association. Results: The clinician survey revealed that care was predominantly delivered via a 'hub-and-spoke' model; there was some uncertainty about treatment strategies; it is not current practice to insert VTs at the time of palate repair; centres were in a position to take part in a future study; and the response rate to the survey was not good, representing a potential concern about future co-operation. A COS reflecting the opinions of clinicians and parents was developed, which included nine core outcomes important to both health-care professionals and parents. The qualitative research suggested that a trial would have a 25% recruitment rate, and although hearing was a key outcome, this was likely to be due to its psychosocial consequences. The VOI analysis suggested that the current uncertainty justified the costs of future research. Conclusions: There exists significant uncertainty regarding the best management strategy for persistent OME in children with clefts, reflecting a lack of high-quality evidence regarding the effectiveness of individual treatments. It is feasible, cost-effective and of significance to clinicians and parents to undertake a trial examining the effectiveness of VTs and HAs for children with CP. However, in view of concerns about recruitment rate and engagement with the clinicians, we recommend that a trial with an internal pilot is considered. Funding: The National Institute for Health Research Health Technology Assessment programme. This study was part-funded by the Healing Foundation supported by the Vocational Training Charitable Trust who funded trial staff including the study co-ordinator, information systems developer, study statistician, administrator and supervisory staff.
**Title:** Exome sequencing identifies a homozygous C5orf42 variant in a Turkish kindred with oral-facial-digital syndrome type VI

**Citation:** American Journal of Medical Genetics, Part A, September 2015, vol./is. 167/9(2132-2137), 1552-4825;1552-4833 (01 Sep 2015)

**Author(s):** Bayram Y., Aydin H., Gambin T., Akdemir Z.C., Atik M.M., Karaca E., Karaman A., Pehlivan D., Jhangiani S.N., Gibbs R.A., Lupski J.R.

**Abstract:** Oral-facial-digital syndrome type VI (OFDVI) is a rare ciliopathy in the spectrum of Joubert syndrome (JS) and distinguished from other oral-facial-digital syndromes by metacarpal abnormalities with central polydactyly and by a molar tooth sign on cranial MRI. Additional characteristic features include short stature, micrognathia, posteriorly rotated low-set ears, hypertelorism, epicanthal folds, broad nasal tip, tongue hamartoma, upper lip notch, intraoral frenula, cleft lip/palate, and renal anomalies. Recently, novel mutations in C5orf42 were identified in 9 out of 11 OFDVI families. In a subsequent study C5orf42 was found to be mutated in only 2 out of 17 OFDVI probands while 28 patients with a pure JS phenotype also had pathogenic mutations of C5orf42. We report on two affected cousins diagnosed with OFDVI who were born from first degree cousin marriages. Whole exome sequencing (WES) identified a homozygous predicted damaging missense mutation (c.4034A>G; p.Gln1345Arg) in the C5orf42 gene. Our data contribute to the evidence that C5orf42 is one of the causative genes for OFDVI.

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**Title:** One-stage (Warsaw) and two-stage (Oslo) repair of unilateral cleft lip and palate: Craniofacial outcomes

**Citation:** Journal of Cranio-Maxillofacial Surgery, September 2015, vol./is. 43/7(1224-1231), 1010-5182;1878-4119 (01 Sep 2015)

**Author(s):** Fudalej P.S., Wegrodzka E., Semb G., Hortis-Dzierzbicka M.

**Abstract:** The aim of this study was to compare facial development in subjects with complete unilateral cleft lip and palate (CUCLP) treated with two different surgical protocols. Lateral cephalometric radiographs of 61 patients (42 boys, 19 girls; mean age, 10.9 years; SD, 1) treated consecutively in Warsaw with one-stage repair and 61 age-matched and sex-matched patients treated in Oslo with two-stage surgery were selected to evaluate craniofacial morphology. On each radiograph 13 angular and two ratio variables were measured in order to describe hard and soft tissues of the facial region. The analysis showed that differences between the groups were limited to hard tissues - the maxillary prominence in subjects from the Warsaw group was decreased by almost 4 degree in comparison with the Oslo group (sella-nasion-A-point (SNA) = 75.3 degree and 79.1 degree, respectively) and maxillo-mandibular morphology was less favorable in the Warsaw group than the Oslo group (ANB angle = 0.8 degree and 2.8 degree, respectively). The soft tissue contour was comparable in both groups. In conclusion, inter-group differences suggest a more favorable outcome in the Oslo group. However, the distinctiveness of facial morphology in background populations (ie, in Poles and Norwegians) could have contributed to the observed results.
**Title:** A comparative cephalometric study for adult operated cleft palate and unoperated cleft palate patients

**Citation:** Journal of Cranio-Maxillofacial Surgery, September 2015, vol./is. 43/7(1218-1223), 1010-5182;1878-4119 (01 Sep 2015)

**Author(s):** Ye B., Wu Y., Zhou Y., Jing H., Hu J., Zhang G.

**Abstract:** Objective To determine the effects of a cleft deformity unilateral cleft lip and palate (UCLP) and the subsequent surgical interventions on maxillary growth. Materials and methods This retrospective study evaluated the lateral cephalograms of 3 groups of individuals: 40 adult patients with ULCP who underwent surgery for both lip and palate; 40 adult patients with ULCP who underwent surgery for lip only; and 40 age- and gender-matched noncleft controls. Differences in jaw morphology among them were analyzed statistically. Results Adult UCLP patients in both groups showed maxillary hypoplasia in anteroposterior and vertical directions compared with noncleft control adults. Significant differences (p > 0.01) in the ANB (subspinale-nasion-supramentale angle), NA-FH (the angle formed between Frankfort horizontal plane and the plane from nasion to subspinale), MP-FH (the angle formed between mandibular plane and Frankfort horizontal plane), and GoMe/SN (the ratio between length of mandibular body and length of anterior cranial base) were found between the two UCLP patient groups. Although maxillary growth in the two UCLP groups was less than that in the noncleft control group, the anteroposterior growth in the UCLP patients with palatoplasty was even less than that in the UCLP patients with unoperated palate. Conclusions There may be an intrinsic deficiency of maxillary anteroposterior and vertical development in UCLP patients compared with the noncleft controls. Palatoplasty can further limit the anteroposterior growth of maxilla but has no detrimental effect on maxillary vertical development. The mandible is rotated clockwise after palatoplasty in UCLP patients.

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**Title:** Single visit custom made flexible feeding obturator for an infant with tetralogy of fallot

**Citation:** Saudi Journal of Medicine and Medical Sciences, September 2015, vol./is. 3/3(226-229), 2321-4856 (01 Sep 2015)

**Author(s):** Rathee M., Tamrakar A.K.

**Abstract:** Cleft lip and palate prevalence is more in patients with heart diseases than in patients with normal hearts. The coexistence of tetralogy of Fallot and cleft palate undermines the health of the infant by underfeeding and circulation of low arterial oxygen concentration. Early prosthodontic adjuvant therapy with feeding obturator is mandatory for rehabilitation till corrective surgery.

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**Title:** Airway obstruction after lingual frenulectomy in two infants with Pierre-Robin Sequence

**Citation:** International Journal of Pediatric Otorhinolaryngology, September 2015, vol./is. 79/9(1592-1594), 0165-5876;1872-8464 (01 Sep 2015)

**Author(s):** Genther D.J., Skinner M.L., Bailey P.J., Capone R.B., Byrne P.J.
Abstract: Pierre-Robin Sequence (PRS) is defined as the triad of micrognathia, glossoptosis, and cleft palate and affects approximately 1/8500 births. Airway obstruction is common in infants with PRS and results from glossoptosis leading to pharyngeal obstruction. Any procedure that increases the severity of glossoptosis, such as lingual frenulectomy, may increase the risk of obstruction or aggravate existing obstruction. This report discusses two cases of significant airway decompensation after lingual frenulectomy requiring surgical intervention in infants with PRS. We suggest that lingual frenulectomy be contraindicated in infants with PRS or suspected PRS due to the possible increased risk of airway obstruction.

Title: The nature of articulation errors in Egyptian Arabic-speaking children with velopharyngeal insufficiency due to cleft palate.

Citation: International Journal of Pediatric Otorhinolaryngology, September 2015, vol./is. 79/9(1527-1532), 0165-5876;1872-8464 (01 Sep 2015)

Author(s): Abou-Elsaad T., Baz H., Afsah O., Mansy A.

Abstract: Even with early surgical repair, the majority of cleft palate children demonstrate articulation errors and have typical cleft palate speech. Objective: Was to determine the nature of articulation errors of Arabic consonants in Egyptian Arabic-speaking children with velopharyngeal insufficiency (VPI). Subjects and methods: Thirty Egyptian Arabic-speaking children with VPI due to cleft palate (whether primary repaired or secondary repaired) were studied. Auditory perceptual assessment (APA) of children speech was conducted. Nasopharyngoscopy was done to assess the velopharyngeal port (VPP) movements while the child was repeating speech tasks. Mansoura Arabic Articulation test (MAAT) was performed to analyze the consonants articulation of these children. Results and conclusion: The most frequent type of articulatory errors observed was substitution, more specifically, backing. Pharyngealization of anterior fricatives was the most frequent substitution, especially for the /s/ sound. The most frequent substituting sounds for other sounds were /?/ followed by /k/ and /n/ sounds. Significant correlations were found between the degrees of the open nasality and VPP closure and the articulation errors. On the other hand, the sounds (/?/)/h/,/l/,/n/,/w/,/j/) were normally articulated in all studied group. The determination of articulation errors in VPI children could guide the therapists for designing appropriate speech therapy programs for these cases.

Title: Immunologic assessment and KMT2D mutation detection in Kabuki syndrome

Citation: Clinical Genetics, September 2015, vol./is. 88/3(255-260), 0009-9163;1399-0004 (01 Sep 2015)


Abstract: Kabuki or Niikawa-Kuroki syndrome (KS) is a rare disorder with multiple malformations and recurrent infections, especially otitis media. This study aimed to investigate the genetic defects in Kabuki syndrome and determine if immune status is related to recurrent otitis media. Fourteen patients from 12 unrelated families were enrolled in the 9-year study period (2005-2013). All had Kabuki faces, cleft palate, developmental delay, mental retardation, and the short fifth finger. Recurrent otitis media...
(12/14) and hearing impairment (8/14) were also more common features. Immunologic analysis revealed lower memory CD19+ cells (11/13), lower memory CD4+ cells (8/13), undetectable anti-HBs antibodies (7/13), and antibody deficiency (7/13), including lower IgA (4), IgG (2), and IgG2 (1). Naive emigrant lymphocytes, lymphocyte proliferation function, complement activity, and superoxide production in polymorphonuclear cells were all normal. All the patients had KMT2D mutations and 10 novel mutations of R1252X, R1757X,Y1998C, P2550R fs2604X, Q4013X, G5379X, E5425K, R5432X, R5432W, and R5500W. Resembling the phenotype of common variable immunodeficiency, KS patients with antibody deficiency, decreased memory cells, and poor vaccine response increased susceptibility to recurrent otitis media. Large-scale prospective studies are warranted to determine if regular immunoglobulin supplementation decreases the frequency of otitis media and severity of hearing impairment.

Title: Contemporary management of cleft lip and palate in the United Kingdom. Have we reached the turning point?

Citation: British Journal of Oral and Maxillofacial Surgery, September 2015, vol./is. 53/7(594-598), 0266-4356;1532-1940 (01 Sep 2015)

Author(s): Colbert S.D., Green B., Brennan P.A., Mercer N.

Abstract: Abstract Babies born with clefts of the lip, and the alveolus or palate, or both, require multidisciplinary, highly specialised treatment from birth to early adulthood. We review the contemporary management of clefts and outline the current treatment protocol adopted by cleft networks in the United Kingdom. We also look at the level of evidence and the restructuring of services that has defined current practice. In light of the recent Cleft Care UK study, we ask whether it is now time to adopt a new philosophy towards the surgical techniques that are used.

Title: Contemporary management of cleft lip and palate in the UK. Have we reached the turning point? A commentary

Citation: British Journal of Oral and Maxillofacial Surgery, September 2015, vol./is. 53/7(599-600), 0266-4356;1532-1940 (01 Sep 2015)

Author(s): Beale V.

Title: Augmentation with hydroxyapatite graft for treating nasal hypoplasia associated with Binderoid complete cleft lip

Citation: British Journal of Oral and Maxillofacial Surgery, September 2015, vol./is. 53/7(666-668), 0266-4356;1532-1940 (01 Sep 2015)

Author(s): Iida N., Watanabe A., Ando Y.
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