

moisture at the lingual mucosa and buccal mucosa was 25.7% and 30.9%.

Conclusion: This study demonstrated that the amount of stimulated saliva became less than 2.00 g/2 minutes and the moisture at the lingual mucosa became less than 30.0% in patients with subjective oral dryness. These results suggest that stimulated saliva and oral moisture related to subjective oral dryness; thus, both the Saxon test and the test using an oral moisture checking device are useful for the assessment of subjective oral dryness.

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The clinical evaluation on XiVE® immediate implant and immediate prosthesis of maxillary anterior teeth

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Background and Objectives: To evaluate the clinical aesthetic effects of XiVE® implants immediate implant and immediate restoration of maxillary anterior teeth.

Methods: Totally 26 cases of maxillary anterior residual root received XiVE® implant installation and 26 implants were placed into fresh anterior extraction sockets. Provisional prosthesis were placed at the same time. The definitive ceramic crowns were placed 6 months later. Ask the patients to recheck periodically and evaluate the effects of the restorations.

Results: The mastication were approved well of most dental implant restorations. Most soft tissue surrounded implants was healthy and beauty. 24 patients felt satisfied with the application and aesthetic effect of the restorations. One case had peri-implant inflammation. One porcelain case dropped. The satisfaction rate was 92.31%.

Conclusion: The results of XiVE® implants immediate implant and immediate restoration of anterior teeth can be satisfactory. But we must pay attention to the aesthetic treatment of hard, soft tissues and prosthodontics.

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P160

Clinical involvement of the temporomandibular joint in patients with chronic polyarthritis

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Background and Objectives: Aim of the study was to determine the incidence of temporomandibular disorders (TMDs) in patients with chronic polyarthritis (CP) and their correlation to the rheumatic scores like the American College of Rheumatology classification.

Methods: Forty patients with rheumatoid arthritis (RA) were investigated prospectively. Further, the Health Assessment Questionnaire (HAQ) and the Disease Activity Score (DAS28) were determined. The clinical investigation of the temporomandibular joint (TMJ) included the following parameters: 1) clicking, 2) crepitation 3) pain and 4) pain on palpation of the masticatory muscles.

Results: 23 patients (57.5%) showed TMJ pathology. Regarding the statistical correlations between the ACR score and the clinical findings of the TMD, a significant correlation was found between an ACR score of 2 and 3 and actual TMJ pain, pain on palpation of the masseter muscle and TMJ crepitation. Using the disease activity score (DAS28), a significant correlation was found between a DAS28 score >5.1 and pain on palpation of the masseter, temporal muscle and the TMJ could be detected.

Conclusion: Further investigations with bigger cohorts of patients have to be performed to decide whether even every CP patient should be referred routinely to a TMJ specialist to prevent undiagnosed TMD. These results imply that the rheumatologist should refer CP patients with an ACR score of 2 or 3 to a TMJ specialist.

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High-resolution ultrasound investigation of the temporomandibular joint in patients with chronic polyarthritis

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Background and Objectives: The aim of this study was to investigate whether there exist correlations between the ultrasound (US) diagnosis and pathological clinical parameters of the temporomandibular joint (TMJ).

Methods: 40 Patients with a chronic polyarthritis were investigated prospectively. The investigation of the TMJ included the detection of the following parameters: 1) clicking, 2) crepitation and 3) pain. The ultrasound investigation was performed regarding the following criteria: 1) destructive changes, 2) effusion and 3) disc dislocation.

Results: The statistical calculation of the correlations between the high resolution (HR)-US results and the clinical investigation of the TMJ by the chi-squared test showed a significant correlation between TMJ-sounds, destructive changes and disc dislocation. Further, a significant correlation between TMJ joint effusion, TMJ pathology and TMJ pain could be detected by the chi square test. Pain on palpation of the masseter and temporal muscle was determined to correlate significantly with TMJ effusion.

Conclusion: The significant correlation between TMJ effusion and actual TMJ pain and TMJ pain on palpation shows the ability of HR-US to detect acute TMJ affection with a high significance. Further, there was found a significant correlation between effusion and pain on palpation of the masticatory muscles, which also could be interpreted as the ability of HR-US to determine acute TMD.

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Pullout-strength of a biodegradable free form osteosynthesis plate

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Background and Objectives: The Inion® Free Form Plate is a new designed biodegradable plate just with pilot holes. After drilling through the plate and tapping, a conventional biodegradable screw could be inserted, followed by a cut of the screw head. As an alternative a countersink screw can be used. The plate is estimate to show the same mechanical stability than a conventional 2.0 mm biodegradable plate. Aim of the study was a comparison of the mechanical properties between the 1.4 mm Free Form Plate and the 2.0 mm conventional shaped plate.

Methods: The mechanical testing, plate pullout, was conducted for the both fixations of the Inion® Free Form Plate with following screw: Inion OTPS™

2.0 × 20 mm screw. Further, the failure mode was reported.

Results: Regarding the yield load, first peak load and maximum load, overlapping confidence levels were found if the Free Form Plate and the conventional 4-hole plate were compared. The Free Form Plate fixed with a screw with head and countersink showed the highest stability at maximum load. Regarding the Strain at yield load, first peak load and maximum load, overlapping confidence levels were found.

Conclusion: The results of the mechanical testing showed no significant differences of the mechanical stability between the tested plates. The main failure mode was a failure of the screw shaft.

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P163 Motorcycle related maxillofacial trauma in southern Vietnam: need for preventive measurements

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Background and Objectives: We describe the aetiology and severity of motorbike-related maxillofacial injuries in patients transferred or referred to the National Hospital of Odonto-Stomatology, the main hospital responsible for maxillofacial trauma care in Southern Vietnam. The aim of this study was to collect epidemiological data on motorbike related maxillofacial trauma which can be used for preventive measurements.

Methods: All patients with motorbike related injuries treated at the National Hospital of Odonto-Stomatology in Ho Chi Minh City, Vietnam between October 1 2006 and January 31 2007 with maxillofacial trauma with or without concomitant non-facial injuries were prospectively identified. We analysed age and sex, the type and site of fracture, aetiology of the accident, participant, helmet type, alcohol involvement, associated injuries and treatment given.

Results: 437 patients were included. Male to female ratio was 8:1 with an average age of 29.5 (± 10.1) years. 84.4% of the victims did not use a crash helmet. 88.1% of the victims were drivers while in 8.1% a passenger was involved. Most common mechanism of accident

was motorbike versus motorbike (58.1%). Accidents mainly occurred after sunset (66.6%). At least 24.9% of accidents were alcohol related. Most frequently diagnosed were zygomatic fractures (29.0%), followed by dentoalveolar trauma (20.2%), Le Fort II (12.7%) and mandibular symphyseal (11.8%) fractures. The average amount of fractures per patient was 2.3.

Conclusion: The main cause of maxillofacial trauma in Southern Vietnam is motorbike related (90.5%). Epidemiologic studies reveal the benefits of prevention on reduction of the amount and severity of maxillofacial injuries.

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P164 Down-regulation of osteopontin in mouse salivary glands after X-ray irradiation

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Radiation-induced xerostomia is a frequent consequence of radiotherapy for head-neck cancer, but its mechanisms remain unclear. Osteopontin (OPN), a highly phosphorylated glycoprotein has been shown to be involved in modulation of inflammatory and tissue repair processes and to be expressed in salivary glands. In the present study using a murine model of radiation-induced xerostomia, we examined the expression of OPN in mouse sublingual glands (SLGs) and submandibular glands (SMGs) after irradiation by quantitative reverse transcriptase-polymerase chain reaction and Western blotting. To explore the cellular location of OPN and its relation to matrix metalloproteinase 3 (MMP3) and CD11b positive cells both of which are also involved in radiation-induced tissue responses, immunofluorescence was performed with anti-OPN, anti-MMP3 or anti-CD11b. In both SLG and SMG, OPN mRNA expression increased on day 5 post-irradiation transiently, but thereafter it decreased on the tenth day. Western blot analysis and immunofluorescence showed that OPN and MMP in duct cells were down-regulated on day 10 post-irradiation, while CD11b positive cells, which were not detected in the non-irradiated mice, increased in stroma after irradiation. The down-regulation of OPN and MMP3, and the increased amount of CD11b positive

cells suggest that they modulate radiation-induced inflammatory responses resulting in salivary gland dysfunction at a later stage after irradiation.

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P165 Efficiency of clinical pathway for swallowing disorders due to oral tumour resection and reconstruction

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Background and Objectives: Evaluation and rehabilitation was conducted in cooperation with the Dysphagia Rehabilitation Clinic, regarding swallowing disorders due to oral tumour resection and reconstruction. We introduced clinical pathway to improve the rehabilitation efficiency, starting June of 2006. This study analyses the result of efficiency of the pathway.

Methods: From 2003 to 2008 June, 45 cases of oral tumour resections and reconstructions were performed on the tongue or the floor of the mouth, followed by evaluation and rehabilitation of swallowing disorders. We compared the 18 cases before introduction of the pathway, with 27 cases after introduction, by means of the period of examination or rehabilitation, and the dietary restrictions.

Results: The average period was shortened after introduction of the pathway. The period from the operation to the first videofluoroscopic examination was 10.0 days shorter; from direct rehabilitation to all dietary intake orally was 10.0 days shorter, resulting in a 14.4-day shortened postsurgical stay. While dietary restriction at discharge was improved, the ratio of patients that needed food processor was decreased from half in the pre-pathway situation to 26.9% after introduction of pathway, and the percentage of patients who could have soft diet increased from 33.3% to 53.9%.

Conclusion: After introducing the pathway, examination of swallowing was conducted in earlier postoperative stage and made the cooperation easier, which seemed to shorten the rehabilitation period. The length until discharge was also shortened, but there were many