

# **Scandinavian Congress of Maxillofacial Surgery & Oral Medicine**

**Visby, Sweden      June 17<sup>th</sup>-20<sup>th</sup>, 2004**

**Final Program & Abstract Book**



**Scandinavian Association of  
Oral and Maxillofacial Surgeons**

**Swedish Society of  
Oral Medicine**

**Swedish Association of  
Oral and Maxillofacial Surgeons**

**Swedish Association of  
Hospital Dentists**

# Welcome to Visby!

Dear Colleagues & Friends,

On behalf of the Scandinavian Association of Oral and Maxillofacial Surgeons, the Swedish Association of Oral and Maxillofacial Surgeons and the Swedish Society of Oral Medicine, we are pleased to welcome you to this joint meeting in Visby, Sweden.

Visby is a picturesque medieval town located on the beautiful island Gotland in the Baltic Sea, and the city is part of UNESCO's World Heritage List. History is ever present, not just in Visby. The whole island testifies to bygone times. Gotland is different and fascinating in so many ways. Fabulously beautiful scenery and exotic culture. That special light. The attractions of the sea and the beach. Steep cliffs and shallow beaches. Lush verdure and open landscapes. Hundreds of historic remains and medieval churches, many of them open to visitors. Gotland is an island of contrasts.

Invited speakers will give lectures in major fields of oral and maxillofacial surgery and oral medicine. In addition there will be scientific and clinical reports and posters, which will bring us to the latest advances in these fields.

*Göran Gynther*  
Congress chairman

*Astri Ragne*  
President SFOMK  
Scandinavian Association of  
Oral and Maxillofacial Surgeons

*Anders Eriksson*  
President KKF  
Swedish Association of  
Oral and Maxillofacial Surgeons

*Ulf Mattsson*  
President SOMS  
Swedish Society of  
Oral Medicine

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## **Boards of organizing associations**

### **Scandinavian Association of Oral and Maxillofacial Surgeons (SFOMK) Board 2004**

President:	Astri Ragne	Norway
Secretary:	Trond Berge	Norway
Treasurer:	Veikko Tuovinen	Finland
General Secretary:	Ulf Ahlström	Sweden
Members:	Lars Eriksson	Sweden
	Göran Gynther	Sweden
	Hans Jørgen Hansen	Denmark
	Sven Erik Nørholt	Denmark
	Anna-Lisa Söderholm	Finland

### **Swedish Association of Oral and Maxillofacial Surgeons (KKF) Board 2004**

President:	Anders Eriksson
Vice President:	Bengt Alsén
Secretary:	Monica Gordh
Treasurer:	Tomas Lundberg

### **Swedish Society of Oral Medicine (SOMS) Board 2004**

President:	Ulf Mattsson
Vice President:	Mats Jontell
Secretary:	Elna Hultqvist
Treasurer:	Johan Blomgren
Members:	Ulf Ahlström
	Agne Nihlson

#### **Congress Chairman**

Göran Gynther

#### **Organizing Committee**

Ulf Ahlström, Anders Eriksson, Hans Forsslund, Björn Franzén, Göran Gynther, Sten Holm,  
Mats Jontell, Ulf Mattsson, Ann Roosaar

#### **Congress Service**

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[www.medsurgvisby.knows.it](http://www.medsurgvisby.knows.it)

## *Meetings during the Congress*

Friday, June 18<sup>th</sup>                      16.30-18.00                      Main lecture hall (upstairs)

KKF (Swedish Association of Oral and Maxillofacial Surgeons) General Assembly

Friday, June 18<sup>th</sup>                      16.30-18.00                      Lecture hall downstairs

SOMS (Swedish Society of Oral Medicine) General Assembly

Saturday, June 19<sup>th</sup>                      16.30-18.00                      Main lecture hall (upstairs)

SFOMK (Scandinavian Association of Oral and Maxillofacial Surgeons) General Assembly

Saturday, June 19<sup>th</sup>                      16.30-18.00                      Lecture hall downstairs

SSTF (Swedish Association of Hospital Dentists) General Assembly

## *Social program*

### **Thursday, June 17<sup>th</sup>**

#### **Golf competition, 13.00-19.00 hrs**

A golf competition will be held during the afternoon at Kronholmen's beautiful golf course located south of Visby just by the sea. There will be transportation by bus for the competitors. A light lunch will be served at the golf course.

#### **Opening Ceremony, 18.00-19.00 hrs**

The Opening Ceremony will be held at 6 PM in the medieval remains of the church S:t Nicolai on Thursday evening, and all delegates and accompanying persons are invited.

#### **Get-together-party, 19.00-24.00 hrs**

Immediately after the opening ceremony there will be a get-together-party with food, wine and music in the exhibition area at the Congress venue, Borgen. This is included in the congress fee for congress participants and paying accompanying persons.

### **Friday, June 18<sup>th</sup>**

#### **Medieval evening, 19.15-22.30 hrs**

Friday night there will be a medieval evening just outside Visby. There will be transportation by bus from the Congress venue (just outside "Österport") at 7.15 PM, and back from the festivity around 10.30 PM. During the evening there will be a medieval dinner with traditional food, drinks and medieval performances. This evening is included in the congress fee for congress participants and paying accompanying persons.

### **Saturday, June 19<sup>th</sup>**

#### **Banquet, 19.30-02.00 hrs**

The congress banquet with dinner, performance and dance will take place on Saturday night 7.30 PM downstairs in the congress venue (the exhibition area). Dress may be your best choice. The banquet is included in the congress fee for congress participants and paying accompanying persons.

### **Sunday, June 20<sup>th</sup>**

#### **Guided bus tour to northern Gotland, 10.00-17.00 hrs**

During this guided bus tour, you will pay a visit to one of the almost 90 medieval stone churches on Gotland. Thereafter a ferry will take you to Fårö. The small island Fårö is mostly famous for its nature and especially its stone formations, and for its inhabitants Ingemar Bergman and previously Olof Palme. Back on the main-island Gotland you will visit the open-air museum Bungemuséet. Here you will find large 17<sup>th</sup> and 18<sup>th</sup> century holdings, as well as huts, hovels and other cottages from Gotlands past times. Short before coming back to Visby you will have a guided tour in the famous cave of Lummelunda. The cave was formed by carbonated water seeping into cracks in the bedrock and dissolving the limestone. The cave was first discovered in 1950, since then cave explorers have discovered an even larger area and today the cave area is 4.5 km.

Starting point: Almedalen. Departure: 10 AM. Return: 5 PM.

## *Congress program*

### **Wednesday, June 16<sup>th</sup>**

13.00-17.00

Visby Hospital

#### **Precongress course: Oral medicine, Part 1**

(limited attendance – only for prepaid participants!)

Lecturer: Mats Jontell

### **Thursday, June 17<sup>th</sup>**

9.00-12.00

Visby Hospital

#### **Precongress course: Oral medicine, Part 2**

(limited attendance – only for prepaid participants!)

Lecturer: Mats Jontell

13.00-17.00

Main lecture hall

(upstairs)

#### **Symposium: Oral cancer**

Chairman: Tony Axell

# 1

#### **The molecular pathogenesis of cancer**

Lecturer: Göran Stenman

# 2

#### **Precancerous lesions**

Lecturer: Isaac van der Waal

# 3

#### **The diagnostic value of modern imaging techniques in the evaluation of neoplastic and inflammatory conditions in oral cavity including jaws, sinonasal cavities and parotid space**

Lecturer: Babak Falahat

# 4

#### **Diagnosis of oral cancer; clinical aspects**

Lecturer: Isaac van der Waal

14.45-15.15

Exhibition area

#### **Coffee**

18.00-19.00

S:t Nicolai

#### **Opening Ceremony**

19.00-24.00

Exhibition area

Congress venue, Borgen

#### **Get-together-party**

**Friday, June 18<sup>th</sup>**

9.00-12.00

Main lecture hall  
(upstairs)

**Symposium: Oral cancer**

Chairman: Anna-Lisa Söderholm

# 5

**Vascularised bone grafts**

Lecturer: Risto Kontio

# 6

**Implant treatment in irradiated tissue**

Lecturer: Gösta Granström

10.15-10.45

Exhibition area

**Coffee**

12.00-13.00

Exhibition area  
(downstairs)

**Lunch**

13.00-13.30

Entrance hall  
(upstairs)

# 7-14

**Poster presentations**

13.30-16.30

Main lecture hall  
(upstairs)

# 15-30

**Oral presentations**

**Oral and maxillofacial surgery**

Chairmen: Lars Eriksson  
Sven Erik Nørholt

Lecture hall  
downstairs

# 31-45

**Oral and maxillofacial surgery**

Chairmen: Trond Berge  
Anders Holmlund

14.40-15.10

Exhibition area

**Coffee**

16.30-18.00

Main lecture hall  
(upstairs)

**General assembly**

KKF (Swedish Association of Oral and Maxillofacial Surgeons)

Lecture hall downstairs

**General assembly**

SOMS (Swedish Society of Oral Medicine)

19.15-22.30

Bustransportation  
from the Congress venue  
(just outside "Österport")

**Medieval evening**

**Saturday, June 19<sup>th</sup>**

9.00-12.00

**Oral presentations**

Main lecture hall # 46-52  
(upstairs)

**Oral medicine**

Chairmen: Palle Holmstrup  
Leif Helldén

9.00-12.00

Lecture hall downstairs

**Sponsor lectures**

9.00-10.15 # 53

**Astra Tech:  
A good morning with Astra Tech. Better healing –  
Biomangement through bone and implant interaction**

Lecturers: Jan-Eirik Ellingsen, Clark Stanford, Anders Holmén

10.45-12.00 # 54

**Nobel Biocare:  
The influence of TiUnite on osseointegration and soft tissue  
integration**

Lecturer: Jan Gottlow

10.15-10.45  
Exhibition area

**Coffee**

12.00-13.00  
Exhibition area

**Lunch**

13.00-13.30 # 7-14  
Entrance hall  
(upstairs)

**Poster presentations**

13.30-16.30  
Main lecture hall  
(upstairs)

**Symposium: Controversies in implant treatment**

Chairman: Daniel Laskin

# 55 **Is surgical skill more important for clinical success than changes in implant hardware?**

Lecturer: Tomas Albrektsson

# 56 **Immediate functional loading. What do we really know?**

Lecturer: Göran Gynther

# 57 **Implantology in the TMD patient**

Lecturer: Daniel Laskin

# 58 **Prosthetic dogms, diagnosis, and decision making**

Lecturer: Bengt Öwall

13.30-16.30  
Lecture hall downstairs

**Symposium: Immunosuppressed patients**

Chairman: Mats Jontell

# 59 **Immunosuppression - medical aspects**

Lecturer: Hans Carlsten

# 60 **Immunosuppression – oral aspects; general**

Lecturer: Ulf Mattsson

# 61 **Immunosuppression - oral aspects; clinical**

Lecturer: Johan Blomgren

14.30-15.00  
Exhibition area

**Coffee**

16.30-18.00  
Main lecture hall  
(upstairs)

**General assembly**  
SFOMK (Scandinavian Association of Oral and Maxillofacial  
Surgeons)

Lecture hall downstairs

**General assembly**  
SSTF (Swedish Association of Hospital Dentists)

19.30-02.00  
Congress venue,  
downstairs

**Banquet**

**Sunday, June 20<sup>th</sup>**

**Social activities**

## ***Poster presentations***

**Friday, June 18<sup>th</sup>, 13.00-13.30**

**Entrance hall, upstairs**

Presenting author underlined

- # 7            **Long-term treatment outcome of oral premalignant lesions**  
Holmstrup P, Vedtofte P, Reibel J, Stoltze K
  
- # 8            **Carcinoma arising in the lower third molar follicle**  
Kyrö U, Tuovinen V
  
- # 9            **TT-virus and TLM-virus detection in recurrent aphthous ulcers.**  
**A preliminary study.**  
Herlofson BB, Dahl H, Fasting LA, Moen E, Grinde B
  
- # 10          **Economics of patient-flows associated with mandibular third molar surgery. Description of study design**  
Liedholm R, Lysell L, Henricsson V, Rosenquist B, Rohlin M, Norlund A, Knutsson K
  
- # 11          **Characterization of a model of dental sinusitis in rabbits**  
Garming Legert K, Heimdahl A, Stierna P
  
- # 12          **Slowly growing mass in the mandible, chronic osteomyelitis, which 25 years later was diagnosed as central giant cell granuloma**  
Soinila J, Tuovinen V
  
- # 13          **Treatment of lateral open bite caused by failure of eruption**  
Uiskamo A, Tammela L, Tuovinen V
  
- # 14          **The Clinical application of split-thickness calvarial bonegrafts in maxillofacial surgery and a critical assessment of donor site**  
Majumdar A, Jones K

## ***Oral presentations:***

## ***Oral and maxillofacial surgery***

**Friday, June 18<sup>th</sup>, 13.30-16.30**

**Main lecture hall (upstairs)**

Chairmen: Lars Eriksson, Sven Erik Nørholt

Presenting author underlined

- 13.30-13.40 # 15 **Evaluation of surgical treatment of orbital / zygomatic fractures. A retrospective study**  
Tjernberg J, Alsén B, Dahlin C
- 13.40-13.50 # 16 **Bioresorbable osteosynthesis in orthognatic surgery**  
Tuovinen V, Teittinen M, Uiskamo A
- 13.50-14.00 # 17 **Preprosthetic segmental maxillary osteotomy. A case report**  
Holm S, Gynther G, Almqvist P
- 14.00-14.10 # 18 **The use of platelet rich plasma (PRP) in surgery**  
Buhl J, Jensen J, Nørholt S-E
- 14.10-14.20 # 19 **New internal distraction device for multidirectional bone transport**  
Hideharu H, Shuhei T, Noriyuki Y, Hideaki K, Iwai T, Minoru U
- 14.10-14.20 # 20 **Vertical distraction treatment of a microvascular osteocutaneous fibula free flap. A case report**  
Olaisson B
- 14.20-14.30 # 21 **Simultaneous sinus lift and implants in the atrophic edentulous posterior maxilla using the “Lundgren technique”**  
Thor A
- 14.30-14.40 # 22 **A prospective, randomised study of 1-stage and 2-stage sinus inlay bone grafts, 5-year follow-up**  
Johansson B, Hallman M, Strandqvist T, Wannfors K
- 14.40-15.10 **Coffee**  
Exhibition area
- 15.10-15.20 # 23 **Implant treatment in combination with lateral augmentation of the alveolar process. A 3-year prospective study**  
Hellem S, Åstrand P, Stenström B, Engqvist B, Bengtsson M, Dahlgren S
- 15.20-15.30 # 24 **Early functional loading of implants in the totally edentulous maxilla. A prospective study**  
Sunzel B, Randow K, Vult von Steyern P, Lindh C

- 15.30-15.40 # 25 **Implant treatment without bone grafting in severely resorbed edentulous maxillae. A five years follow-up study**  
Rosén A, Gynther G
- 15.40-15.50 # 26 **A retrospective influence of different operatory set-ups on implant survival rate. A clinical study**  
Cardemil C, Ristevski Z, Alsén B, Dahlin C
- 15.50-16.00 # 27 **Prophylactic removal of third molars. A method evaluation based on an international literature study**  
Ragne A
- 15.00-16.10 # 28 **Traumatic changes of the inferior alveolar nerve and ganglion Gasseri following removal of a lower third molar**  
Eriksson L, Hillerup S, Brun A, Reibel J, Persson S
- 16.10-16.20 # 29 **Effects of perioperatively administered betamethasone on morphological changes after nerve injury**  
Al-Bishri A, Forsgren S, Rosenquist J, Sunzel B
- 16.20-16.30 # 30 **Systemic betamethasone accelerates functional recovery after a crush injury to rat sciatic nerve**  
Al-Bishri A, Dahlin L, Rosenquist J, Sunzel B

**Friday, June 18<sup>th</sup>, 13.30-16.30**

**Lecture hall downstairs**

Chairmen: Trond Berge, Anders Holmlund

Presenting author underlined

- 13.30-13.40 # 31 **Late secondary reconstruction of hemimaxillary defect. A case report**  
Olaisson B
- 13.40-13.50 # 32 **3D osteotomy planning in maxillofacial surgery including 3D soft tissue prediction**  
Westermarck A, Zachow S
- 13.50-14.00 # 33 **Technology meets surgery. Patient matched implants produced with the aid of anatomical models**  
Westermarck A, Hedén P
- 14.00-14.10 # 34 **Maxillary reconstruction with a preformed, vascularised fibular graft in a patient where several previous reconstructive efforts had failed. 3-D support in complicated surgery**  
Westermarck A, Brown A
- 14.10-14.20 # 35 **Surgical rehabilitation at continuity defects in the midface and the mandible; experiences from 100 reconstructions**  
Svensson B, Bågenholm T, Adell R

- 14.20-14.30 # 36 **100 reconstructions at continuity defects in the mandible and the midface; results and dental rehabilitation**  
Adell R, Svensson B, Bågenholm T
- 14.30-14.40 # 37 **Treatment and long-term results of malignant tumors of the salivary glands. A retrospective analysis**  
Eckardt A, Brüggemann N, Kokemüller H
- 14.40-15.10 **Coffee**  
Exhibition area
- 15.10-15.20 # 38 **Oral pathological oddities I. Carcinoid metastasis in the mandible. A case-report**  
Westermarck A, Danielsson D, Lindskog S, Lundgren J
- 15.20-15.30 # 39 **Degenerative and inflammatory changes in patients with TMJ painful clicking and chronic closed lock**  
Holmlund A, Paegle DI, Kardel R
- 15.30-15.40 # 40 **Functional reconstruction of the temporomandibular joint with free fibulamicrovascular flap. A case series**  
Thor A, Sörlin G, Hirsch J-M
- 15.40-15.50 # 41 **Molecular anatomy reveals fibrocartilage in the temporomandibular joint capsule – An essential component in the TMJ ankylosis?**  
Westermarck A, Milz S
- 15.50-16.00 # 42 **Oral pathological oddities II. Synovial chondromatosis of the temporomandibular joint with intracranial extension. Report on a case**  
Danielsson D, Ahlén K
- 16.00-16.10 # 43 **Osteomyelitis of the jaws – assessment of microbiota by DNA-DNA hybridisation. A preliminary report**  
Frid P, Ragne A, Olsen I, Eribe ER
- 16.10-16.20 # 44 **The Hajdu-Chenay Syndrome (idiopathic acro-osteolysis). A case report of oral and maxillofacial interest**  
Jungner M, Westermarck A
- 16.20-16.30 # 45 **Plasmocytoma in the upper jaw. A diagnostic problem**  
Englesson L, Eriksson L, Petersson A, Warfinge G

## ***Oral presentations:***

## ***Oral medicine***

**Saturday, June 19<sup>th</sup>, 9.00-12.00**

**Main lecture hall (upstairs)**

Chairmen: Palle Holmstrup, Leif Helldén

Presenting author underlined

- |                                |      |  |
|--------------------------------|------|--|
| 9.00-9.10                      | # 46 | <b>Osteo-chemo-necrosis of the mandible following chemotherapy for leukemia</b><br><u>Schiødt M</u> , Birgens H  |
| 9.10-9.20                      | # 47 | <b>Report on clinical practice guidelines for the prevention and treatment of cancer therapy-induced oral mucositis</b><br><u>von Bültzingslöwen I</u>   |
| 9.20-9.30                      | # 48 | <b>Clonal Chromosome rearrangements in recurrent oral leukoplakia. A case report</b><br>Stenman G, <u>Jontell M</u>  |
| 9.30-9.40                      | # 49 | <b>Bacterial associated oral lichenoid reactions</b><br>Bäckman K, <u>Jontell M</u>  |
| 9.40-9.50                      | # 50 | <b>Human papillomavirus DNA in patients with oral squamous cell carcinoma and in healthy population-based controls</b><br><u>Rosenquist K</u> , Antonsson A, Wennerberg J, Schildt E-B, Andersson G, Hansson B |
| 9.50-10.00                     | # 51 | <b>Orofacial granulomatosis in childhood – oral manifestations which may indicate Crohn´s disease as well as food allergy</b><br>Saalman R, <u>Mattsson U</u> , Jontell M                                      |
| 10.00-10.10                    | # 52 | <b>Oral bacteria and clinical variables in dependent individuals at a special facility</b><br><u>Wårdh I</u> , Wikström M, Sörensen S  |
| 10.10-10.40<br>Exhibition area |      | <b>Coffee</b>  |
| 10.40-11.00                    |      | <b>Certification lecture for passing SOMS´examination in Oral medicine</b><br>Peter Johansson<br>Clinic of Oral Medicine, Faculty of Odontology, Göteborg, Sweden  |
| 11.00-11.20                    |      | <b>Certification lecture for passing SOMS´examination in Oral medicine</b><br>Terje Persson<br>Clinic of Hospital Dentistry, Falun County Hospital, Sweden   |

# *Abstracts*

## **The molecular pathogenesis of cancer**

Stenman, Göran

Lundberg Laboratory for Cancer Research, Department of Pathology, Göteborg University,  
Sahlgrenska University Hospital, Göteborg, Sweden

Cancer is a genomic disease caused by multiple, acquired mutations in somatic cells. Approximately 10% of all cancers are caused by germ line mutations, resulting in a genetic predisposition for tumor development. Characteristically, cancer cells also show an innate genetic instability which is manifested both at the chromosomal level (chromosomal instability – CIN) and at the molecular level (microsatellite instability – MIN). The genetic alterations associated with tumor development include activation of oncogenes (gain of function mutations) and inactivation of tumor suppressor genes (loss of function mutations). Mutations in DNA-repair genes are mainly associated with certain hereditary cancers. Moreover, recent studies have shown that tumor-specific chromosome translocations often result in pathogenetic fusion oncogenes, encoding novel fusion proteins or normal, but ectopically expressed proteins. The genetic alterations commonly found in cancer cells result in defects in important regulatory pathways that govern normal cell proliferation and homeostasis (i.e. cell cycle control, apoptosis, growth factor signaling, cell-to-cell adhesion, and angiogenesis) leading to tumorigenesis. Recent advances in our understanding of growth control and cellular signaling have led to the discovery of several novel and promising cancer drugs, including e.g. tyrosine kinase inhibitors, inhibitors of growth factors and their receptors, antiangiogenic molecules, and small molecules that can reactivate mutant p53 protein.

## **Precancerous lesions**

van der Waal, Isaac

VU university medical centre/ACTA  
Department of Oral and Maxillofacial Surgery/Pathology, Amsterdam, The Netherlands

Leukoplakia is the most common premalignant lesion of the oral mucosa and is defined as a predominantly white lesion that can not be characterized as any other definable lesion. In view of a wide variety of white or whitish lesions of the oral mucosa, dentists and oral and maxillofacial surgeons are challenged to recognise such definable lesions in order to properly identify leukoplakia.

Oral leukoplakia occurs much more often in smokers than in non-smokers. The diagnosis of leukoplakia is primarily based on clinical aspects. Predictors of future malignant transformation are clinical subtype, particularly the nonhomogeneous type, and presence of epithelial dysplasia as assessed by histopathological examination. Location on the tongue or the floor of the mouth may be another prognostic indicator. In recent years, DNA-ploidy of the epithelial cells is suggested to be a more reliable prognostic indicator of malignant transformation than the presence and degree of epithelial dysplasia.

Leukoplakias may regress after cessation of smoking habits, if any. Spontaneous regression is rare. The most common treatment modalities are surgery and CO<sub>2</sub>-laser. Novel therapies include photodynamic therapy and the use of manipulated adenoviruses incorporated in a mouthwash.

Recurrences after surgical treatment are not uncommon. Furthermore, it has become clear, amongst others from a recent Cochrane study, that the effectiveness of treatment with regard to the prevention of malignant transformation has never been proven. Nevertheless, it is recommended to treat oral leukoplakia, particularly if dysplastic.

## **The diagnostic value of modern imaging techniques in the evaluation of neoplastic and inflammatory conditions in oral cavity including jaws, sinonasal cavities and parotid space**

Falahat, Babak

Department of Oral and Maxillofacial Radiology, The Institute for Postgraduate Dental Education, Jönköping, Sweden

Beside the advantages of plain film radiography, the development of multi-sectional modalities, high-resolution computer tomography (CT) and magnetic resonance imaging (MRI) plays a vital role in the analysis of the inflammatory and neoplastic lesions, in the maxillofacial region and suprahyoid neck.

Multimodality imaging also improves the differential diagnosis and allows early diagnosis, careful tumor mapping (deep tissue extent of tumor, bone involvement, perineural spread), and also helping the referring clinicians with accurate treatment planning.

The prognosis for patient with cancers in the maxillofacial and neck is also correlated with if presence of metastatic nodal disease and imaging, which is significantly more accurate than palpation, helps detection and early treatment of cervical metastatic disease.

The lecture aims to show examples of imaging of different pathological conditions in oral cavity including jaws, sinonasal cavities and parotid space.

## **Diagnosis of oral cancer. Clinical aspects**

van der Waal, Isaac

VU university medical centre/ACTA

Department of Oral and Maxillofacial Surgery/Pathology, Amsterdam, The Netherlands

The majority of oral cancers consists of squamous cell carcinoma arising from the mucosa. Oral squamous cell carcinoma may present in various ways. The most common presentation is an ulcer. Sites of preference are the lower lip, the borders of the tongue, the anterior floor of the mouth, and the lower alveolar ridge. A substantial number of squamous cell carcinomas is associated with or preceded by leukoplakic changes. Symptoms may vary from mild discomfort to severe pain, sometimes being experienced as referred pain into the ear or the temporo-mandibular joint.

Diagnostic aids may consist of exfoliative cytology, brush biopsy and the use of Toluidine blue; the most reliable diagnosis is based on histopathological examination from a biopsy. In most cases an incisional biopsy is preferred above an excisional one.

Some 20% of oral cancers consists of non-squamous cell carcinomas, being malignant melanoma, salivary gland carcinoma of the intraoral accessory glands, sarcoma of the soft and hard tissues, malignant odontogenic tumors, non-Hodgkin's lymphomas and metastases from primary tumors located elsewhere in the body. The clinical aspects of these so-called "other" oral cancers will be briefly discussed. The emphasis will be on the clinical diagnosis. Probably due to their rare occurrence, the signs and symptoms of the "other" oral cancers are often not recognised at an early stage. In contrast to oral squamous cell carcinoma, the "other" oral cancers are non-preventable.

## Vascularised bone grafts

Kontio, Risto

Department of Oral and Maxillofacial Surgery, Helsinki University Hospital, Finland

Maxillofacial bone reconstruction continues to provide one of the most difficult challenges to the head and neck reconstruction surgeon. The mandible and maxilla are both functionally and cosmetically one of the most important structures of the head and neck, contributing to facial contour, chewing, speech and swallowing.

The goals of reconstruction are: 1) establishment of mandible and maxillary continuity; 2) establishment of an osseous-alveolar base; and 3) correction of soft-tissue defects.

In general, bone loss due to benign processes results in preservation of soft-tissue and is more likely to heal. In contrast, mandibulectomy or maxillectomy for carcinoma more frequently results in large bone and soft-tissue defects. Lateral mandible defects are generally tolerated and do not necessarily require immediate reconstruction. In contrast, anterior mandible defects result in severe functional and cosmetic deformities.

Autogenous bone grafts can be in the form of free bone transfer, pedicled osteomyocutaneous grafts or microvascular free flaps. Reconstruction using free bone grafts has a high failure rate due to the lack of vascularization. Pedicled osteomyocutaneous flaps supply their vascularity and soft-tissue. These flaps, however, require an additional operation site and provide a limited amount of bone in head & neck area. Osteomyocutaneous flaps include the sternomastoid-clavicular, pectoralis major - 5th rib and trapezius grafts.

Era in microsurgery started all ready over 60 years ago, when Professor Carl Nylén (ENT) performed an ear operation using operative microscope. Since that time instruments and microsurgical devices has developed enormously, and has made microvascular surgery in the field of maxillofacial surgery popular. Better microvascular technique as well as new free flaps has been introduced during the past couple of decades enabling efficient and adequate facial reconstruction. The vascularized free flaps can be divided to fasciocutaneous, myocutaneous and osteomyocutaneous flaps. One of the first flaps introduced to maxillofacial surgery, 1977 was myocutaneous groin flap by Banje and Baker.

DCIA is among one of the method of choice free flaps in maxillofacial reconstruction. It gives tools for difficult reconstruction, if otherwise not impossible. DCIA flap was introduced originally by Taylor but it was not until the works of Ramasastry, 1984 and Urken, 1989, it became popular among maxillofacial surgeons. DCIA flap is composed of three main components, bone, muscle and skin. Bone gets it blood circulation via perforators coming from the muscle cuff surrounding the main pedicle along the medial side of iliac crest. The ascending branch running on the abdominal surface of this muscle feeds internal oblique muscle and skin. Ascending branch emerges the main pedicle usually 2 cm medially and inferiorly to ASIS between internal oblique and transversalis muscles.

The advantage of composite DCIA flap is that it enables aggressive and radical resection of tumour tissue. Secondly it gives extra tools for the surgeon to resolve difficult reconstruction situation like anterior lower jaw or massive soft and hard tissue defect. Free flap is also easier

to position when surgeon is not bound to fixed pedicle. The main goal for maxillofacial reconstruction should be restoration of form and function. Due to good quality and quantity of bone and internal oblique muscle that can be raised together with the flap restoration of function and form should be possible.

The fibula is a long thin bone that has close proximity to the peroneal artery and venae and can therefore be harvested on a single large pedicle. The length of the bone, consistent blood supply and relative ease of harvest make this donor one of the most useful when osseous reconstruction is required. It has become the workhorse for mandible reconstruction and segmental long bone defects in both the upper and lower extremities.

Microvascular free flaps have found wide application in maxillofacial reconstruction. Advantages include: 1) wide selection of donor site, 2) non-irradiated tissue, 3) own vascular supply, and 4) soft-tissue for closure. Major disadvantages include: 1) donor site morbidity, 2) longer operation time, 3) need for special surgical and nursing skills, and 4) longer hospitalization.

At the Dept. of Oral and Maxillofacial Surgery in Helsinki we have performed until now 61 free vascularized bone flap reconstructions in maxillary and mandible regions. The results will be presented.

## **Implant treatment in irradiated tissue**

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Osseointegration has greatly improved the rehabilitation of head and neck cancer patients. Patients with defects of the head, face and jaws can be supplied with bone-anchored episthesis or bridges to compensate for anatomical and functional deficits. The concept is widely used in non-irradiated patients, but partly restricted in irradiated patients. This lecture will discuss reports from the international literature of osseointegration in irradiated tissue. A database of our first 100 treated irradiated patients was established. Altogether 635 implants in 107 patients have been followed for a mean of 6.5 years. Factors for implant survival as age, sex, smoking, type and region of cancer, cancer TNM-classification, cancer surgery, irradiation dose, and quality, additional chemotherapy were evaluated. Time from radiotherapy to implant installation, region of implant installation, type and length of implant, retention systems used, and surgical experience was further evaluated. 71 of the 107 patients were still alive. 484 implants were still active and integrated, whereas 147 had failed during the observation period. High implant failures were seen after high-dose radiotherapy and long times after irradiation. Certain risk areas were identified as the frontal bone and nasal maxilla. Short fixtures and retention with extended arms increased failures. Low fixture failures were seen in oral cavity regions with the use of long fixtures, fixed retention and combined treatment with hyperbaric oxygen. It is concluded that patient survival and implant survival is so high after cancer treatment that an improved quality of life for these patients is expected.

## **Long-term treatment outcome of oral premalignant lesions**

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<sup>1</sup> Department of Periodontology, <sup>2</sup> Department of Oral Medicine and Pathology, University of Copenhagen, <sup>3</sup> Department of Oral Surgery, Copenhagen University Hospital, Denmark

### Aims:

To learn the long-term treatment outcome of oral leuko- and erythroplakia.

### Material & Methods:

A total of 270 lesions (70% homogenous and 25% non-homogenous leukoplakias and 6% erythroplakias) in 236 patients (132 women and 104 men; mean age: 60.8 yrs. range: 23 - 92) were included. The mean follow-up period was 6.0 yrs. (range: 1-20 yrs). 95 lesions (41% homogenous and 49% non-homogenous leukoplakias and 9% erythroplakias) were surgically removed. The remaining 175 lesions (85% homogenous and 11% non-homogenous leukoplakias and 3% erythroplakias) had no surgical intervention because patients refused or the lesions were considered as having a low risk of malignant development or because the general medical condition of the patient did not allow such treatment. Candidal infections were treated and all patients were encouraged to quit smoking.

### Results:

Among surgically treated lesions 13.5% (1 erythroplakia, 11 non-homogenous and 1 homogenous leukoplakia), developed carcinoma. Among non-surgically treated lesions 4.0% including 3 non-homogenous and 4 homogenous leukoplakias developed carcinoma. Lesions with slight epithelial dysplasia developed carcinoma in 17% of surgically treated and 14% of non-surgically treated lesions.

### Conclusions:

This study confirms that surgical intervention does not prevent malignant development of oral leukoplakia and erythroplakia in all cases. A surprisingly high proportion of lesions with slight epithelial dysplasia developed carcinoma in both treatment groups.

This work was presented at the Annual Meeting of IADR, Honolulu, March 2004

## **Carcinoma arising in the lower third molar follicle**

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Jyväskylä, Finland.

### Aims:

The aim of this report is to describe diagnostics and treatment of intraosseous carcinoma arising in lower third molar follicle.

### Material & Methods:

A 62-year-old woman was referred to an oral surgeon for removal of residual cyst in the right lower third molar region. Two years earlier the impacted tooth with enlarged follicle was removed from this region. Patient's main claim was occasional bad taste from the region. No regional palpable lymphatic nodes were found. The cystic lesion was removed in local anesthesia. The oral mucosa was intact except for a small fistula opening. Histopathological examination showed epidermoid carcinoma. After the malignancy diagnosis larger resection was performed. No signs of metastases were found. New histopathological specimen showed residual malignancy on the borders of the excised tissue. An even larger resection was performed consisting of hemimandibular ectomy, ectomy of ipsilateral maxillary bone and removal of suprahyoid cervical lymph nodes. Removed lymph nodes were clean. The mandible was reconstructed with a reconstruction plate and a fasciocutaneous microvascular flap. No radiation therapy was performed. Rehabilitation of occlusion was carried out seven months post-operatively with dental implants and fixed and removable prosthesis.

### Results:

Twenty-eight month follow-up shows no signs of relapse or metastases and the patients complacency is excellent.

### Conclusions:

Even if carcinoma arising in a tooth follicle or cyst is a very rare condition, attention must be paid to healing after removal of such impacted teeth.

## **TT-virus and TLM-virus detection in recurrent aphthous ulcers. A preliminary study**

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<sup>2</sup> Division of Infectious Disease Control, National Institute of Public Health, Norway.

### Aims:

This study examined the presence of TT-virus (TTV) DNA and TLM-virus (TLMV) DNA in oral mucosal biopsies by PCR in patients suffering from recurrent aphthous ulcerations (RAU).

### Material & Methods:

The study comprised 8 otherwise healthy patients suffering from minor type of recurrent aphthous ulceration (RAU). Punch biopsies from 1-2 days old aphthous ulcers (no 9) and from healthy mucosa (no 8), were taken and frozen at  $-20^{\circ}\text{C}$ . Nested PCR were performed using two new designed sets of primers, one for TTV and one for TLMV.

### Results:

Six out of 9 biopsies from aphthous ulcers were tested positive for either TTV-DNA or/and TLMV-DNA. Only one out of 8 biopsies from healthy mucosa was weakly positive for TTV-DNA.

### Conclusions:

This preliminary study showed an increased amount of TTV-DNA and TLMV-DNA in biopsies from aphthous ulcers compared with biopsies from healthy mucosa in RAU patients. The study is too small to suggest a possible support for an etiologic role for TTV and TLMV in RAU. The increased presence of these newly discovered viruses (TTV and TLMV) may reflect a local inflammatory process where these viruses are confounders in cells active in the inflammatory infiltrate in aphthous ulcers. Further studies are wanted to elucidate if TTV and TLMV may be associated with oral mucosal diseases.

## **Economics of patient-flows associated with mandibular third molar surgery. Description of study design**

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### Aims:

Economic analyses of health care costs could contribute to a better understanding of clinical practice variations in two ways. First, economic models and analyses may help the caregivers to understand the causes of existing practice variations. Second, these analyses could be a base to describe desirable and efficient policies to create changes in practice. Till now we have only limited experience about different flows of patients referred for third molar surgery and economic resources utilised. To decrease mandibular third molar removal rate on weak or wrong indications it is of interest to elucidate the cost-effective ratio of patients with mandibular third molars scheduled for surgery.

### Material & Methods:

100 consecutive patients per clinic referred to four oral and maxillofacial surgery clinics of the National Health Service in south Sweden are asked to participate. Different patient-flows and the costs related to these are analysed. The documentation and analyses start with the preoperative management of the referrals and finish 14 days postoperatively. Thus, 14 days after the surgical procedure all patients are interviewed about postoperative complications, postoperative care and consumption of drugs related to postoperative pain.

### Results:

Extensive variations of costs could be expected when comparing different patient-flows. These variations could be explained by, for example, differences in patient characteristics, clinician's operation performances, geographic position of the clinic, tradition, and education. High costs could be expected.

### Conclusions:

In an oral health care perspective, this study could state as a model for cost-effective analyses.

## **Characterization of a model of dental sinusitis in rabbits**

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### Aims:

To induce an acute dental maxillary sinusitis (dMxS) in rabbits by using their own oral microflora to create a periapical infection and to follow morphological, roentgenological, bacteriological and histological changes of the sinus mucosa cavity.

### Material & Methods:

Bilateral upper molar root canals were identified in 26 animals. The continuously growing germ of the roots were then impaired by using diathermi. The animals were randomized into two groups. Group 1 (20 animals): The teeth were left open for the study period, Group 2 (6 animals): The root canals were sealed one week after the initial procedure. The animals were sacrificed from two hours up to nine months in group 1 and after six months in group 2, followed by radiographic examination, post mortem inspection of the paranasal sinus cavity and maxillary complex, microbiological studies and histopathological examination.

### Results:

Group 1: After three months the radiographic examination showed changes ranging from widening of the periodontal space to bone reaction. Both macroscopically and microscopically post mortem changes of the sinus mucosa at sacrifice, ranged from signs of mucosal inflammation to purulent dMxS. Microbial growth increased over time with predominance of Gram negative aerobic microorganisms. Group 2: The findings were generally more pronounced and anaerobic microorganisms were predominant. In both groups the findings were consistent with dMxS.

### Conclusions:

A rabbit model of dMxS was developed that was reproducible and that mimicked human dental sinusitis with respect to its natural course and inflammation.

## **Slowly growing mass in the mandible, chronic osteomyelitis, which 25 years later was diagnosed as central giant cell granuloma**

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### Aims:

The aim of this case presentation is to remind of the possibility of different diagnosis of bone lesions which radiologically have similar appearance. After a long follow-up period e.g. osteomyelitis may transform into another bone disease such as central giant cell granuloma.

### Material & Methods:

A 61-year-old woman with considerable asymptomatic swelling in the right side of the mandible was referred to our hospital. Clear asymmetry was seen which had increased over the years. Radiologically the swelling appeared as diffuse mass with osteolytic and sclerotic zones. 25 years earlier the lesion was diagnosed as osteomyelitis according to the patient. We were not able to find histopathological report from that time. Bone biopsy in local anesthesia was taken in the first phase. Histopathological diagnosis was osteomyelitis. In the next phase the lesion was removed in general anesthesia and the new histopathological examination showed central giant cell granuloma.

### Results:

Follow up was carried out with radiological and clinical investigation and three years later no relapse was noted. The patient was satisfied with the treatment and proper diagnosis.

### Conclusions:

In the differential diagnosis one should pay attention to other bone affecting lesions, such as fibro-osseous lesions /fibrous dysplasia, benign fibrotic histiocytosis, malignant osteosarcoma and central giant cell granuloma.

## **Treatment of lateral open bite caused by failure of eruption**

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Department of Oral and Maxillofacial Surgery, Central Hospital of Central Finland,  
Jyväskylä, Finland.

### Aims:

The aim of this report is to describe the treatment of lateral open bite with facial asymmetry caused by primary failure of eruption.

### Material & Methods:

An 18-year-old-girl was referred to our hospital. Facial asymmetry, right sided open bite with non erupted molars were diagnosed. Right upper molars and lower second and third molars were first operatively removed. These teeth were observed to be ankylosed. In the next phase preoperative orthodontic treatment with fixed appliances was carried out followed by bimaxillary surgery. Segmented LeFort I for the maxilla and BSSO for the mandible were performed. Right side of the maxilla was segmented and rotated down and ipsilateral mandible was rotated upwards and midline deviation was corrected. Postoperative orthodontic treatment was carried out before replacement of first upper molar with dental implant.

### Results:

14 month follow up shows stable occlusion and nice facial symmetry.

### Conclusions :

Lateral open bite with facial asymmetry caused by primary failure of eruption can be treated successfully with orthodontics and bimaxillary surgery.

## **The clinical application of split-thickness calvarial bonegrafts in maxillofacial surgery and a critical assessment of donor site**

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Maxillofacial Unit, Derbyshire Royal Infirmary, Derby, United Kingdom.

### Aims:

To evaluate the use of calvarial bone grafting in primary post traumatic reconstruction of the maxillofacial skeleton and a critical assessment of the short and long term donor site morbidity.

### Materials & Methods:

This retrospective study analyses the use of calvarial bone grafts in 32 patients who had 45 cranial bone grafts harvested since 1994. 31 patients were followed up for a period ranging from 3 months to 48 months the average period being 18 months. All the patients in this study have been followed up to ascertain the long-term morbidity of the cranial bone graft donor site. The patients were closely questioned both about the procedure and its short and long-term sequelae.

The authors report on the use of porcine dermal collagen sheet on the donor site to camouflage the defect.

### Results:

No immediate complications were encountered. One patient was noted to have a small collection in the scalp wound at one week postoperatively, which resolved spontaneously. Long-term follow-up of the donor site revealed that the scar had healed well in all the patients with no evidence of hypertrophy or hair loss in the area.

Our early experience with the use of porcine dermal collagen sheet form as a camouflaging agent and dressing material for the graft donor site has been encouraging. Overall patient acceptance of the graft harvest was very high.

### Conclusions:

The split thickness cranial bone graft is the simplest and safest method for obtaining membranous bone when the site to be reconstructed does not require vascularised tissues.

## **Evaluation of surgical treatment of orbital / zygomatic fractures. A retrospective study**

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Department of Oral and Maxillofacial Surgery. NÄL Medical Centre Hospital, Trollhättan, Sweden.

### Aims:

The aim of the present study was to compare the postoperative outcome of different surgical approaches in the treatment of Orbital/Zygomatic fractures.

### Material & Methods:

Seventy-five patients treated between 1982-2002 were analysed retrospectively using medical records and clinical examination. Location of fractures, surgical approach, diplopia enophthalmus and occlusal interference at the time of surgery were noted. In 2004, all patients were offered an examination and also asked to answer a questionnaire regarding postoperative sequelae and quality of life.

### Results:

The data collection are under progress. Results and clinical findings will be presented.

## **Bioresorbable osteosynthesis in orthognatic surgery**

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Jyväskylä, Finland

### Aims:

During recent years the use of bioresorbable osteosynthesis material has become familiar in maxillo- and craniofacial surgery. The aim of the study was to evaluate the stability of rigid internal fixation of maxillary or mandibular or bimaxillary osteotomies by bioresorbable osteosynthesis material (BioSorb) compared with fixation by titanium miniplates (Leibinger), and to compare the morbidity when using these two fixation methods.

### Materials & Methods:

One hundred six patients with maxillary or mandibular growth disturbance for whom the correction by Le Fort I osteotomy or mandibular BSSO or bimaxillary surgery was planned were included in the study (Leibinger 52 patients: 29 BSSO, 13 LeFortI, 10 Bimax. / BioSorb 54 patients: 29 BSSO, 17 LeFortI, 8 Bimax.). Randomisation was performed. Surgery was done by using standard surgical technique. In Le Fort I osteotomy the osteosynthesis was done by using plates and screws. For BSSO fixation 3 screws were used on each side. The sagittal and vertical positions of the maxilla and mandible were measured on lateral cephalograms. Mean age of the patients was 32,7.1 yrs in the Leibinger group and 31,7 in the BioSorb group. Mean follow-up time was 17,8 and 18,1 respectively varying from 4 to 31 months.

### Results:

Unwanted relapses were not noted immediately or during the follow-up time in either of the groups.

### Conclusions:

It can be concluded that both materials can reliably be used in the orthognatic surgery.

## **Preprosthetic segmental maxillary osteotomy. A case report**

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<sup>1</sup> Specialist Centre for Dental Implants, Nacka, Sweden, <sup>2</sup> Department of Oral and Maxillofacial Surgery, Karolinska Institutet/Karolinska University Hospital, Huddinge, Sweden.

### Aims:

The segmental osteotomy provides an important treatment approach for the correction of skeletal-dental malocclusions that would otherwise be unmanageable with conventional orthodontic or prosthetic care. The aim in this case was to create anterior space and reduce a midline asymmetry in the maxillary incisor region for optimal esthetic result and to close the posterior space from a missing molar.

### Material and methods:

A 39-year old woman was referred for management of a midline asymmetry. During childhood she had a traumatic loss of the right central maxillary incisor and therefore she underwent orthodontic spaceclosure with positioning of the left central incisor in the midline. Due to pathology, the remaining left central maxillary incisor and the right first maxillary molar had to be extracted in adult age. Nor orthodontic or prosthetic therapy alone or combined, seemed to give a good esthetic and functional result when the treatment was planned. Instead, a segmental maxillary osteotomy procedure was used to create anterior space for two central maxillary incisors and also to close the posterior space after the missing molar. After healing of the segmental osteotomy, the created anterior space was closed with a single implant and a fixed prosthesis on the left lateral incisor.

### Results:

The orthognatic surgery facilitated prosthetic treatment with a good esthetic and functional result without any complications.

### Conclusions:

The role of orthognatic surgery in the treatment plan should not be overlooked. In special indications it offers patients the opportunity to gain function and esthetics that might otherwise be hard to accomplish.

## **The use of platelet rich plasma (PRP) in surgery**

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### Aims:

To describe our experience with platelet rich plasma and particulate cancellous bone in reconstructive surgery

### Material & Methods:

The patient group consists of 13 patients (eight male, five female), with an age range from 16 year to 65 years. The PRP was separated from 54 ml of blood from the patient prior to the operation. The PRP was mixed with 1 ml CaCl 10% and 2 ml blood to become a glue and then used together with particulate bone grafts from anterior iliac crest, the mandible or the maxilla.

Group 1: (Six patients); Four patients with cleft palate and persisting fistula. Two patients with persisting fistula after reconstruction of atrophic maxillae. The patients in group 1 had already underwent surgical intervention from two to five times, without closure of the fistula.

Group 2: (Seven patients); Three patients with maxillary hypoplasia or prognathia, two patients with syndromes (Dysostosis cleidocranialis, Crouzon), one patient with atrophy of the maxillae, one patient with femoral pseudartrosis. This last patient had already been operated four times with autologous bone graft, without healing.

### Results:

One out of six patients in group 1 had sequestration but closure of the fistula. Two out of six patients in group 1 had sequestration and incomplete closure of the fistula. Three out of six patients in group 1 had closure of the fistula and complete bone consolidation. All patients in group 2 healed successfully.

### Conclusions:

The use of PRP in reconstructive surgery is controversial. PRP adds a practical benefit caused by the fibrin formation that binds the graft material together. This assists the surgeon in sculpting the graft material.

## **New internal distraction device for multidirectional bone transport**

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Department of Oral and Maxillofacial Surgery, Nagoya University Graduate School of Medicine, Japan.

### Aims:

Reconstructing large segmental defects of the mandible is a challenging problem. As a possible solution bone transport technique of distraction osteogenesis has been tried. Although there are many distraction devices available, internal ones are almost unidirectional. Multidirectional control is possible with external ones, which cause various problems. We developed a new internal distraction device for multidirectional bone transport.

### Material & Methods:

The distraction device consists of a bridging reconstruction plate with two longitudinal grooves, brackets with miniplates to fix transport disks, cylindrical traction mechanics including a screw rod, and wires for connecting the bracket and the rod through the grooves. Activating the traction mechanics leads the bracket to slide on the bridging rail of the reconstruction plate. Most part of the device is settled subcutaneously except the distal part of the traction mechanics which is transcutaneous at the retromandibular region. Two sets of the traction mechanics, brackets, and traction wires allow bilateral bone transport.

### Results:

The present device has several advantages. Internal systems avoid such problems of external ones as facial pin-tract scar, excessive distraction force due to skin resistance, and social inconvenience. Transport disks move multidirectionally along the programmed rail. The device is settled through not only simultaneous but also staged approach for possibly compromised patients. Not screwing the rod but unscrewing it eliminates contamination and facilitates infection control.

### Conclusions:

The device allows reconstructing large segmental defect of the mandible without donor site morbidity with shorter hospital stay and lower cost.

## **Vertical distraction treatment of a microvascular osteocutaneous fibula free flap. A case report.**

Olaisson B

Department of Oral and Maxillofacial Surgery, Linköping University Hospital, Sweden.

A 55 year old man, with a history of a osteocutaneous fibula free flap in the anterior part of the mandible, was planned for a bone anchored bridge. The problem was the low vertical bone height of the fibula, in combination with the thick cutaneous flap attached high up on the inside of the lower lip. There was no vestibulum. This was supposed to be unfavourable for the implant treatment. We wanted therefore to create more vertical bone height; thin attached mucosa and an oral vestibulum.

### Background:

A gingival squamous cell carcinoma, T4N0M0, was treated in 1998, with preoperative radiation therapy and ablative surgery. The anterior part of the mandible and floor of the mouth was resected. Complementary with bilateral supraomohyoid neck dissection. Primary reconstruction with a micro-vascular osteocutaneous fibula free flap. No postoperative radiation therapy. Osseous bone healing during 1 year and 11 months.

### Treatment:

In October 2000, a distraction device, Track 1,5 mm, Martin, was installed in the anterior part of the fibula for vertical distraction. After a latency period of 6 days, a distraction of 15 mm was performed. After that a period of consolidation of 1 year. When the device was removed, a simultaneous mucous transplantation from the hard palate to the alveolar crest was performed. The result of the distraction of the fibula, with the hard cortical bone and bone marrow, was still excellent hard cortical bone but with a rather structureless content. The fibula was filled with cancellous bone graft from the iliac crest in combination with PRP. Six months later, six Nobel-implants were inserted. The patient has now a temporary acrylic bridge. After adaptation of the height of that bridge a new permanent bone anchored bridge will be made.

## **Simultaneous sinus lift and implants in the atrophic edentulous posterior maxilla using the “Lundgren technique”.**

Thor A

Department of Surgical Sciences, Oral and Maxillofacial Surgery, Uppsala University Hospital, Sweden

### Aims:

To evaluate the use of a recently developed surgical technique with simultaneous sinus lift and installation of dental implants.

### Material & Methods:

21 patients consecutively included from Nov. 2001, with a subantral alveolar bone height in the area of the fixtures of 2-9 mm, were operated on. All together 44 (37 Astra ST 4,5 or 5 mm, 4 Tioblast Astra and 3 NB Tiunite) implants were installed. The lateral wall of 28 sinuses was exposed via a rectangular saw osteotomy and the Schneiderian membrane was elevated. Implants were installed in the planned position in the residual bone. The drill protocol for the Astra ST implant was slightly modified in severely resorbed cases. Membrane lacerations were recorded as well as the exact amount of residual bone. The implants were left to heal for six months before loading.

### Results:

After a variable follow up time for all patients, no implants have been lost. Excellent primary stability was found in all implants at installation, even in cases with 2 or 3 mm bone. Lacerations (13 of 28) or not, of the sinus membrane at preparation of the sinus, may be important for the produced bone level around implants after healing. In some cases, radiology confirms bone formation around implants as reported by Lundgren.

### Conclusions:

This clinical study shows promising results of “the Lundgren technique”. The obvious potential for this procedure is great and will have to be explored in further controlled studies.

## **A prospective, randomised study of 1-stage and 2-stage sinus inlay bone grafts. 5-year follow-up**

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### Aims:

To study the prognosis and outcome of the methods stated in the title.

### Material & Methods:

The study comprised 40 patients with edentulous maxillae with a posterior vertical bone height of less than 6 mm, thus in need of bone augmentation in order to place dental implants for the later anchoring of fixed bridges. The patients were randomised to either; 1-stage sinus bloc grafts or 2-stage sinus particulated bone grafts, 20 patients in each group all using autologous iliac crest bone graft. In the 1-stage group, two posterior bilateral implants were placed simultaneously with the bone graft and allowed to heal for 6 months. In the 2-stage group, the graft was allowed to heal for 6 months before two bilateral posterior implants were placed. Treatment and follow-up were performed according to a previously published protocol. Implants were also placed in the anterior part of the maxillae without the use of bone grafts. After 6 months of healing, abutments were placed and the prosthetic constructions were placed. Follow-up were carried out after 1 year, 3 years and 5 years of prosthetic load.

### Results:

Implant stability was after 5 years 77.7 % in the 1-stage and 86.5 % in the 2-stage group respectively. Corresponding figures in the non-grafted anterior regions were 91.7 % and 95.5 %.

### Conclusions:

As compared to the 1-year and 3-year results, implant stability was unchanged and as a whole, the majority of implant failures were diagnosed at the abutment stage and at the 1-year control.

## **Implant treatment in combination with lateral augmentation of the alveolar process. A 3-year prospective study**

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### Aims:

The aim of the study was to prospectively evaluate the clinical and radiographic outcome of dental implants inserted in a combination of bovine hydroxyapatite (Bio-Oss®) and autogenous bone as grafting material for lateral augmentation.

### Material & Methods:

30 patients, aged 17-75 years, applying for implant treatment but with insufficient width of the alveolar process were included in the study. As a stabilising matrix a fibrin glue (Tisseel®) was added to the mixture of Bio-Oss® and autogenous bone. After six months of healing implant insertion was made as a submerged procedure. A total number of 82 fixtures were inserted (Nobel Brånemark Mark II, Nobel Biocare®). Clinical and radiographic follow-up examinations were measured at connection of prosthetic construction, one and three year after loading. With use of the intraoral radiographs the distance from the fixture/abutment junction to the most coronal point where the marginal bone meets the fixture surface was measured.

### Results:

After dropouts the number of studied augmentation sites was 29 and the number of fixtures followed was 74. Three fixtures were lost leaving a survival rate with the implant as the unit at 95.9%. The mean marginal bone loss during the 3-year observation period was 0.3 + 0.2 mm. This is similar to those measured in non-augmented cases presented in other studies.

### Conclusions:

The 1:1 combination of Bio-Oss® and autogenous bone stabilised with Tisseel® seems to be a useful alternative for lateral augmentation of the alveolar crest.

## **Early functional loading of implants in the totally edentulous maxilla. A prospective study**

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### Aims:

To evaluate 3-year results of dental implants in totally edentulous maxillas, loaded 24 hours postoperatively with temporary screw-retained acrylic prosthesis.

### Material & Methods:

Ten women and 7 men with edentulous maxillas were consecutively recruited from referrals. Patients with severe atrophy of the alveolar crest or with a history of bruxism were excluded. Fifty percent of the patients were smokers. One-hundred-and -four standard implants (Astra Tech AB, Mölndal, Sweden) were inserted and standard abutments were mounted. The prosthetic registration and impression was performed immediately after wound closure. A reinforced screw retained acrylic prosthesis was inserted after 24 hours. A permanent screw-retained metal-ceramic prosthesis replaced the provisional prosthesis after 3 months. Radiographs were taken one week postoperatively and at each annual control to evaluate marginal bone loss. After 1 and 3 years each implant was evaluated clinically after removal of the permanent bridge.

### Results:

During the first 3 months 10 implants (6 implants in one patient ) were lost in 4 patients. No further loss of implants occurred. The success rate was 90.4 % . The main reasons for loss of implants were attributed to fractures of the provisional prosthesis and overload.

### Conclusions:

Direct loading of implants in selected patients with totally edentulous maxillas seems according to these preliminary data to be successful in the majority of patients. The construction of the temporary prosthesis is crucial.

## **Implant treatment without bone grafting in severely resorbed edentulous maxillae. A five years follow-up study.**

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### Aims

The aim of this study was to evaluate the surgical and prosthodontic effects of a posterior extension of the bridge by the use of tilted dental implants, in patients who otherwise had to be treated with bone grafting to allow placement of posterior implants.

### Material & Methods

Thirty-two patients with severely resorbed edentulous maxillae that were treated with osseointegrated implants (Brånemark Mark II, Nobel Biocare) and fixed dental prostheses. It was assessed from clinical and radiographic examinations that the bone volume was sufficient for implants to support a fixed prostheses in the maxilla. This was possible due to a surgical technique with fenestration of the maxillary sinus, and uncovering of the nasal floor in order to visualize the total amount of maxillary bone. By angulation of the implants and permitting 2-5 uncovered fixture threads on the palatal aspect, 4-6 implants of optimal length could be installed. All implants were installed by the same surgeon with 2-stage surgery technique with a healing time of minimally 6 months before second stage surgery. This surgical technique is compared with the more resource demanding technique where bone is grafted from the iliac crest or the mandible. These methods often necessitate general anaesthesia and hospitalisation. Postoperative problems with the graft and host morbidity are other possible negative factors.

Nine-teen patients were included in the study, and 13 patients were excluded (2 patients with not enough tilted implants, 2 couldn't attend the examination, and 9 deceased). This 19 patients were radiological examined (panoramic- and conventional intraoral radiographic examination) at least five years after the surgical treatment. Clinical and prosthodontic examination in accordance to a special form was then performed.

### Results

One-hundred implants were installed; 4-6 implants in each patient. Three of the patients had lost implants during these five years; one had lost all 5 implants one year after second stage surgery. The other patient lost 4 out of 5 implants during the first year after receiving the bridge and the third patient lost 1 implant before the second stage surgery. The remaining patients had all their implants intact with functionally fixed dental prostheses.

### Conclusion

This cost effective technique can be an alternative to the more resource demanding technique with bone grafting in patients with severely resorbed edentulous maxillae.

## **A retrospective influence of different operatory set-ups on implant survival rate. A clinical study**

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Trollhättan, Sweden.

### Aims:

The aim of this study was to analyze implant survival rate using a simplified surgical operatory set-up compared to the use of the Brånemark system protocol.

### Material & Methods:

A total of 1285 consecutively treated patients were included in the study. 4000 implants were placed during the period of 1985-2003. Group A, (using the Brånemark system protocol) comprised of 654 patients and 2414 implants. Group B (using a simplified operatory set-up) comprised of 631 patients and 1586 implants. Healing was evaluated after 6 months of clinical function. Failure was defined as removal of implants because of non-osseointegration. Statistic analysis was performed using Student's t-test for paired samples. The level of significance was set at 5 % for comparison of data.

### Results:

No significant difference with regard to complications and implant survival rate was found in the study.

### Conclusions:

The result from the present study suggests that a simplified operatory set-up does not affect the survival rate of oral implant treatment.

## **Prophylactic removal of third molars. A method evaluation based on an international literature study**

Ragne A

Department of Oral Surgery and Oral Medicine, University of Oslo, Norway.

### Aims:

To study whether prophylactic removal of 3rd molars can be considered indicated.

### Material & Methods:

The study was carried out through the Centre for Medical Evaluation (SMM), Oslo. Participants: Berge T I (leader), Espeland L V, Klock K, Ragne A, Nilsen E M, Linnestad K K. A systematic study of a method evaluation from England, guidelines from England (NICE), Scotland (SIGN) and literature from the last 5 years on the usefulness of prophylactic removal of impacted 3rd molars was performed. An extended search on Scandinavian conditions was carried out. An economic analysis was also done.

### Results:

1109 abstracts were found. 145 articles were ordered, of which 25 were considered to fulfil the criteria for the study and included. In addition 10 articles from Scandinavia were included. No randomized controlled trials were identified. The report includes 11 patient series, 5 cohort studies, 2 case-controlled studies, 6 cross-sectional studies and 1 decision analysis. Studies on postoperative complications report a relatively high prevalence of residual periodontal defects of the 2nd molar. The incidence of other complications was low. Studies of complications related to non-removal report a relatively high incidence of pericoronitis and caries. The incidence of other pathology was low.

### Conclusions:

This report is based on studies on small selected patient groups. It is therefore difficult to draw conclusions regarding treatment. However, removal of asymptomatic fully impacted teeth is not recommended. It could not be concluded which strategy would be the most cost-effective in Norway. There is need for further studies of a selection of patients representative of the population.

## **Traumatic changes of the inferior alveolar nerve and ganglion Gasseri following removal of a lower third molar**

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### Aims:

To compare history and clinical status with histological findings from foramen mentale to Ganglion Gasseri of a traumatized human mandibular nerve, following removal of a lower third molar.

### Material & Methods:

After removal of the lower left third molar a 55-year-old lady had persistent severe pain, feeling of slight swelling of the left cheek and disturbed sensation of the left side of her lower lip. Eighteen months after the surgery the patient committed suicide. At the autopsy it was possible to extirpate the left mandibular nerve from ganglion Gasseri to the mental foramen.

### Results:

Histologically the nerve was desorganized, split up in nerve fascicles embedded in and separated by collagenous connective tissue, which also infiltrated the fascicles and in some locations surrounded single myelin sheaths. A few intact nerve fascicles were seen. Immunohistochemically single axones were found far out in the collagenous connective tissue. At the proximal end of the mandibular nerve, nerve roots with somewhat varying density of myelin were observed without any marked scarring. Sparse round cells were also found without any evidence of regressive changes. The left ganglion Gasseri showed some inflammatory cells and loss of ganglion cells but also had groups of intact ganglion cells. The right ganglion had abundant intact nerve cells and fascicles.

### Conclusions:

The significance of the observed morphological changes in the more central parts of the nerve is not clear. The inflammatory changes in the ganglion might be related to the pain. It is known that in addition to peripheral nerve damage secondary central affection may occur that continues in spite of healing in the periphery, known as deafferentation pain. Such neurogenic central pain, anesthesia dolorosa, may be refractory to treatment.

## **Effects of perioperatively administered betamethasone on morphological changes after nerve injury**

Al-Bishri A, Forsgren S, Rosenquist J, Sunzel B.

Department of Oral and Maxillofacial Surgery, University Hospital MAS and Faculty of Dentistry, Malmö University, Sweden.

### Aims:

To assess possible morphological changes explaining the beneficial effect of betamethasone on nerve recovery after trauma.

### Material & Methods:

Forty-two young adult female Wistar rats were divided into two groups of 21 animals. All animals had their left sciatic nerve severed. In one group the animals received betamethasone s.c. (2 mg/kg body-weight/day) on the day of severance beginning immediately surgery while the other half had a physiological saline injection. After 2, 7 and 17 days 10-12 mm segments of the crushed nerve were obtained and the animals sacrificed. Immunocytochemistry for identification of macrophages and nerve growth factor was carried out on ten slides from each rat.

### Results:

After two days betamethasone significantly ( $p=0.001$ ) impaired the recruitment of macrophages. By the end of the first week the recruitment had increased rapidly with significantly ( $p=0.001$ ) more macrophages in the steroid group than in the non-steroid group. After the second week, on day 17, the number of the macrophage decrease again to become lower than non-steroid group ( $p=0.01$ ). As for the nerve growth factor the differences between the two groups were less clear.

### Conclusions:

The transient initial depression of macrophage recruitment caused by the perioperatively administered steroid could possibly explain the nerve recovery which did not seem to be brought about by a consequential effect on nerve growth factor.

## **Systemic betamethasone accelerates functional recovery after a crush injury to rat sciatic nerve**

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### Aims:

The aims of the study were to evaluate the effect of perioperatively systemically administered betamethasone on nerve recovery (within or outside a confined space) after induced nerve crush injury.

### Material & Methods:

The sciatic nerve of forty adult Wistar rats was crushed. In half of the animals the injured nerve was entrapped in a silicone tube to simulate the environment of a closed space and in the other half the nerve was left to heal. Half of the rats in each group were treated with subcutaneous betamethasone (2mg/kg bodyweight per day) during the first 24 hours, starting preoperatively, while the other half, controls, were given the same amount of physiological saline. All animals underwent pre- and postoperative walking track analysis twice weekly for six weeks.

### Results:

Non-confined space groups, there was no significant difference between the two groups ( $p=0.052$  for ITS and  $p=0.315$  for TS) during the first 2 weeks. Starting from the end of the second week animals treated with betamethasone recovered more rapidly than the controls ( $P<0.001$ ) and continued to do so until the end of the observation period. In the confined space groups, there was a significant difference between the two groups for ITS ( $p<0.001$ ), and for TS ( $p<0.05$ ) during the first 2 weeks. The difference continued at almost the same level of significance ( $p=0.001$ ) for ITS while for TS the difference disappeared after the 2<sup>nd</sup> week.

### Conclusions:

We conclude that short-term perioperative administration of betamethasone has a beneficial effect on the recovery of injured nerves.

## **Late secondary reconstruction of hemimaxillary defect. A case report.**

Olaisson B

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### Background:

On a 38 year-old man a squamous cell carcinoma obliterating the right maxillary sinus was operated 1997. After preoperative radiation therapy, 64 Gy, a right hand side hemimaxillectomy was performed. No neck dissection. Histological examination showed no radical margins in some part of the resected tissue. Obviously a bad prognosis. The maxillary defect was covered with an obturator, with good functional outcome. Five years later, without signs of recurrent tumour, the patient asked for a permanent reconstruction.

### Treatment:

A plaster model of the midface was manufactured for the planning of the surgery. Hyperbaric oxygen (HBO) treatment, was given 20 times preoperatively. The hemimaxillary defect was reconstructed with a microvascular deep circumflex iliac artery (DCIA) free flap, with internal oblique muscle attached to the iliac crest according to J.S. Brown, 1996. Postoperative HBO treatment 10 times. A CT was taken 6 months postoperatively. Four Nobel implants was inserted in the bone transplant. The most posterior implant did not osseointegrate. Later on, one more implant was inserted. A minor corrective surgery of the oral vestibulum was performed, before the patient got a temporary acrylic bridge. Further therapy: a transplantation mucous membrane from the left hard palate to replace the soft tissue nearest the implants, because of recurrent tissue hyperplasia. After the insertion of the permanent bone anchored bridge, a revision of a lip scar will take place.

## **3D osteotomy planning in maxillofacial surgery including 3D soft tissue prediction**

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### Aims:

Planning of complex osteotomies in cranio-maxillofacial surgery requires a high degree of experience and expertise for optimal rehabilitation. Live size skull models can be a valuable planning aid, but soft tissues cannot be taken into account in 3D model surgery. Many computerised planning systems exist, but for estimation of soft tissue responses, they all rely on empirically determined ratios of questionable predictive accuracy.

A full spatial prognosis of the patient's postoperative appearance is a highly desired feature of a 3D planning system for computer assisted maxillofacial surgery.

### Material & Methods:

We present a planning system that generates both 3D surface images and volumetric models for mechanical simulation. We use Amira® Software for segmentation of anatomical structures out of tomographic data. For interactive manipulation and fast numerical simulation the models are of locally adaptive resolution, preserving detail in regions of interest and neglecting details in other regions. A typical head model consists of 3-5 million triangles that can be reduced to 200-400.000 triangles, leading to a volumetric grid of 500.000 up to 2 million tetrahedral elements. In the planning system osteotomy lines can be drawn on the bone image, just as they would on a 3D model. The bone segments can be interactively transformed under collision control. The planning surgeon can either directly translate bone segments in 3D, or these transformations can be specified numerically for each axis of the given coordinate system in terms of angles and displacements. As the bone segments are transformed, the soft tissue responses are calculated by millions of equations. These procedures only take a few minutes on recent computer system.

### Results:

The accuracy of the method will be described with a number of case demonstrations.

### Conclusions:

We believe that this system provides tools to achieve the aim mentioned above.

## **Technology meets surgery. Patient matched implants produced with the aid of anatomical models**

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### A case report:

Autogenous bone is widely used in maxillofacial reconstruction. Most of the time acceptable aesthetics can be achieved. Sometimes, however, the outcome of even successful procedures may be suboptimal, and may require additional treatment if the final result shall match the efforts invested.

In this case report we present a reconstruction procedure spanning over a long period of time. The patient was eight years old when she underwent a partial hemimandibulectomy because of a squamous cell carcinoma. The resection included the condyle, and the anterior border was anterior of the ipsilateral canine. No reconstruction was done at the time. When the patient was 15 years old and there had been no sign of recurrence, the mandible was reconstructed with a vascularised iliac crest graft. The condyle was reconstructed with a free costo-chondral graft added to the iliac crest graft. The reconstruction became somewhat too voluminous. Therefore, 2 years later, the iliac crest graft was reduced in the base. At the same time the patients retrognathia was treated with mandibular advancement after bilateral sagittal split; and a genioplasty. The chin underwent a relatively obvious resorption over the next years. At the age of 20 the patient had a deep desire to shape up the mandible.

Based on a 3 dimensional model, an implant shape was formed to improve symmetry of the facial contour. The implant was produced by W Lorenz, Jacksonville, in a porous metylmethacrylate. This material has been used for over 4.500 patient matched implants and less than 20 of those implants have had to be removed. The porosity of the material probably counts up for the success. The implant has about 30-40% porosity, which permits vessels to grow through the implant.

During surgery, the implant was attached to the reconstructed mandible with the use of two regular osteosynthesis screws. At the same time the submandibular soft tissues were shaped up. The final result of treatment was excellent and the patient was very satisfied after all the struggles. The patient matched implant is useful in cases where a complicated architecture of an implant is desired. Aided by modern 3D technology all kinds of shapes can be designed.

## **Maxillary reconstruction with a preformed, vascularised fibular graft in a patient where several previous reconstructive efforts had failed. 3-D support in complicated surgery**

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### A case report:

We describe a 40 year old male born with a CLP. After regular CLP treatment he developed an angiofibroma of the maxilla. Surgical treatment and radiation resulted in loss of the major part of the maxilla. Over a period of fifteen years he underwent five reconstructive surgery efforts both at home and abroad. They all failed. The failures included in various degrees one frontal skin flap, one vascularised scapula flap, one radial forearm flap with iliac crest graft, one radial forearm flap with rib graft, and one vascularised fibula. After that he had zygomatic implants installed with only limited success. His lower incisors almost met his nose tip, his temporomandibular joints were in bad conditions, and he was eager to try reconstructive surgery once more. He had only two remaining donor sites: one scapula, and one fibula. He did not want to sacrifice the scapula.

The patient was offered a procedure in several steps that we have been carried out over a period of a year and a half.

First we opened the right fibula. As the bone was freed, a thin muscle cuff was left on the lateral side. Over it we installed a skin graft from the other leg, covered it with a teflon membrane and closed. Two weeks later, with skin graft attached to it, the fibula was exposed again. While it was still attached to its vessels, the fibula graft was osteotomised to fit a dummy that had been produced on a 3-dimensional skull model. Plated to its correct shape, the fibula graft was then transported to the maxilla and sutured to the vessels.

Six months later, dental implants were installed in the fibula graft. At the same time additional bone support for the anterior part of the reconstruction was obtained from a rib. Another half year later a vestibuloplasty with split skin graft was done. At the same time the implant abutments were installed, and the patient was finally ready for prosthetic, dental rehabilitation.

**Surgical rehabilitation at continuity defects  
in the midface and the mandible.  
Experiences from 100 reconstructions**

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A variety of reconstructions of the midface and the mandible at continuity defects, mainly after resections for malignant tumours, will be presented as experienced from more than 100 reconstructions during a 15 year period by a multidisciplinary team.

Standard solutions, alternative solutions and complications when attempting functional restoration and rehabilitation of patients with major jaw defects will be delineated from an oral maxillofacial surgery aspect with some emphasis on midface problems.

## **100 reconstructions at continuity defects in the mandible and the midface. Results and dental rehabilitation**

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Örebro University Hospital, Sweden.

### Aims:

To evaluate various methods for reconstruction of the mandible and the midface after continuity defects with special emphasis on dental rehabilitation.

### Material & Methods:

More than 100 continuous patients had their jaws resected due to malignant (85%) or benign (5%) tumours or for other reasons (10%). 25 % of these patients were reconstructed with alloplastic reconstruction plates, embedded in thick soft tissue flaps. In the remaining 75% of the cases reconstructions were carried out by microvascularly anastomosed free flaps, the fibula and the iliac crest flaps being the most common ones. Primary immediate reconstructions were carried out at resections for malignancies. Continuous clinical and radiographic follow-ups for up to 15 years

### Results:

12% of the reconstructions without bone and 16% with bone entailed severe complications such as plate fractures, dehiscences and partial or full flap necrosis. No patients with reconstruction plates but more than 45% of the patients reconstructed with flaps including bone were dentally rehabilitated. More than 35% of these patients received bone-anchored bridges on osseointegrated implants.

### Conclusions:

Patients, reconstructed with flaps including bone, have good opportunities not only to have the continuity of their jaws restored but also to become dentally rehabilitated, preferably with fixed bridges on osseointegrated implants. This kind of rehabilitation implies positive effects for biting and chewing and not least for the patients self confidence.

## **Treatment and long-term results of malignant tumors of the salivary glands. A retrospective analysis**

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### Aims:

Malignant salivary gland tumors are rare representing only 4% of all malignant head and neck tumors. Due to its rarity and complexity early and exact diagnosis is challenging. Prediction of prognosis continues to be difficult, mainly because of the great variety of histologic subtypes.

### Material & Methods:

A retrospective analysis of all patients treated for a malignant salivary gland tumor during the period from January 1974 to January 2003 was performed. Patients data regarding gender, age at initial diagnosis, tumor location, histology, tumor stage, surgical therapy, adjuvant therapy, treatment of recurrent tumors, survival were evaluated and further analyzed statistically.

### Results:

A total of 155 patients ( 81 females, 74 males ) diagnosed with a malignant salivary gland tumor were retrieved from our tumor registry. The most frequent histologic subtypes were as follows: 51% adenoidcystic carcinoma, 27,1% mucoepidermoid carcinoma, 14,2% adenocarcinoma. All patients underwent surgery as primary treatment; adjuvant modalities were used depending on resection status and histologic subtype. Overall survival for all patients at 5, 10, 15, and 20 years was 65,9%, 48%, 39,8% and 33,3%; disease-free survival at 5, 10, and 15 years was 70,3%, 53,2% and 45,2%. Histologic subtype, tumor stage and resection status were significant prognostic factors ( $p<0,001$ ).

### Conclusion:

The role and efficacy of adjuvant treatment modalities could not be finally assessed in our patient population. However, we recommend to include patients with malignant salivary gland tumors into randomized multicenter trials.

## **Oral pathological oddities I. Carcinoid metastasis in the mandible. A case-report**

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### Introduction:

A carcinoid is a tumour of neuroendocrine origin, usually found in the bowel, kidneys and lungs. It is extremely rare in the mandible. No more than a handful of cases have been reported in the literature.

### Case-report:

This case report describes a 63-year old woman with a carcinoid of her left lung and a metastasis in the mandible. Previous surgical intervention had resulted in loss of sensitivity in the mental area. A CT-scan demonstrated a mandibular destruction with a honeycomb pattern reaching from the first molar up to the sigmoid notch. On a 3-dimensional model a reconstructive plate with condylar head was precontoured. The patient underwent a partial resection of the mandible including the joint. The postoperative course of events included an infection but was otherwise uneventful. Today, five months after surgery, the patient has intact sensitivity of her tongue, and good facial motor-control. She has good facial symmetry and reaches a maximum intercuspal opening of 35 mm. Her occlusion is good. The recurrence-rate of such a rare tumour is not entirely known. Since it has metastasised from the lung to the mandible, we must consider it rather aggressive. Therefore, we will not perform any bony reconstruction until we feel relatively certain that the risk of local recurrence is low.

## **Degenerative and inflammatory changes in patients with TMJ painful clicking and chronic closed lock.**

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### Aims:

Better knowledge of how the glycosaminoglycan (GAG) content, inflammatory cells and cytokines changes during development of painful clicking and chronic closed lock (the two clinical variants of TMJ internal derangement) might elucidate some of the underlying biological processes during disc displacement. In our investigation we have studied the occurrence of selected glycosaminoglycans, inflammatory cells and cytokines in patients with painful clicking and chronic closed lock of the TMJ as they may appear in both the disc and the posterior disc attachment.

### Material & Methods:

During discectomy, specimens were obtained from the disc and the posterior disc attachment and their content of GAGs analyzed by means of capillary zone electrophoresis. Immunohistochemistry were used to analyze the occurrence of inflammatory cells (T-cells and macrophages) and cytokines (IL-1 $\alpha$ , $\beta$ ,ra; IL-2, INF- $\gamma$ , TNF- $\alpha$ , TGF $\beta$ 1,2,3)

### Results:

There were significant differences in the amount of GAGs between the two groups, values in patients with painful clicking being comparable to those of normal individuals, while patients with chronic closed lock showed significantly reduced values. Both groups showed higher values in the posterior disc attachment when compared with the disc and similar pattern of GAG sulphation. The cytokine staining was most frequently positive for IL-1 $\alpha$  and IL-1 $\beta$  in both patient groups. However joints with chronic closed lock showed a more complex cytokine pattern, also involving INF- $\gamma$  (p=0.019) and IL-1ra (p=0.047) and apparently but without reaching the chosen levels for significance IL-2, TNF- $\alpha$  and TGF $\beta$ 1,2,3. Positive staining for T-cells were frequent in both groups. Patients with chronic closed lock showed more frequently positive staining for macrophages (p=0.025).

### Conclusions:

The results indicate that these two patient groups have distinctly different patterns of tissue reactions. Chronic closed lock patients showed typical features of degenerative joint disease while patients with painful clicking show no degradation of matrix and only a slight traumatic synovitis.

## **Functional reconstruction of the temporomandibular joint with free fibulamicrovascular flap. A case series**

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### Aims:

Tumour involvement of the ascending ramus of the mandible may necessitate resection of the TMJ. A description of the surgical approach, functional outcome and radiological findings will be reported where functional reconstruction of the TMJ was achieved using free fibula flaps.

### Material & Methods:

Three patients, two with ameloblastomas and one treated after previous reconstruction of a squamous cell carcinoma, were operated on. Ablative surgery included an external exposure of the mandible. Resections were performed to guarantee free margins. A pre auricular approach exposing the joint capsule, meniscus, condyle and ramus was used and the lateral pterygoid muscle secured. The grafts were sectioned according to the surgical plan using templates and plated. The fibular cranial part was shaped and then correctly placed in the joint compartment. The lateral pterygoid muscle was fixated and the graft plated to the mandible.

### Results:

Pain and functional impairment of chewing and swallowing was an important finding before treatment. The primary healing was uneventful. Speech, mobility disorder and pain were the dominant problems in the immediate post-operative phase. The cosmetic result was good with a correct midline. The functional result was judged as satisfying with straight mouth opening and inter-incisal distances within normal range, rotation, translation as well as capability to perform normal lateral movements. Continuous remodelling of the articular part of the fibula was the most important radiological finding.

### Conclusions:

The technique provides primary or secondary therapy in joint replacement where tumour, trauma, or failed prosthetic replacement necessitates complete reconstruction.

## **Molecular anatomy reveals fibrocartilage in the temporomandibular joint capsule. An essential component in TMJ ankylosis?**

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### Aims:

Temporomandibular joint ankylosis is the most challenging diagnosis to treat in maxillofacial surgery. The sometimes annoying tendency to recur makes the condition even more obscure. So far, the pathophysiology of TMJ ankylosis has not been fully revealed. The aim of this study was to trace fibrocartilage in the lateral part of the TMJ capsule as well as in bony specimen from reankylosis.

### Material & Methods:

Specimen for study of the lateral joint capsule were obtained from autopsy material. Specimen from TMJ ankylosis were obtained during surgical procedures to release such conditions. The tissue material was fixed in 90% methanol. Cryosections were immunolabeled with antibodies against proteoglycans, glycosaminoglycans and collagens.

### Results:

The labeling demonstrated fibrocartilage presence in the lateral capsule of the TMJ in autopsy material. In one of the reankylosis cases the labeling demonstrated signs of fast bone formation close to fibrocartilage in a previous rib graft. Material from a reankylosis case without rib graft was analysed at the time of abstract deadline.

### Conclusions:

The presence of fibrocartilage in the lateral capsule of the TMJ indicates that there is a molecular basis for ossification. The findings from one of the reankylosis cases suggest that fibrocartilage may play an important role in ankylosis and reankylosis of the TMJ. This is supported by similar findings from other anatomical sites.

## **Oral pathological oddities II. Synovial chondromatosis of the temporomandibular joint with intracranial extension. Report on a case**

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### Introduction:

Synovial Chondromatosis is a rare, but relatively well described pathological condition of the TMJ. The most common location is the knee-joint. It usually occurs in middle-aged individuals. It is twice as common in males than in females.

### Case-report:

This case-report describes a 59 year old woman with a Synovial Chondromatosis. She was referred to our department after unsuccessfully being treated for cholesteatoma in her right ear. A CT-scan showed a destruction of the right TMJ. MRI showed an intracranial component. Fine-needle aspiration was inconclusive. A biopsy obtained from the TMJ demonstrated a Synovial Chondromatosis. The tumour was removed through a subtemporal/preauricular approach. The skull-base was reconstructed with calvarial grafts. The postoperative course included an infection but was otherwise uneventful. Seven months after surgery the patient suffers from partial loss of sensation from her temporal region, right side. Initially after surgery her occlusion was a bit off, but this situation has improved. After jaw-opening exercises her maximum interincisal opening is now 32 mm.

## **Osteomyelitis of the jaws – assessment of microbiota by DNA-DNA hybridisation. A preliminary report**

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Osteomyelitis of the jaws has for a long time been considered a rare disease due to introduction of antibiotics. But it still presents a therapeutical challenge of today due to; resistant microorganisms, more medically compromised patients and because many physicians are not experienced with the treatment of osteomyelitis.

In earlier days the microbiota in 80-90 % of the osteomyelitis cases has been associated with skin bacterias such as staphylococcus aureus or epidermidis. One presumed that the rest of the cases were associated with a mixed anaerobic bacterial flora. The selection of antibiotic agents is as far as possible directed by sensitivity testing.

Due to improved investigation techniques one can identify microorganismes which earlier could not be cultivated.

### Aims:

The aim of the present study will be to investigate the microbiota of osteomyelitis by DNA-DNA hybridisation, with the hypothesis that one will identify uncultivated microorganismes and thereby be able to choose a more specific type of antibiotic for treatment.

### Material & Methods:

This descriptive study will comprise approximately 10 patients with osteomyelitis of the jaws, both acute and chronic forms. Microbiological and histopathological samples will be carried out. The “checkerboard” method of Socransky et al will be used. In addition, part of each microbiological sample will be cultured anaerobically for sensitivity-testing.

## **The Hajdu-Cheney Syndrome (idiopathic acro-osteolysis). A case report of oral and maxillofacial interest**

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### Introduction:

The Hajdu-Cheney Syndrome (idiopathic acro-osteolysis) is a rare autosomal disorder with variable expressivity, which involves painful osteolysis of the distal phalanges, numerous skeletal abnormalities and early loss of teeth. The Hajdu-Cheney Syndrome is of particular dental interest due to the craniofacial manifestations, which represent a constant feature in this syndrome.

### Case report:

A 61-year-old woman with unclear acro-osteolysis of the fingers and toes was referred to the Department of Maxillofacial Surgery for evaluation due to malformations and osteolysis of the cranio-maxillofacial skeleton. The patient reported a history of 12 years of progressive malformation and malfunction of the distal phalanges of the fingers and toes, involving gradual pain. Comprehensive investigation at the Department of Reumatology did not give evidence for scleroderma or arthrosis. Clinical findings consist of extraoral asymmetry with increased amount of soft-tissue of right lateral mandible, a reduction in jaw opening, with reduced mobility of right temporal-mandibular joint. General reduction of alveolar bone height with manifested periodontal disease.

### Discussion:

The pathogenesis of Hajdu-Cheney Syndrome is uncertain. The dysplastic osseous manifestations have been associated with insufficient function of pituitary eosinophilic cells and the failure of the shafts of small bones to ossify. The symptoms and signs exhibited by our patient were suggestive of Hajdu-Cheney Syndrome.

## **Plasmocytoma in the upper jaw. A diagnostic problem.**

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<sup>3</sup> Department of Oral Pathology, Faculty of Odontology, Malmö University, Malmö, Sweden.

### Aims:

To report on a plasmacytoma, a tumor that most often develops in the respiratory tract or the oral cavity, initially diagnosed and treated during 14 months by several doctors and dentists as a sinusitis and a periapical lesion of a first upper premolar.

### Material & Methods:

A 77-year old man initially noticed minor discomfort of the right side of the cheek. A radiographic examination indicated sinusitis. He got antibiotics without any improvement. Later an upper right premolar was endodontically treated without success. Fourteen months after the first symptoms occurred, the patient was sent for periapical surgery to a private oral surgeon, who referred the patient to the University Hospital of Malmö.

### Results:

On the buccal and palatal right side of the maxilla a fluctuating swelling was found, clinically mimicking a cyst. The sensibility of the right infraorbital nerve was disturbed. A CT-examination showed a major radiolucent tumor, filling the right sinus maxillaris with destruction of the surrounding bone. The histological diagnosis was a plasmocytoma. The patient got full dose irradiation.

### Conclusions:

Major radiolucent tumors in the premolar and molar area of the maxilla may be misinterpreted as a recess of sinus maxillaris. When the diagnosis is uncertain extended radiographic examinations should be performed, if necessary supplemented with a biopsy.

## **Osteo-chemo-necrosis of the mandible following chemotherapy for leukemia.**

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### Case reports

Osteonecrosis is a well known complication following irradiation for malignant neoplasms of the head and neck, known as osteo-radio-necrosis. In contrast, similar lesions have rarely been reported following chemotherapy. We report two cases of osteo-chemo-necrosis of the mandible.

A 24 year old man was diagnosed with ALL in 1993. He was initially treated with chemotherapy and prednisone leading to remission. Following maintenance chemotherapy for three years he developed a recurrence in 1997. He had low grade whole body radiation and bone marrow transplantation. A second recurrence occurred in 2001. In August 2001 he scratched his buccal mucosa with a tooth-brush. The minor scratch led to a dehiscence adjacent to the lower second molar with exposed necrotic bone. In 2002 he succumbed from his leukaemia.

The second patient was a 67-year old woman diagnosed with acute myeloid leukemia (AML) in 2003. She was treated with chemotherapy leading to remission and followed by maintenance chemotherapy (daily/weekly) and consolidation therapy every 12 weeks. Following the latter she developed severe thrombocytopenia and neutropenia. During summer of 2003 she developed a spontaneous dehiscence of the lower right premolar region. Due to her hematologic state a surgical intervention was not possible and she was treated conservatively. At present state we await a normalization of her hematologic status, which will make surgery possible.

The possible mechanisms for development and treatment of osteo-chemo-necrosis will be discussed.

## **Report on clinical practice guidelines for the prevention and treatment of cancer therapy-induced oral mucositis**

von Bülzingslöwen I

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Oral mucositis is a common, sometimes dose-limiting, side effect of anticancer therapies. It entails a risk for local and systemic infections, considerable patient sufferings and at times a need for intravenous narcotic analgesics, additional days of total parenteral nutrition and hospital care. Most current treatments of mucositis seem to have evolved from empiricism rather than evidence. Hence a methodology review was considered of vital importance. The aim was to create evidence-based guidelines for preventing and treating oral and gastrointestinal mucositis. An international multidisciplinary panel of experts, the Mucositis Study Section of the Multinational Association of Supportive Care in Cancer and the International Society for Oral Oncology, reviewed mucositis-related scientific literature. Thirty-three panellists worked in 15 subgroups to critically evaluate literature published during the last 30 years. Clinical practice guidelines were compiled by a writing committee (Rubenstein EB, Peterson DE, Schubert M, Keefe D, McGuire D, Epstein J, Elting LS, Fox PC, Loprinzi CL, Sonis ST.). Eleven evidence-based clinical practice guidelines for prevention and treatment of oral mucositis were produced. The guidelines may serve as a benchmark for clinicians and as a springboard for future research in areas where evidence is lacking. An overview of the guidelines will be presented.

## **Clonal chromosome rearrangements in recurrent oral leukoplakia. A case report**

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Recent studies have indicated that the majority of DNA aneuploid oral leukoplakias transform into squamous cell carcinomas. The molecular basis of this process is, however, largely unknown. The objective of the present pilot study was to identify early genetic changes of potential importance for malignant transformation of recurrent oral leukoplakias. A 58-year-old female presented at the primary examination in 1998 with a homogenous oral leukoplakia on the right border of the tongue. The lesion was symptomatic (VAS = 3.0) and had been noticed for the first time 6 months earlier. The patient did not smoke and was not using any medication. A biopsy revealed hyperkeratosis with moderate dysplasia. After excision, the leukoplakia recurred despite several attempts to permanently remove the lesion by both conventional and laser surgery. Four years after the primary examination, another biopsy revealed hyperkeratosis with severe dysplasia. A specimen from this lesion was used to establish short term cultures for cytogenetic and spectral karyotype analyses. The majority of cells analyzed had a pseudodiploid karyotype with clonal chromosome rearrangements, including an unbalanced 3;8-translocation with a concomitant loss of 3p and 8p material, a balanced X;9-translocation and an isochromosome for the long arm of chromosome 21. In addition, about 20% of the cells contained one or more double minute chromosomes. Our findings show that clonal chromosome rearrangements may occur in oral dysplastic lesions prior to carcinoma development and that gene amplification may be an early genetic event of potential importance for malignant transformation of oral leukoplakias.

## **Bacterial associated oral lichenoid reactions**

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During the last years it has been come increasingly clear that lichenoid reactions in the oral mucosa comprise a reaction pattern instigated by different etiologic factors. Reaction patterns caused by oral lichen planus, lichenoid contact reactions and graft versus host disease could not be clinically or histopathologically discriminated. The objective with the present study was to compare a new type of symptomatic lichenoid reactions (LCRBAK, n=25), specifically located on the mucosal side of the lips, with a matched control group presenting with reticular oral lichen planus of the buccal mucosa (OLPr). The mean age for both groups was 66 yrs with a predominance of women (62%). The LCRBAK group presented with a reticular reaction pattern embracing various degree of erythema. Patients presenting with OLPr had similar lesions confined to the buccal mucosa but not on the mucosal side of the lips. No differences were found between the groups regarding allergies or smoking habits. In both groups, 80% were on any type of medication. However, 56% of the patients with LCRBAK medicated with more than 3 drugs compared to 29% in the OLPr group. In addition, the former group more often used medicaments prescribed for cardiovascular diseases (48% vs. 25%). Twenty-two of the patients with LCRBAK were treated with klorhexidine. In 80% of these patients (n=18), the lesions improved or completely healed, indicating a bacterial association. The differences in medication may have effected the secretion of saliva which would facilitate precipitation of bacterial plaque on the buccal surfaces of the anterior teeth.

## **Human papillomavirus DNA in patients with oral squamous cell carcinoma and in healthy population-based controls**

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### Aims:

The aim of this study was to investigate the presence of human papillomavirus DNA (HPV DNA) of high-risk mucosal/genital types in patients who were diagnosed consecutively as having oral squamous cell carcinoma (OSCC), and in population-based healthy controls.

### Material & Methods:

Recruited for the study were 85 patients born in Sweden, living in the Southern Healthcare Region, with untreated OSCC diagnosed 2001 – 2002, and with no previous cancer diagnosis. By stratified random sampling 141 matched controls were drawn from the Swedish Population Registry. Patients and controls were subjected to the same examination. A record form specially designed for the study was used. From patients and healthy controls samples were taken from the tonsillar fossa, and in patients also from the tumours. The specimens were collected with cotton-tipped swabs. In addition a mouthwash sample was obtained from each patient and control. All specimens were tested for HPV DNA by nested Polymerase Chain Reaction (PCR). Positive samples were analysed for 14 high-risk HPV types.

### Results:

Preliminary results will be presented.

## **Orofacial granulomatosis in childhood – oral manifestations which may indicate Crohn´s disease as well as food allergy**

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### Aims:

The aim of the present prospective study was to medically examine children with manifestations of Orofacial granulomatosis (OFG) in order to evaluate how often OFG indicates systemic disease, with a particular emphasis on inflammatory conditions elsewhere in the gastrointestinal tract.

### Material & Methods:

This prospective study includes all children (<18 yrs) who between January 1999 and December 2001 were diagnosed with OFG at the Clinic of Oral Medicine, Faculty of Odontology, Göteborg, Sweden. The patients, 8 children (2 girls, 6 boys) were 9-16 years (median age 13 years) at the time of OFG diagnosis. Following diagnosis of OFG, the patients were referred to the Department of Pediatrics, The Queen Silvia Children´s Hospital, for evaluation of possible intestinal involvement.

### Results:

Three patients received a diagnosis of Crohn´s disease based on endoscopy with macroscopic and subsequent histopathological examination. A fourth patient showed a clinical picture consistent with probable Crohn´s disease. One patient demonstrated a food allergy and became free from OFG lesions following elimination of the food substance.

### Conclusions:

The present study indicates that all children and adolescents with clinical manifestations of OFG should be referred for gastroenterological examination. An allergic etiology to OFG should also be considered and evaluated.

## **Oral bacteria and clinical variables in dependent individuals at a special facility**

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### Aims:

To describe the oral flora in relation to other health variables and to classify the residents at a special facility on different risk levels according to the oral flora.

### Material & Methods:

A nursing facility with 36 dependent residents. An oral examination of the residents was made at the facility, together with a three-day food record and an oral microbiological analysis. The analysis classified the residents on three risk levels according to both acid-producing bacteria and the flora correlated to a reduction in general health. The levels were based on previous studies conducted at the Department of Microbiology, Faculty of Odontology in Göteborg.

### Results:

At baseline it was shown that the risk level for acid-producing bacteria was high in 12 individuals and the risk level according to decreased general health was high in five individuals. A high risk of acid-producing bacteria was related to functional impairment, which in turn was related to nutritional problems. An oral flora according to reduction in general health was only visible among functionally impaired individuals. The study is ongoing.

### Conclusions:

Functional impairment is correlated to a high risk level based on an oral flora that can predispose for oral problems.

**A good morning with Astra Tech.  
Better healing – Biomanagement through bone and implant  
interaction**

Ellingsen J-E (Norway), Stanford C (USA), Holmén A (Sweden)

Today, there are indications for dental implants that may challenge the success of osseointegration. They include type IV bone, implant placement in extraction sockets and immediate loading.

The implant treatment protocols have changed during the last years including reduced healing periods before loading being advocated for both upper as well as lower jaw situations. This challenges the bone healing while implants are loaded with inferior bone to metal contact and inferior calcification of the bone surrounding the implant. The early loading protocol may have clinical consequences with a reduced success rate as result.

With increasing knowledge of bone regeneration processes and advancements in biomaterial technology, possibilities are established for improved healing and regeneration of bone after implant installation. Surface structures have been developed which claim to give better bone reactions and implant retention.

Based on over 10 years documented experience, further advancement in implant surface technology, i.e. the new fluoride modified surface OsseoSpeed™ from Astra Tech, has showed significant improvements in bone formation and bone to implant bonding.

These results and their clinical implications will be discussed in this lecture. Astra Tech invites you to an interesting morning session.

## **The influence of TiUnite on osseointegration and soft tissue integration**

Gottlow J (Sweden)

The TiUnite™ surface is created through a controlled increase of the TiO<sub>2</sub> surface layer including designed surface properties of oxide thickness, roughness, texture and a porous structure.

Histological studies in humans and animals have shown osteoconductive properties of the TiUnite surface with bone growing not only directly at the surface but also into the porous structure resulting in an enhanced osseointegration and implant stability. Studies have found higher bone-to-implant contact and greater stability (resonance frequency) and removal torque values when compared to e.g. a machined surface. Time-sequence studies indicate dramatically shortened healing time.

Thus, the TiUnite implant surface will shorten the healing time needed to accomplish secondary (biological) stability and also help to maintain the primary (mechanical) stability obtained at the day of surgery. Both factors are of special importance when applying immediate load protocols.

In the peri-implant mucosa the cells of the junctional epithelium attach to the TiUnite surface via hemidesmosomes establishing an effective soft tissue seal.

A series of pre-clinical and clinical studies will be presented including the outcomes of immediate loading and histological evaluation in humans.

## **Is surgical skill more important for clinical success than changes in implant hardware?**

Albrektsson, Tomas

Department of Biomaterials, University of Göteborg, Sweden

New types of oral implants are produced, often in the manner of presenting new car models. The major drawbacks of this approach are the lack of attempts to a clinical pre-testing and that seemingly the only thing that matters is the implant hardware. In the case of the car model, it is generally established that the driver is important for its performance, not only the car.

Indeed, one often neglected but important side of oral implantation is related to surgical and prosthodontic techniques at placing the implant. Roos et al coupled the clinical results of one and the same oral implant system to the surgeon who placed them. Of 11 active surgeons at our Göteborg University clinic in 1986, one individual had 40 per cent more failures than anyone else. In addition, the same gentleman inserted the majority of those implants that showed unacceptable bone loss. He was not the most inexperienced surgeon. He did not take care of the most difficult cases that were treated by the Head of the clinic, who, by the way, saw no failures at all this specific year. In another investigation, again performed with one and the same implant, Bryant analysed the outcome in 130 consecutively treated patients over a follow up of 4 to 17 years. There was a correlation between implant outcome and the responsible surgeon as well as between implant outcome and the initial prosthodontist who took care of the patients. These findings are backed up by reports in the orthopaedic literature from cases of knee replacements or hip arthroplasties. In conclusion, it may be stated that selecting the surgeon/prosthodontist may be at least as important as selecting the type of implant.

These observations do not exclude the possibility that hardware changes of oral implants are of some additional importance. However, the profession ought to ask for clinical results when buying a new product, to avoid falling flat into the commercial trap. In a recently submitted investigation (Albrektsson & Wennerberg 2004) we found only the launching of one novel oral implant from five big companies, the Astra Tech Osseospeed implant, to be backed up by careful clinical analyses of 1- 3 years duration. All other new products were, at best, preceded by animal experiments only.

## **Immediate functional loading. What do we really know?**

Gynther, Göran

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Bone-anchored dental implants have become an established method for replacing missing teeth. In recent years, various attempts have been made to simplify the process and shorten the treatment time. This would benefit the patient, the surgeon and prosthodontist, and the implant hardware producers. A one-stage method has been developed whereby all of the components are installed during the same surgical procedure, and the fixed prosthesis is attached to the implant within 3 weeks.

Several studies have been conducted on patients with completely edentulous lower jaws, and similar results have been reported compared to the conventional two-stage method. However, most of the studies on immediate functional loading in this patient group, are retrospective studies, with relative short follow-up period, and without a control group.

On patients with completely edentulous upper jaws, partially edentulous jaws, or singletooth implants, there is still limited scientific documentation on immediate functional loading.

Despite this, it seems that several clinicians try to use this method on most of the implant patients. This presentation will give scientific, clinical and personal views on immediate functional loading of dental implants.

## **Implantology in the TMD patient**

Laskin, Daniel

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Because of the adverse effects of stress on the temporomandibular joint, it is essential that patients with temporomandibular disorders (TMD) have a stable occlusion. Thus, it is important that any missing teeth are replaced. Often such replacement can involve the use of dental implants. However, because many patients with TMD have chronic tooth clenching and grinding habits, the question of what effects such abnormal occlusal forces can have on dental implants needs to be considered. It is the purpose of this presentation to address this issue.

## **Prosthodontic dogms, diagnosis, and decision making**

Öwall, Bengt

Department of Prosthetic Dentistry, Faculty of Health Sciences, Dental School,  
University of Copenhagen, Denmark.

The prosthodontic part of a treatment is the crowning achievement of the whole séance, often time consuming, costly and of great importance for the well being and the quality of life for the patient. Remarkably weak diagnostic criteria for treatment have, however, evolved and mostly the decision of extent, type, and level of prosthodontic measures are made up in a weighing process of what is technically and biologically possible, what are the patients wishes and worries, what are the dentists preferences and qualifications and at the end many times it is the financial aspect that is decisive.

Prosthodontics, as a clinical and scientific discipline, has for long strived after a medical/dental based evaluation and guidance for choice of treatment. Epidemiology, especially from the Scandinavian countries, has been an eye-opener and made scientists and health care planners aware of the problems to make directives that combine population and individual needs and demands. During the last ten years also behavioural sciences has entered the scene. In the Scandinavian countries public funding for prosthodontics has created new demands for decision-making even if the instruments are not available. Recommendations and restrictions by authoritative bodies are based on a mix of traditional thinking, personal views, dental school culture and economy.

Implant has opened so many new fantastic treatment options that it is understandable that many conflicts and controversies arise.

The lecture will try to sort up these aspects and give scientific, if any, clinical and personal views on the choice of prosthodontic treatment for a defective dentition, whatever that is.

## **Immunsuppression – medical aspects**

Carlsten, Hans

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Modern treatment of autoimmune inflammatory diseases involves the use of a variety of different immunosuppressive therapies. Some remedies like corticosteroids and cytotoxic drugs are "unspecific" meaning that they target many different cell types and compartments. During the last years more "selective" biological agents have been introduced in the therapeutic arsenal. For instance, blocking of the proinflammatory cytokine TNF by use of monoclonal antibodies has become routine treatment for patients with active rheumatoid arthritis not responding to conventional therapy with methotrexate in combination with other anti-rheumatic drugs. In severe cases of RA and systemic rheumatic diseases like SLE, myositis and systemic sclerosis depletion of T cells with anti-thymocyte globulin, depletion of B cells with anti-CD20 monoclonal antibodies and autologous peripheral stem cell transplantation have been used. All immunosuppressive regimens are afflicted with more or less severe side-effects like osteoporosis, vascular disease, infections and in certain cases increased risk of developing malignancies. In contrast, left untreated patients with chronic inflammatory rheumatic diseases are at high risk of developing all these disorders. In conclusion, there has been a fantastic progress in the medical treatment of autoimmune diseases during the last decade and in the future hopefully "specific" therapies will be available. At the same time clinicians must be prepared to deal with a new panorama of side effects and complications.

## **Immunosuppression - oral aspects; general**

Mattsson, Ulf

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The dental surgeon is confronted with immunosuppressed patients in several clinical situations. The clinical considerations related to management of these patients are frequently complex, involving both systemic and local factors. It is therefore essential that the dental surgeon is familiar with the main principles of how the immunosuppressed patient may appear in clinical practice. The general aspects of the following issues will be addressed during the lecture.

Intraoral lesions in generally healthy patients who are treated with drugs with local immunosuppressive effect.

Intraoral lesions in patients who are medically immunosuppressed. This includes lesions directly or indirectly associated with the disease itself, but also lesions which arise as a consequence of the medical treatment given to the patient.

Patients who will receive medical treatment with immunosuppressive effect, where an oral status free from infection is required in order to avoid local or systemic complications.

## **Immunosuppression - oral aspects; clinical**

Blomgren, Johan

Clinic of Oral Medicine, Sahlgrenska University Hospital – Östra, Göteborg, Sweden

The final part of the symposium will focus on two issues.

### **How do we treat oral opportunistic infections in immunosuppressed patients?**

Treatments of viral, bacterial and fungal infections will be discussed

### **How do we avoid infections, when we give dental treatment to immunosuppressed patients?**

Special precautions must be taken when dental therapy is given to immunosuppressed patients. This includes situations with a generally immunosuppressed patient, but also the patient with a locus of minor resistance (i.e. valve prosthesis or joint prosthesis).

The management of these patients entails the importance of oral health and the prophylactic use of antibiotics. Renal dialysis, pacemakers, diabetes, by-pass surgery, surgical stents, dental implants, disease- drug- or radiation- induced immunosuppression, endocarditis, heart valve prosthesis and joint prosthesis are all examples where different treatments will be discussed.

Updated and revised guidelines for antibiotic prophylaxis for the prevention of infective endocarditis have been presented in the form of consensus statement. Recommendations from USA and Sweden are presented.

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# **General assembly SFOMK**

**Skandinavisk Forening af Oral og Maxillofacial Kirurger (SFOMK)**

**SCANDINAVIAN ASSOCIATION OF ORAL AND MAXILLOFACIAL SURGEONS**

Innkalling til generalforsamling i SFOMK, Teatersalongen, Borgen, Visby

Lördag 19 juni 2004, kl 16.30-18.00

**Extra: Møtet vil begynne med at Professor Erik Hjørting-Hansen gir en kort installasjonspresentasjon i anledning hans æresmedlemskap.**

1. Valg av møteordfører
2. Protokolljusterere (2)
3. Presidentens rapport virksomhetsperioden 2000 – 2002
4. Rapport om foreningens økonomi
5. Revisjonsrapport 2002 og 2003
6. Revisjonsrapport kongress 2002
7. Valg av styre
8. Fastsettelse av medlemsavgifter
9. Medlemsspørsmål
10. Rapport SFOMK-fond
11. Kommende SFOMK-aktiviteter
  - Mellommøte ?
  - Kongress 2006
12. Øvrige spørsmål

Välkomna!

Astri Ragne

President

## General assembly KKF

### Kallelse till Svensk Käkkirurgisk Förenings (KKF) årsmöte

Medlemmarna i Svensk Käkkirurgisk Förening kallas härmed till årsmöte, fredagen den 18 juni 2004, kl. 16.30 – 18.00, Teatersalongen, Borgen, Visby.

- § 1. Mötets öppnande
- § 2. Val av justeringsmän
- § 3. Val av sekreterare
- § 4. Mötets stadgeenliga utlysande
- § 5. Fastställande av dagordning
- § 6. Protokoll från föregående föreningsmöte i Vänersborg (24/5 2003)
- § 7. Verksamhetsberättelse för år 2003.
- § 8. Skattmästarens redogörelse. Bokslut för år 2003.
- § 9. Revisorernas berättelse för räkenskapsåret 2003.
- §10. Frågan om ansvarsfrihet för 2003 års styrelse.
- §11. Fastställande av årsavgift för år 2005.
- §12. Val av ordförande.  
Valberedningens förslag: *Ulf Blombäck*. Nyval 2 år (2005, 2006)
- §13. Val av vice ordförande:  
Valberedningens förslag: *Björn Johansson*. Nyval, 2 år (2005, 2006).
- §14. Val av skattmästare:  
Valberedningens förslag : *Arne Mordenfeld*. Nyval, 2 år (2005, 2006).
- §15. Val av revisorer för kommande kalenderår 2005.  
Valberedningens förslag: *Peter Nallestam*. Omval, 1 år,  
*Harald Broberg*. Omval, 1 år,  
*Gunnar Sörlin*, suppleant. Omval, 1 år
- §16. Val av ledamot i valberedning.  
Valberedningens förslag: *Bengt Alsén*. Nyval, 2 år (2005, 2006)
- §17. Val av ledamot i stipendienämnden.  
Valberedningens förslag: *Börje Svensson*, omval, 2 år (2004, 2005)  
*Andreas Thor*, omval, 2 år (2004, 2005)
- §18. Ordföranden informerar.

§19. Krav på medlemskap i Tandläkarförbundet för medlemskap i KKF. OBS! Röstning!

§20. Internationella frågor.

§21. Resestipendier.

§22. Medlemsärenden.

§23. Odontologisk Riksstämma 2004.

§24. Presentation av höstmöte 2005 i Malmö.

§25. Övriga frågor.

§26. Mötets avslutande

Hjärtligt välkommen!

Anders R. Eriksson  
Ordförande

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## **General assembly SOMS**

### **Swedish Oral Medicine Society (SOMS)**

Pelarsalen, Borgen, Visby  
Friday, June 18<sup>th</sup>, 2004, 16.30-18.00

§1 Opening of the meeting

§2 Formation of a clinical network in oral medicine.

During the last years, technology has provided clinicians with the possibility to perform distant consultations and hold seminars within the field of oral medicine. At present, this exchange of information is limited to discussions regarding diagnosis and treatment of individual cases. A national network focused on gathering of clinical data on a larger scale could potentially enhance our possibilities to analyze and learn from the experiences we encounter in daily clinical practice. The possibility to create a network focused on a more systematic approach to education, learning and research will be discussed.

Welcome!

Ulf Mattsson  
President