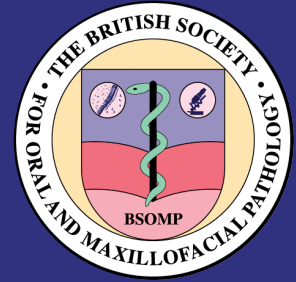
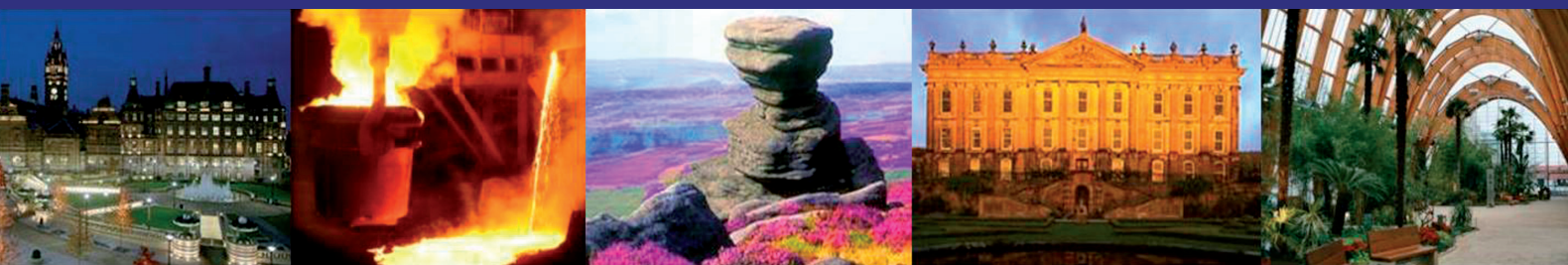




The British Society for
Oral Medicine
and
The British Society for Oral and
Maxillofacial Pathology



Joint Conference 3 - 6 May 2011 Sheffield, UK



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4th to 6th May 2011

Dear Colleagues

Welcome to the 2011 Joint BSOM and BSOMP Scientific Meeting which we are delighted to host here in Sheffield. We hope you will all enjoy and find intellectually stimulating, the scientific and clinic-pathological programme over the next three days.

On Wednesday and Thursday the conference will be held in the historic Cutlers' Hall, home to the Cutlers' Company which was established by a parliamentary Act of Incorporation in 1624. For almost four hundred years it has sought to maintain the standards and quality of Sheffield manufactured cutlery and steel products and to promote the name of Sheffield. We are even more pleased that the Master Cutler, Mr W B Speirs will be here to welcome us on Wednesday lunchtime.

On Friday morning the meeting will be held in the School of Clinical Dentistry

We would especially like to thank our invited speakers for Thursday's two symposia. We are grateful to them for agreeing to give us their valuable time and expertise.

Bisphosphonates and the Management of Metastatic Bone Disease

- Professor Graham Russell
- Professor Peter Croucher
- Professor Rob Coleman
- Professor Simon Rogers

Diseases of the Gastro Intestinal Tract

- Dr Mark McAllinden
- Professor David Sanders
- Dr Alan Lobo
- Dr Dermot Gleeson

No Joint Meeting would be complete without a Social Programme. On Wednesday evening there is a visit to Kelham Island Museum which was opened in 1982 to house objects, pictures and archive material representing Sheffield's industrial story. Drinks and light snacks will be provided. On Thursday night the Annual Dinner is in Carriages Restaurant at Chatsworth House in Derbyshire. The House and estate is the ancestral home of the Cavendish family (Duke and Duchess of Devonshire) and one of the most visited stately homes of England.

With all our good wishes for an excellent, enjoyable meeting.

Paula Farthing, Chris Franklin, Anne Hegarty, Keith Hunter, Paul Speight, Martin Thornhill, Christine Yeoman.

Conference Programme

Tuesday 3 May 2011:
The School of Clinical Dentistry

Time	Session Title	Venue
09.30 – 12.30	Oral Medicine Training Programme Directors meeting. Tea/coffee on arrival	Seminar rooms 1-4, Dental School
12.00 – 14.00	Lunch	Dental School Common Room
13.30 – 16.30	Juniors' Meeting	Dental School Lecture Theatre
17.00 – 18.30	Council Meeting BSOMP	Committee Room
16.30 – 18.30	Council Meeting BSOM	NHS Meeting Room
19.30	Councils dinner	Loch Fyne Restaurant

Wednesday 4 May 2011:
The Cutlers' Hall, Sheffield

Time	Session Title
09.00	Registration & tea/coffee
09.20 – 09.30	Welcome address
09.30 – 10.45	Clinical Pathological Conference
10.45 – 11.15	Tea/coffee, poster viewing and trade display.
11.15 – 12.30	Clinico-pathological Conference
12.30 - 13.30	Lunch – includes short address/welcome by Master Cutler. Poster viewing and trade display.
13.30 – 14.45	Free papers
14.45 – 15.15	Tea/coffee, poster viewing and trade display.
15.15 – 16.30	Free papers
16.30 – 17.30	BSOM & BSOMP AGMs
17.45 - 19.30	Coaches leave Cutlers' Hall for Kelham Island, drinks on arrival

Thursday 5 May 2011:
The Cutlers' Hall, Sheffield

Time	Session Title
Symposium 1: Bisphosphonates and the Management of Metastatic Bone Disease	
09.30 – 10.15	Professor Graham Russell :Update and overview of bisphosphonates
10.15 – 10.45	Professor Peter Croucher: Mechanisms of metastatic bone disease
10.45 – 11.15	Tea/coffee, poster viewing and trade display.
11.15 – 11.45	Professor Rob Coleman: Clinical problems and management
11.45 – 12.15	Professor Simon Rogers: Bisphosphonate related osteonecrosis of the jaw
12.15 – 12.30	Discussion
12.30 – 14.00	Lunch. Poster viewing and trade display.

Symposium 2: Diseases of the Gastro Intestinal Tract

14.00 – 14.30	Dr Mark McAlindon: Aetiopathogenesis of gastric mucosal disease
14.30 – 15.00	Professor David Sanders: Immunology of coeliac disease
15.00 – 15.30	Tea/coffee, poster viewing and trade display.
15.30 – 16.00	Dr Alan Lobo: Crohn's disease and ulcerative colitis
16.00 – 16.30	Dr Dermot Gleeson: Autoimmune liver disease
16.30	Discussion
19.00	Coaches pick up at Cutlers' Hall and leave for Chatsworth House
19.45 – 23.30	Chatsworth House, pre dinner drinks and dinner in Carriages restaurant

Friday 6 May 2011:
The School of Clinical Dentistry

Time	Session Title	Venue
09.30 – 12.00	BSOM Free papers	Dental School Lecture Theatre
09.30 – 12.00	BSOMP Head & Neck EQA Review of slides	Dental School Seminar Rooms 3 & 4
12.00 – 14.00	Lunch	Dental School Common Room

JOINT JUNIORS SCIENTIFIC MEETING FOR THE BRITISH SOCIETY OF ORAL MEDICINE AND THE BRITISH SOCIETY FOR ORAL AND MAXILLOFACIAL PATHOLOGY

Venue: Lecture Theatre, School of Clinical Dentistry, Sheffield

The formal meeting will commence at 13.45 with a speaker followed by Juniors' oral presentations

Speaker: Mr John Potts
Senior lecturer/ Honorary Consultant in Oral Pathology
Cardiff Dental School
"The Clinicopathological Interface"

There will be an opportunity for questions after the presentation followed by coffee

Juniors' oral presentations start at 15.00

15.00-15.15	Condyloma acuminata in a young woman: implications for management Presenter: Cristina Frezzini, Sheffield Dental Hospital
15.15-15.30	Idiopathic Dysgeusia: a Case Report Presenter: Polly Pok-Lam Fung, UCL Eastman Dental Institute
15.30-15.45	Oral involvement in Erdheim-Chester Disease (Case Report) Presenter: Surab Alsahaf, KCL Dental Institute
15.45-16.00	Oral granular cell tumour: A case report of an unusual clinical presentation Presenter: Joanna Christou, UCL Eastman Dental Institute
16.00-16.15	Multiple white nodular plaques on edentulous alveolar ridge: a case report Presenter: Eranga Nissanka, KCL Dental Institute
16.15-16.30	Fat Face- Not all things are common. Presenter: Jenny Taylor, University dental hospital of Manchester

*The meeting will close at 16.30
3 hours CPD will be awarded*

Clinicopathological Conference

Session chairs: Dr Anne Hegarty and Dr Keith Hunter

CPC1. 09.30-09.45

Chambers A*¹, Hampton P², Sloan P³, Carozzo M¹

¹Department of Oral Medicine, School of Dental Sciences, University of Newcastle Upon Tyne, Newcastle upon Tyne, UK ²Department of Dermatology Royal Victoria Infirmary Hospital, Newcastle Upon Tyne, UK ³Department of Pathology, Royal Victoria Infirmary Hospital, Newcastle upon Tyne, UK

A 42 year old lady with a long history of swelling of both lips since the age of 10 is presented. Despite few bowel symptoms and a normal colonoscopy, biopsy showed diagnosis of Crohn's disease. She started a benzoate and cinnamon free diet but the lips continued to be swollen. Her lip swelling was then successfully treated with triamcinolone acetonide injections. Afterward she started to develop an erythematous facial rash affecting the chin with oedema and induration which failed to respond to different treatment plans.

CPC2: 09.45-10.00

A large red palatal lesion in an infant

Holt DJ¹, Hegarty AM¹, Yeoman CM¹, Hunter K², Al-adnani M³, Jenkins A³, Shackley F³

¹Oral Medicine Unit, Oral Maxillofacial Medicine and Surgery, ²Oral Maxillofacial Pathology, University of Sheffield School of Clinical Dentistry and Charles Clifford Dental Hospital, Sheffield Teaching Hospitals Foundation Trust, ³ Sheffield Children's Hospital Foundation Trust

The diagnosis and management of children who are unwell can be more problematic than in adults.

A 19 month old male in-patient was reviewed by the Oral Medicine team at the request of the Paediatric physicians. A raised red lesion was found centrally in the hard palate. It was of two week duration. He had an undiagnosed systemic disease affecting the respiratory tract requiring hospital admission. Following deterioration in his respiratory symptoms he required management on the HDU. He was extensively investigated and diagnosis hinged on the histopathology findings of his biopsied palatal lesion.

CPC3: 10.00 – 10.15

Chronic oral ulcer - an unusual diagnosis

K. Staines, P. Sloan, A. Chambers
Newcastle, UK

We report a case presenting with an unusual, large painful ulcer on the dorsum of the tongue, present for three months in a homosexual non-smoking male with no notable medical or drug history. The patient presented first to the Oral Surgery clinic where a biopsy was performed. This had been reported as chronic non-specific ulceration. On referral to Oral Medicine a differential diagnosis was considered.

CPC4: 10.15-10.30

An unusual mucosal lesion

Khurram SA, Fernando M, Smith A, Hunter KD.
Sheffield, UK

A 45 year old female patient presented to her local maxillofacial surgery department with a painful irregular swelling on the left lateral border of the tongue which had been present for 3-4 months. She also reported associated dysphagia of more recent onset. She is an insulin dependent diabetic (type 2) with poor control of glucose levels and is a heavy smoker. Examination showed a large speckled mass on the lateral border of the tongue and a right tonsillar lesion. She also has lymphadenopathy in the right level 2 of the neck. The initial clinical diagnosis was squamous cell carcinoma and the lesion was biopsied. At this time she also reported a non-itchy rash on arms and chest.



CPC5. 10.30-10.45

A pea accident

Riina Richardson* and Jaana Hagström
Manchester, UK and Helsinki, Finland

An 8-year old boy, diagnosed with Evans Sdr, arthritis and suspicion of SLE was hit by a pea shooter on the right cheek. On 10mg of prednisolone every other day the rheumatoid disease was in remission. A solid mass developed overnight and a 15mmx15mm fluid collection was seen by ultrasound. A month later it had grown bigger and was examined by MRI: on the surface of the parotid gland, partially anteriorly, suggestive of brachial cleft type I cyst structure, lymphatic malformation or sialoceles". The tumor had become softer, lumpier and the adjacent skin had turned red-blue. Not painful at any stage. Cavity was aspirated: thick reddish-brown fluid with high count of PMN leukocytes in cytology. All cultures and PCRs negative. Treated with co-amoxiclav + levofloxacin with no response in two weeks. Instead grew bigger and was surgically cleared. New samples for cytology, pathology, cultures and PCR. New cytology: mixed inflammation, not granulomatous.

CPC6. 11.15-11.30

Mary Toner and Stephen Flint
Dublin, ROI

A 23 year old Asian man presented to the Dublin Dental Hospital with painful gums and a feeling that his teeth were going to 'shake out'. His gingivae were erythematous, vascular and granulomatous with an appearance suggestive of so called "strawberry gums". The interdental papillae were pink and normal and there was no gingival recession and no plaque related periodontal disease. An orthopantomogram showed extensive alveolar bone loss. He also had a one month history of night sweats and cough, productive of purulent sputum with weight loss of 7 kg in that time. Examination revealed extensive, soft, non-tender, bilateral cervical lymphadenopathy. A chest radiograph shows bilateral reticular nodular shadowing with some areas suggestive of cavitation.

His gum biopsy showed marked chronic inflammation with epithelial hyperplasia. Several isolated giant cells were present in the inflammatory infiltrate and several poorly formed non-necrotising granulomas. No vasculitis identified.



CPC7. 11.30-11.45

An unusual neck swelling in a teenager

Rachel Hall

The Royal Oldham Hospital, The Pennine Acute Hospitals NHS Trust

A seventeen year old girl presented to the ENT Department with an enlarged level II mass which was clinically suspicious of lymphoma. She underwent a CT scan which showed a 2.5 cm mass lying deep to sternomastoid.

The lesion was biopsied and histology showed a florid fibrovascular proliferation containing spindle cells in a sclerotic stroma admixed with inflammatory cells including lymphocytes, macrophages, eosinophils and plasma cells. Multinucleate foreign body type giant cells and keloid-like fibrosis were present.

Immunohistochemistry was performed and special stains for micro-organisms.

CPC8: 11.45-12.00

K. Staines, P. Sloan, A. Chambers
Newcastle, UK

We present a case of a 67 year old man with a 3 month history of painful and swollen gums. Intraoral examination revealed a strawberry gingivitis. Routine bloods were normal. Anti-neutrophil cytoplasmic antibody [c ANCA] was positive with a titre of 80U/ml. An incisional biopsy of the gingival tissue showed irregular hyperplasia and focal ulceration. A leukocytoclastic vasculitis was present and accumulations of neutrophils were seen in the corium. Referral to a multidisciplinary team was made and chest radiographs, renal investigations and a CT scan of the maxillary and sinonasal regions did not reveal any further abnormalities.

CPC9: 12.00-12.15

Lichen planus, corticosteroids and systemic immunosuppression: a perfect recipe for malignancy?

Chaudhry SI^{1*}, Conn BI^{2*}, Jay A², Walker DM², Hodgson TA¹.

¹Oral Medicine, Eastman Dental Hospital, ²Oral and Maxillofacial Pathology, University College London Hospitals NHS Foundation Trust, London, UK.

Although the World Health Organization classifies oral lichen planus (OLP) as a precancerous condition, considerable controversy regarding its malignant transformation remains. We report two cases of biopsy-proven OLP associated with dysplastic change.

Case A - a 63 year old lady with a seven year history of OLP developed a verrucous hyperkeratosis of the lower alveolar mucosa which progressed rapidly to a squamous cell carcinoma. Case B - a 58 year old lady with a 15 year history of OLP who, despite aggressive immunosuppressant therapy, developed multi-focal dysplastic verrucous lesions necessitating surgical removal. Symptomatic management of this individual remains problematic.

Epidemiological and proteomic studies support the above association of chronic inflammation and carcinogenesis, with the cellular and cytokine components of the inflammatory and tumour micro-environments being remarkably similar. Currently, it remains unknown whether local or systemic immunosuppression increases the risk of epithelial dysplasia and SCC within the setting of OLP.

CPC 10. 12.15-12.30

A recently described odontogenic tumour.

Alica Torres-Rendon, Omar Husain, Robert Orr, Peter Doyle, Roger Start, Paula Farthing, Paul Speight.
Sheffield , UK

We report a case of an osteolytic lesion occurring in the maxilla of a 55 year old male. Radiographically, the tumour appeared as a moderately well circumscribed, radiolucent lesion, in the inter-radicular area causing displacement and root resorption of UR2 and UR3. Histopathological examination showed small, rounded, short cords of odontogenic epithelium composed of polygonal, bland appearing cells, resembling Rests of Malassez, within a densely fibrous stroma. Mitoses were rare and the tumour did not elicit an inflammatory host response. It had an infiltrative invasion pattern. There was no evidence of amyloid. Immunohistochemical analysis showed expression of CK19, AE1/3 and CK5/6. The histopathological differential diagnosis included: CEOT, odontogenic fibroma, metastasis, desmoplastic ameloblastoma, squamous odontogenic tumour and normal odontogenic rests.

Free paper abstracts

Session chairs: Prof Martin Thornhill and Prof Paula Farthing

FP1. 13.30-13.45

The epidermal glucocorticoid system modulates anchorage independent survival in squamous cell carcinoma

Authors: Nicola Cirillo, Stephen S Prime. School of Oral and Dental Science, University of Bristol

The bioavailability of circulating and/or endogenous hydrocortisone (cortisol) in epidermal cells is a key determinant in a variety of human diseases. In the present study, we show by microarray analysis that keratinocytes (normal and malignant) express mRNAs to all the major enzymes involved in the metabolic chain from cholesterol to cortisol. The two enzymes mediating activation/deactivation of cortisone to cortisol, namely HSD11B1 and HSD11B2, were expressed at the protein level in cultured keratinocytes (WB) as well as human skin samples (IHC). In functional assays, we show that keratinocytes are not only able to activate cortisone to cortisol in a HSD11B-dependent manner but, also, silencing of either HSD11B1 or HSD11B2 specifically modulates the bioavailability of the inactive glucocorticoid and the active steroid, respectively. A further key observation was that keratinocytes responded to stimulation with ACTH by a significant increase in the de novo synthesis of cortisol. We found that both endogenous and exogenous stimulation by cortisol promoted aggregation (formation of multicellular aggregates, MCAs) and survival in epidermal cancer cells (II-3 and RT-3, respectively), but not non-malignant keratinocytes (HaCat and I-7), in the absence of extracellular matrix (ECM) attachment. This process was modulated by 11 β -HSD1 and 11 β -HSD2 expression. This is a relevant observation because the ability of cancer cells to survive in the absence of cell-ECM adhesion is a key phenotype of metastatic cells. We also found that expression of both 11 β -HSD1 and 11 β -HSD2 was altered in skin and head and neck cancers by IHC. In conclusion, our data demonstrate that epidermal keratinocytes synthesize cortisol and suggest that autocrine/endocrine modulation of the epidermal glucocorticoid system may affect the metastatic phenotype of cancer cells.

The impact of the NICE guidelines recommending the cessation of antibiotic prophylaxis for the prevention of infective endocarditis

Authors: Martin H Thornhill¹, Mark J Dayer², Jamie M Forde³, G Ralph Corey⁴, Vivian H Chu⁴, David J Couper⁵, Peter B Lockhart⁶.

¹University of Sheffield School of Clinical Dentistry; ²Dept. Cardiology, Musgrove Park Hospital, Somerset. ³Dr Foster Intelligence, London. ⁴Div. Infectious Diseases, Duke University Medical Centre, Durham, NC, USA; ⁵Dept. Biostatistics, Univ. North Carolina, Chapel Hill, NC, USA; ⁶Dept. Oral Medicine, Carolinas Medical Center, Charlotte, NC, USA.

Objective: To quantify the change in prescribing of antibiotic prophylaxis (AP) for patients at risk of infective endocarditis (IE) following introduction of the NICE guidelines and to quantify any resulting change in incidence of IE.

Design: We obtained national AP prescribing data from January 2004 through April 2010 from the Prescription Pricing Division of the NHS Business Authority for a single 3g oral dose of Amoxicillin or a single 600mg oral dose of Clindamycin. We also accessed the NHS Secondary User Service data warehouse to obtain national monthly inpatient hospital activity data for England for IE patients, IE related in hospital deaths or IE cases with a possible oral streptococcal origin between January 2000 and April 2010. Monthly trends were investigated using a Poisson regression model that corrected for population changes over the study period. A pre-specified “non-inferiority” test was used to test for significant differences in the trends before and after the introduction of the NICE guidelines.

Results: There was a highly significant 78.6% reduction ($p < 0.0001$) in AP prescribing following the introduction of the NICE guidelines. There was no evidence that the general upward trend in IE cases before the NICE guidelines was significantly altered after ($p = 0.61$). We were able to exclude an increase in the number of IE cases of $\geq 9.3\%$.

Conclusion: Despite a 78.6% reduction in AP prescribing, this study excluded any large increase in IE cases or deaths following the introduction of the NICE guideline. Although this lends support to the NICE guideline, ongoing data monitoring is needed to confirm this and further clinical trials may be needed to determine if AP still has a role in protecting some patients thought to be at particularly high risk of IE.

Increased senescence and altered collagen metabolism in oral submucous fibrosis

Authors: G. PITIYAGE¹, S.S. PRIME², F. FORTUNE¹, and K. PARKINSON¹.

¹Clinical & Diagnostic Oral Sciences, Queen Mary School of Medicine & Dentistry, London, United Kingdom, ²Department of Oral and Dental Science, Bristol, United Kingdom.

Objectives: Oral submucous fibrosis (OSMF) is a cancer-susceptible fibrotic condition caused by chewing of the Areca Nut. Areca nut extract can cause keratinocyte senescence in vitro and there is evidence that senescent fibroblasts can stimulate in growth of pre-malignant keratinocytes. OSMF fibroblasts can be intrinsically damaged.

Methods: Immunofluorescence studies were conducted using antibodies against histone repressor A (HIRA), 53BP1, GammaH2A.X, P16, 8-oxo-guanine and Ki67, on cultured cells from normal, non diseased chewers and OSMF and on frozen sections of OSMF and control samples. Cytokine profile of OSMF fibroblasts were studied using ELISA.

Results: Fibroblasts possessing senescence-associated heterochromatic foci (SAHFs), as visualized by HIRA staining, accumulated during the progression of OSMF. Markers of DNA damage (Gamma H2AX and 53BP1), oxidative damage (8-oxo-guanine) and p16INK4A accumulated with disease progression. Ki67 staining did not reveal excessive proliferation in the OSMF fibroblasts at any stage, arguing against replicative senescence or mitotic stress but an antioxidant reduced the frequency of senescent cells. The cultures from non-diseased Areca Nut users were near normal. Therefore, the cause of senescence is intrinsic to the fibroblast population and independent of the disease stimulus. In addition, the replicative lifespan of OSMF fibroblasts was truncated compared to normal, suggesting that they possessed cryptic damage. The OSMF fibroblasts expressed elevated levels of tissue inhibitor of matrix metalloproteinases 1 & 2 and showed higher levels of osteopontin.

Conclusion: Our results suggest that the intrinsic generation of reactive oxygen species causes senescence in OSMF. The results suggest that proteins secreted by senescent fibroblasts could be early indicators of neoplasia and that anti-oxidants may be useful in the treatment of fibrosis.

Periodontal status in mucous membrane pemphigoid: a pilot controlled study

Authors: Carrozzo M^{*1}, Arduino P², D'Aiuto F³, Farci V², Carceri P², Tanteri C², Carbone M², Gardino N², Broccoletti R².

¹Department of Oral Medicine, School of Dental Sciences, Newcastle University, Newcastle upon Tyne, UK ²Department of Biomedical Sciences and Human Oncology, Oral Medicine Section, Lingotto Dental School, University of Turin, Turin, Italy; ³Periodontology Unit, Division of Clinical Research, UCL Eastman Dental Institute, London, UK

Background: Mucous membrane pemphigoid (MMP) frequently affects the gingiva but few data are available on the periodontal status of MMP patients

Methods: A prospective case-control study was undertaken to examine the human periodontium of 29 MMP patients and 30 healthy controls. Parameters evaluated included full mouth plaque score (FMPS), full mouth bleeding upon probing scores, probing depths (PD), gingival recession, clinical attachment level (CAL), mobility score, furcation involvement, number of missing teeth and Machtei criteria.

Results: All periodontal parameters recorded were increased in cases when compared to controls in univariate statistics. The mean differences between MMP and controls in PD (0.8 ± 0.2 mm, 95% CI 0.3–1.3), CAL (1.3 ± 0.4 mm, 95% CI 0.4–2.2), FMPS ($41.0 \pm 6.2\%$, 95% CI 28.7–53.4), FMBS ($16.2 \pm 6.6\%$, 95% CI 3.0–29.4) and tooth loss (2 ± 1 teeth, 95% CI 1–3) were all statistically significant ($P < 0.01$ for all). Moreover, substantial differences in domiciliary oral hygiene routines were observed ($P < 0.0001$). In multivariate models when FMPS was included as covariate the difference between groups in all clinical periodontal parameters was no longer statistically significant.

Conclusions: Our results showed that periodontal status is worse in MMP patients if compared with healthy controls possibly due to the difficulties in maintaining a good oral hygiene. Oral health should be promoted in MMP.

FP5. 14.30-14.45

Developing a tissue engineered model of radiotherapy-induced oral mucositis

Authors: Paula Eves, Martin H. Thornhill, Helen Colley, Craig Murdoch*

University of Sheffield School of Clinical Dentistry

Oral mucositis is a severe and often dose-limiting side-effect of cancer therapy that is prevalent in patients receiving radiotherapy for head and neck cancers. Radiation-induced damage causes extensive breakdown of the oral epithelium. However, the exact cells affected in the mucosa are not known and experimental data on the pathobiology of mucositis is lacking. This study aimed to examine the effects of radiation on oral mucosal cells cultured as monolayers and to establish a tissue engineered model of radiation-induced oral mucositis. Normal oral keratinocytes (NOK), oral fibroblasts (NOF) and dermal microvascular endothelial cells (DMEC) were cultured as individual monolayers or as co-cultures, subjected to 20Gy radiation and levels of cell damage quantified for up to 72h. Tissue engineered oral mucosa consisting of NOK, NOF and DMEC were subjected to 20Gy radiation and analysed for up to 21d for cell viability and damage. The viability of cells cultured either in isolation or as co-cultures were all significantly affected 72 h post-irradiation when compared to non-irradiated cells. NOK were affected more than NOF or DMEC. Cells cultured alone were affected more by radiation than co-cultured cells. The viability of irradiated tissue engineered mucosal models was also significantly reduced compared to non-irradiated controls at all time points examined. Histologically, irradiated models displayed thinner epithelium with extensive damage that increased in severity over the 21d period. Tissue engineered oral mucosa containing NOK, NOF and DMEC is a useful model of oral mucositis that will be helpful in examining disease mechanisms or future treatment strategies.

CO₂ Laser Surgery as a treatment modality for Oral Precancer: Especial consideration to resection margins

Authors: Omar Hamadah^{1*}, Peter Thomson²

¹Oral Medicine department, The Faculty of Dental Medicine, Damascus University, Syria,

²Oral and Maxillofacial department, The School of Dental Sciences, Newcastle University, UK

Objectives: Oral precancerous lesions (OPLs) are graded according to severity of dysplasia and this is used to identify white patches at greater risk of malignant change. Dysplasia is graded following incisional and subsequently excisional biopsies, but the decision whether or not to remove a white patch is largely based on the initial biopsy.

Aim: To assess the clinical usefulness of interventional CO₂ laser surgery in treating oral precancer lesions with histologically confirmed dysplasia, with two years postoperative follow up. Also, to assess agreement between the histopathology of incisional biopsies versus laser excision specimens for OPLs and to examine possible influences on clinical treatment outcomes.

Methods: 78 patients with OPLs underwent incisional biopsy with a scalpel and excisional biopsy with “The Ultra-pulse CO₂ laser, model 1000 supplied by Coherent (The Medical Group, Cambridge, UK)”. To rationalise treatment decisions for oral dysplastic lesions, histo-pathological diagnoses were considered as mild, moderate, or severe dysplasia using WHO criteria (2005). Statistical analyses were carried out using SPSS software.

Results: There was no correlation between treatment outcome and the degree of agreement between the incisional and excisional biopsies ($\rho=0.04$, $p=0.74$). Resection margins of excisional specimens were clear in 55.1% of cases and, whilst 39.7% displayed mild or moderate dysplasia, only 5.1% showed severe dysplasia. 3 patients with clear margins developed SCC.

Conclusions: In the absence of standardised treatment protocols for OPLs, particularly those manifesting dysplastic features, CO₂ laser remains the most effective tool offering precise tissue excision with minimal postoperative morbidity.

Systemic therapy in Oral Medicine: demand and adverse outcomes

Authors: Dr Hadleigh Clark, Dr Sabine Jurge*, Dr Tim Hodgson.

Unit of Oral Medicine, Eastman Dental Hospital, UCLHT and Eastman Dental Institute, UCL

Background: Systemic immunosuppressive therapies are advocated for managing refractory oral disease. None have documented the actual numbers of individuals requiring these treatments or the disease related risk of requiring systemic intervention.

Methods: A clinical database of oral medicine patients on systemic therapies was reviewed. Inclusion criteria: any patient on systemic therapy initiated for oral mucosal disease. Exclusion criteria: patients solely on prednisolone, and on systemic therapy initiated for extra-oral disease. Data was confirmed by reviewing clinical files, electronic records and laboratory records.

Results: 84 patients had been prescribed systemic therapy between January 2010 and February 2011. Medications included azathioprine (n=49), dapsone (n=15), mycophenolate mofetil (n=7), deflazacort (n=4), thalidomide (n=3), and tacrolimus (n=1). Two patients were on mycophenolate and dapsone, and one was on mycophenolate and deflazacort. The percentage of disease specific individuals requiring immunosuppression were as follows: 43.8% (14 of 32) pemphigus, 36.4% (4 of 11) Behcet's, 23.8% (20/84), pemphigoid, 21.4% (3/14) erythema multiforme, 18.1% (8/44) orofacial granulomatosis, 11.8% (2/17) lupus, 9.8% (18/184) recurrent aphthous stomatitis 8.3% (1/12) plasmacytosis and oral lichen planus 1.7% (14/806). 8 patients experienced adverse effects of azathioprine, and 5 of them had to discontinue. 6 patients discontinued colchicine, 2 mycophenolate and one dapsone.

Conclusions: Each disease has a spectrum of severity and many do not require systemic immunosuppression. Systemic therapy can be a necessary, effective and safe intervention but requires shared care, careful monitoring and rapid intervention if adverse effects occur.

FP8. 15.45-16.00

Angiotensin 1-7 inhibits angiotensin II-stimulated oral cancer cell motility

Authors: Hinsley EE, Farthing PM and Lambert DW*.

Unit of Oral and Maxillofacial Pathology, School of Clinical Dentistry, University of Sheffield.

Angiotensin receptor 1 (AT₁R) blockade is thought to reduce disease progression in a number of cancers, although the mechanisms by which it does so remain largely obscure. Here we show, for the first time, that the AT₁R ligand angiotensin II (Ang II) promotes invasion and migration of oral squamous cell carcinoma (OSCC) cells by stimulating EGF receptor transactivation in both an autocrine and paracrine manner. This effect is mediated by binding to the AT₁R, which we show is dramatically over-expressed in OSCC cells compared to normal keratinocytes. Furthermore, we demonstrate that the effects of Ang II on OSCC cells are inhibited by Ang 1-7, a peptide produced from Ang II by angiotensin converting enzyme 2 (ACE2). These data are the first to demonstrate a role for angiotensin peptides in oral carcinogenesis and raise the possibility of utilising AT₁R receptor antagonists and/or Ang 1-7 as novel therapeutic agents for OSCC.

The project was supported by a grant from BSOMP

FP9: 16.00-16.15

Clinical features and their significance in oro-facial granulomatosis

Authors: Escudier M¹, Campbell H², Hullah, E¹, Sanderson J³, Challacombe S¹

¹Unit of Oral Medicine, King's College London Dental Institute, London, UK ²Unit of Nutrition, King's College London, London, UK ³Gastroenterology, King's College London, London, UK

Background: Orofacial granulomatosis (OFG) is a rare chronic inflammatory disease of unknown aetiology sharing histological features with gut Crohn's disease.

Aims: (1) To describe in detail the oro-facial sites involved and clinical presentation of 249 patients with OFG. (2) To determine those features indicative of underlying Crohn's disease.

Design: A retrospective cohort study utilising data extracted from the medical records of 249 patients attending a multidisciplinary clinic.

Results: One hundred twenty six patients (51%) were male. Ethnic background included White (81%), Asian (9%), Black (7%) and mixed (3%). Median age of disease onset was 26 years (range 2-73, median 22). The buccal mucosa (74%) and lower lip (67%) were the most common sites involved followed by gingivae (62%), upper lip (59%), face (36%), floor of mouth (32%), palate (22%) and buccal sulcus (18%). The most common clinical findings were swelling (92%), erythema (66%), tags (27%), ulcers (23%), fissures (21%) and nodules (21%) whilst angular cheilitis (28%), cobblestoning (28%), "staghorn" (9.6%) and fibrous banding (8%) were noted in specific sites. The absence of lip involvement, presence of sulcal features, ulceration or fibrous banding are all significantly associated ($p < 0.01$) with underlying Crohn's disease.

Conclusion: OFG affects young adults and most commonly presents with buccal and lower lip involvement most often in the form of swelling and erythema. Several oral features are highly suggestive of underlying Crohn's disease and indicate a need for appropriate investigation.

The effect of oral squamous cell carcinoma on macrophage differentiation

Authors: Rebecca Merry*, Simon Jackson, Oliver Hanemann, Paul McArdle, Andrew McLennan, Jon Bennett.

Peninsula Dental School, Peninsula College of Medicine and Dentistry

Introduction/aim: The presence of tumour associated macrophages (TAMs) in oral squamous cell carcinoma (OSCC) has been associated with tumour progression and poor prognosis. TAMs from other cancer types have been shown to express a tumour promoting M2 phenotype rather than a tumouricidal M1 function. However, the TAM phenotype in OSCC is poorly understood. The aim of this presentation is to discuss preliminary results investigating the effect of OSCC on macrophage differentiation.

Methods: M1 and M2 macrophages were generated in vitro from the monocytic cell line, THP-1, with phorbol 12-myristate 13-acetate (PMA) or vitamin D3 respectively. Monocytes were differentiated in the presence of conditioned media (0 - 50%) from a primary OSCC specimen of the tongue. To examine the macrophage phenotype, macrophages were stimulated with *Porphyromonas gingivalis* LPS and the cytotoxic cytokine TNF- α was measured by sandwich ELISA as a marker for M1 (TNF- α^{high}) and M2 (TNF- α^{low}) differentiation. Macrophage viability was assessed by trypan blue.

Results: TNF-alpha produced by M1 and M2 macrophages decreased in the presence of OSCC conditioned media (control, M1 - 1420.5 ± 238.3 pg/ml and M2 - 416.0 ± 46.7 pg/ml, with 2.5% conditioned media, M1 - 324.0 ± 22.6 pg/ml and M2 - 7.0 ± 0.0 pg/ml). Furthermore there was a loss in the anti-tumoural M1 macrophage cell viability.

Conclusions: The results from this pilot study suggest that soluble factors produced by OSCC may affect macrophage differentiation and viability generating a population of macrophages that can aid tumour progression.

Symposium 1: Bisphosphonates and the Management of Metastatic Bone Disease

Session chair: Prof Paul Speight

Professor Graham Russell, PhD, DM, FRCP, FRCPath, FmedSci



Professor Russell graduated with first-class honours in biochemistry from Cambridge and then worked with the MRC Unit in Leeds, gaining his PhD. He worked in Oxford, Bern and Harvard University before being appointed to the Chair of Human Metabolism and Clinical Biochemistry in Sheffield University. Under his leadership that department became established as a major international centre for the study of basic and clinical research into bone diseases. He has played a central role in studying the biological effects of bisphosphonates, and in their evaluation for the treatment of bone disorders. Bisphosphonates are now the most widely-used drugs for the treatment of bone diseases throughout the world. His other research interests include bone cell biology - work which is directly concerned with the improvement of treatment of osteoporosis, Paget's disease and malignant disease of bone. He has held many prestigious offices, including the Presidency of the International Bone & Mineral Society, and he is now Chairman of the Council of Management of the National Osteoporosis Society (UK). He was the Heberden Orator of the BRS in 1993 and was the recipient of the John Johnson Award of the Paget's Foundation (USA) in 1997. In 2000 he was the first British scientist to receive the Neuman Award of the American Society of Bone & Mineral Metabolism. His research team are now based in the new institute, where they play a key role in the investigation of the cell biology and biochemistry of common bone diseases, especially osteoporosis and malignant disease of bone, including trials of new treatment.

Update and overview of Bisphosphonates

This lecture will review the development and biological activities of bisphosphonates. Their use in the management of bone diseases including metastatic disease will also be covered.

Professor Peter Croucher BSc, PhD



Peter Croucher gained his PhD from the University Of Wales College Of Medicine in Cardiff in 1991 before moving to the Department of Medicine at Cambridge University to work as a post-doctoral scientist. In 1994 he moved to the Department of Human Metabolism and Clinical Biochemistry at the University of Sheffield where in 1997 he became a Leukaemia Research Bennett Senior Fellow. In 2001 he moved to the Nuffield Department of Orthopaedic Surgery in the Oxford University Institute for Musculoskeletal Sciences as a senior research fellow. In 2003 he returned to the University of Sheffield School of Medicine as Professor of Bone Biology. He is currently Joint Director of the Mellanby Centre for Bone Research and Head of the Department of Human Metabolism. Peter's research interests are in bone biology and in particular in understanding the development of bone metastasis. His work is currently funded by programme grants from the LLRF and Cancer Research UK.

Mechanisms of metastatic bone disease

Tumour cells can metastasise to the skeleton or can develop directly in bone. These cells interact directly with bone cells to cause devastating bone disease. This presentation will outline recent advances in our understanding of:

- The molecular mechanisms responsible for regulating bone resorption
- The molecular mechanisms of biomes formation
- The evidence for an interdependence between metastasising tumour cells and the cells of bone

Robert E. Coleman, MD, FRCP, FRCPE



Robert Coleman is Professor and Honorary Consultant Medical Oncologist in the Academic Unit of Clinical Oncology and Director of the Cancer Clinical Trials Centre, Weston Park Hospital, Sheffield, United Kingdom. He is Associate Director of the National Cancer Research Network. He was Chairman of the National Cancer Research Institute Breast Cancer Study Group in the UK (2004-09) and Past-President of the Cancer and Bone Society. Professor Coleman's research interests include cancer-induced bone disease and developments in the management of breast cancer. He has authored or co-authored more than 200 publications of original research appearing in such journals as *The New England Journal of Medicine*, *Journal of National Cancer Institute*, *Journal of Clinical Oncology*, and *Annals of Oncology* and 100 reviews and book chapters. He is on the editorial board of several oncology journals and a reviewer for numerous journals.

Bisphosphonates and the management of metastatic bone disease – clinical problems and management

Abstract: Bone is the most common site for metastasis and is of particular clinical importance in breast and prostate cancers. The interactions between cancer cells in the bone marrow microenvironment and normal bone cells provide the rationale for bone-targeted therapies such as bisphosphonates to reduce the risk of skeletal complications and relieve bone pain.

Advanced disease: Multiple, randomised controlled trials over the past two decades have clearly demonstrated that bisphosphonates are effective in reducing skeletal morbidity. Zoledronic acid is the most potent bisphosphonate, with efficacy across the range of tumour types resulting in metastatic bone disease.

Early disease: Bone targeted treatments may modify the course of the disease and disrupt the metastatic process, reducing the risks of disease recurrence. The evidence is particularly strong in patients with low background levels of reproductive hormones. Bisphosphonates are also an important component in the management of treatment induced bone loss. The biological rationale, clinical evidence and practical applications of bisphosphonates in oncology will be reviewed.

Professor Simon Rogers BDS, MBChB (Hons), FSD RCS (Eng), FRCS (Eng), FRCS (Max), MD



Simon qualified from Sheffield University Dental School in 1984. He became a Fellow of the Dental Faculty of the Royal College of Surgeons England in 1988 and qualified with honours from Birmingham University Medical School in 1990. In 1994 he passed his general surgical fellowship from the Royal College of Surgeons England and in 1997 won the gold medal in the Intercollegiate Oral and Maxillofacial exit examination. In January 1999 Simon was appointed Consultant Oral and Maxillofacial Surgeon at the University Hospital Aintree and Honorary Reader, University of Liverpool. He has an interest in Patient Reported Outcomes and in 2000 was awarded his MD from the University of Birmingham. In 2002 he was awarded a Hunterian Professorship from the Royal College of Surgeons of England for his research into the relationship between function and quality of life following primary surgery for oral and oropharyngeal cancer. In November 2006 he joined Edge Hill University, Faculty of Health and has a Chair in the Evidence based Practice Research Centre (www.edgehill.ac.uk/eprc). He is currently Chairman of the BAOMS Clinical Effectiveness Sub-committee.

Bisphosphonate related osteonecrosis of the jaw

Abstract: This presentation will focus on the clinical aspects of BRONJ. Brief points will be made on definition, diagnosis, stage, incidence, risk factors, presentation, prevention, development of local guidelines, treatment and data from the National BRONJ audit, the Merseyside regional audit, and clinical cases will be used to draw attention to key aspects.

Symposium 2: Diseases of the Gastro Intestinal Tract

Session chair: Dr Christine Yeoman

Dr Mark McAlindon BM BS B Med Sci DM FRCP



Mark McAlindon has been a consultant Gastroenterologist in Sheffield since 1998. He trained in Nottingham, Stoke-on-Trent and Melbourne and was the British digestive foundation research training fellow 1994-6. His interests include capsule endoscopy, nutrition and inflammatory bowel disease. He is a Member of the British Society of Gastroenterology Endoscopy Committee and is chairman of the UK Capsule and Device-Assisted Enteroscopy Group.

Aetiopathogenesis of gastric mucosal disease

Dyspepsia (pain or discomfort in the upper abdomen) affects up to 40% of the population. Functional (or non-ulcer) dyspepsia is the commonest diagnosis. Aetiology is incompletely understood, but visceral hypersensitivity and abnormal motility appear to contribute to symptoms arising from a macroscopically normal gut. Gastro-oesophageal reflux is associated with a combination of factors which may include disruption of the normal sphincter mechanism with the development of a hiatus hernia, oesophageal dysmotility and abnormal transient lower oesophageal sphincter relaxations. Patients commonly present with heartburn and reflux but some have oro-laryngo-pharyngeal symptoms. The increasing prevalence of obesity and acid reflux may contribute to increasing rates of oesophageal adenocarcinoma, as both are associated with Barrett's metaplasia, a premalignant condition. Peptic ulcer diagnoses are diminishing with time, perhaps because of reduced rates of infection with *Helicobacter pylori* and more judicious use of non-steroidal anti-inflammatory drugs, the two main causes.

Professor David S Sanders



David Sanders is an NHS Consultant Gastroenterologist and Honorary Professor in Gastroenterology at the Royal Hallamshire Hospital and the University of Sheffield. His clinical research interests include coeliac disease, gastrostomy feeding, small bowel endoscopy, irritable bowel syndrome and gastrointestinal bleeding. To date he has obtained research funding of over £1.8million (current active research funding £590K). He has published (or in-press) 186 peer-reviewed manuscripts, 84 of which are original research papers (first or senior author on 42). As a result of this work he has been fortunate to be selected for the European Rising Star Award in Gastroenterology 2010. This is an international research award conferred by the Association of National European and Mediterranean Societies of Gastroenterology (ASNEMGE). He has supervised 1 PhD, 3 MD's, 2 BMed Sci and 2 MSc (all successfully awarded). He has 2 on-going MD's & 2 BMedSci students. As a result of the coeliac clinical service he was amazed to be awarded the Coeliac UK (National Medical Patient Charity) Healthcare Professional of the Year Award 2010. This award is based on patient nomination and voting. He is the co-author on the recent NICE guidelines for coeliac disease (BMJ 2009) and current BSG guidelines. In 2011 he and his colleagues won one of the inaugural British Society of Gastroenterology National GI Care awards. The team were delighted to have received recognition for the Sheffield Small Bowel Service which they provide.

Immunology of coeliac disease

Abstract: Coeliac disease is a common but often under diagnosed condition with important complications. Coeliac disease is due to immune mediated gluten intolerance and may present in a number of ways. Coeliac disease has become more frequently diagnosed due to the recognition of the atypical presentations. In recent years more sensitive and specific serological markers have been developed but the gold standard of diagnosis is still performing a duodenal biopsy. Adherence to a strict, lifelong gluten free diet is the cornerstone of management, improving symptoms and reducing complications of the disease. I hope that this talk will provide an overview of our current understanding of coeliac disease as well as clinically relevant information about the optimal ways to diagnose and test for coeliac disease. The second part of the talk will specifically concentrate on oral manifestations of coeliac disease and the relationship between coeliac disease and other autoimmune diseases for example, Sjogren's syndrome.

Dr Alan Lobo



Dr Alan Lobo qualified from Guy's Hospital Medical School and subsequently undertook training posts in Cambridge and Oxford. He trained in Gastroenterology in Leeds and Bristol before his appointment as Consultant Gastroenterologist, in Sheffield, in 1994, where he has developed a large, multidisciplinary Inflammatory Bowel Disease service. He is a member of the BSG Inflammatory Bowel Disease committee, was a co-author of the British Society of Gastroenterology guidelines for the management of inflammatory bowel disease in 2004 and is currently a member of the NICE guideline development group for Crohn's disease.

Crohn's disease and ulcerative colitis

There have been important and exciting developments in both these idiopathic inflammatory bowel diseases (IBD) relating to aetiology and pathogenesis, investigation and treatment and service delivery and organization. Advances in molecular technology and gene sequencing have allowed rapid developments in the detection of genes associated with both Crohn's disease (CD) and ulcerative colitis (UC). At least 70 genes are now thought to be associated with Crohn's disease and, in particular, genes linked to autophagy pathways and innate immune responses have been implicated. Advances in treatment have been seen in optimizing use of established drugs and increasing use of newer drugs – particularly anti-tumour necrosis factor (TNF) agents. New data therefore supports the use of 5-aminosalicylic acid (5-ASA) agents at higher dose and in combination with topical therapy in ulcerative colitis. There is - perhaps belatedly - increasing acceptance of the importance of drug adherence in treatment of these chronic diseases and so once daily dosing for 5-ASA medications is also more widely used. Systemic corticosteroids are effective and widely used for active IBD, but are associated with significant morbidity. Strategies for reducing corticosteroid use are therefore important – including the use of immunosuppression with azathioprine/mercaptopurine or methotrexate. Such strategies include the earlier identification of those with markers of a more debilitating disease course. The use of anti-TNF agents has radically changed the management of IBD, particularly Crohn's disease, both by offering an additional, effective treatment, but also by focusing attention on other important endpoints, particularly mucosal healing. There remains uncertainty about best use of these drugs in terms of concomitant immunosuppression, exit strategies from long-term use, and long-term toxicity. IBD services have benefited over a decade from the increasing involvement of specialist IBD nurses, though their availability is not universal. There is now a national focus on the quality of the service for these patients through a national audit, national standards from the British Society of Gastroenterology and new guidelines for both diseases are in preparation from the National Institute for Clinical Excellence (NICE). The latter will also include establishment of quality standards – an important development for patients, service providers and commissioners.



Dr Dermot Gleeson qualified from University Collage Cork in 1976. He has been a Consultant Gastroenterologist/Hepatologist in Sheffield since 1991, having previously worked in Birmingham, Cardiff, London, Manchester, Yale University, and as a GP in Newfoundland. He has held office and served on committees, both at local and national level. His interests include Alcoholic Liver Disease and Autoimmune Hepatitis (for which he has co-written the draft British Society of Gastroenterology Management Guidelines). When tired of working, he likes to talk to his family, read or play guitar.

Autoimmune liver disease

Abstract. Autoimmune Hepatitis (AIH), Primary Biliary Cirrhosis (PBC) and Primary Sclerosing Cholangitis (PSC) are the main autoimmune liver diseases. Evidence for an autoimmune aetiology includes: (1) presence of chronic inflammation without demonstrable infection (2) immune hyperactivity: antibodies against cell components and high immunoglobulin levels in serum (3) frequent coexistence of other autoimmune diseases in the subject and in family members (4) associations with certain HLA genotypes and (5) therapeutic response to immunosuppressive drugs, although this varies from good in AIH to poor in PSC. The disease manifestations are determined by the main site of the immune attack. In AIH this is the hepatocyte. Thus, patients with AIH present with fatigue, jaundice and (occasionally) liver failure. Typically, serum alanine (ALT) and aspartate (AST) transaminases are elevated, often 10-fold or more, suggesting active damage to hepatocytes. 75% of patients have serum autoantibodies (usually antinuclear or anti smooth muscle antibodies), although these are not completely specific. In about 80% of patients, serum immunoglobulin G is elevated. Liver biopsy shows inflammation and hepatocyte damage at the interface between the portal tracts and the liver lobules, so-called "interface hepatitis". Typically, immunoglobulin-producing plasma cells predominate.

In contrast, in PBC and PSC, the autoimmune attack is directed against the bile ducts: the small interlobular ducts in PBC and the larger bile ducts in PSC. Thus, the main presenting symptoms are fatigue and itching. Itching is found in about half of cases of patients with bile duct damage or obstruction. Its variable occurrence and its aetiology are not understood. Typically, in PBC and PSC, the "ductular" enzymes: serum alkaline phosphatase and Gamma-GT both rise in parallel but serum ALT and AST are only mildly elevated. 90% of patients with PBC have a characteristic serum autoantibody: the antimitochondrial antibody, which is uncommon in other liver diseases. Serum immunoglobulins are often elevated, usually the IgM fraction. Liver biopsy typically shows damage to the small interlobular bile ducts. Often, in the liver biopsy, there is no bile duct remaining in the portal tracts (so called "ductopenia"). Granulomas are common in PBC but are rare in AIH and PSC. Characteristics typical of PSC include (1) a strong association with Inflammatory Bowel Disease (2) presence of anti neutrophil cytoplasmic antibody (ANCA), although not specific for PSC. (3) Most typically, the larger bile ducts develop segmental fibrous narrowing (stricturing). Thus, PSC is usually diagnosed by direct cholangio-pancreatography, either using magnetic resonance (MRCP) or endoscopy (ERCP). In contrast, cholangiography is normal in AIH and PBC. Liver biopsy in PSC often shows portal tract inflammation, scarring around the bile ducts and ductopenia but is often not diagnostic. Patients with autoimmune liver disease sometimes develop (and may present with) oral symptoms. 20-40% of patients with PBC and 2-4% with AIH have Sjogren's "sicca" syndrome. 60% of patients with PSC and about 5% with AIH or PBC have Inflammatory Bowel Disease. 5-10% of patients with PBC and 1-2% with AIH have Coeliac Disease. These bowel diseases may present with mouth ulcers.

In over 80% of patients with AIH, immunosuppressive drugs, such as Corticosteroids and Azathioprine result in fall of serum AST and ALT to near normal. About 70% of patients achieve remission of hepatitis on follow up biopsy. However, disease relapse is unusual following withdrawal of therapy. Therefore, patients are often maintained on long-term Azathioprine. Despite this, progression to cirrhosis and liver failure eventually occurs in about ¼ of patients. Although Corticosteroids, Azathioprine and Cyclosporin have demonstrated some benefits in PBC, these are modest and do not justify their long-term side effects. Ursodeoxycholic Acid, which protects hepatocytes against bile-acid induced damage, has been shown to slow progression of PBC and to improve survival. Unfortunately, to date, no drug has been shown to prevent progression of PSC. Liver transplantation is an effect "salvage" option for advanced liver disease associated with either AIH, PBC or PSC; however, the disease recurs in the transplanted liver in about ⅓ of patients.

Poster abstracts

P1. Lingual arteritis – a case report and literature review.

Authors: Underhill HC*, Grant SWJ, Atkin PA. Oral Medicine, Cardiff Dental Hospital and School

Lingual necrosis is a rare cause of tongue pain, swelling, discolouration and ulceration, the most common cause of which is Giant Cell Arteritis (GCA). We present a case of GCA with oral involvement. There are few large reviews in the literature of lingual necrosis in GCA. We carried out a comprehensive literature review and collated 62 cases which demonstrate a clinical presentation of lingual necrosis in GCA. Lingual necrosis is frequently accompanied with other signs and symptoms, the most common of which are headache, tender temporal arteries, tongue discolouration, swelling and dysaesthesia. Lingual necrosis presents to a variety of specialities, with Oral and Maxillofacial Surgery departments seeing 45% of initial presentations. 22 cases presented with visual loss and 8 of these were preceded by lingual necrosis. This highlights that lingual necrosis indicates advanced stages of the disease and although being a rare initial manifestation of GCA, damage to retinal blood supply is likely to be advanced at presentation. The clinician should therefore be alert to the possibility of GCA in patients with these features. Early diagnosis and treatment is imperative as delay can lead to visual loss and permanent loss of tongue tissue.

P2. Reliability and Responsiveness of The Chronic Oral Mucosal Diseases Questionnaire

Authors: R Ni Riordain*, C McCreary, University Dental School and Hospital, Cork, Ireland

Study aim: To evaluate the reliability and responsiveness of the newly developed Chronic Oral Mucosal Diseases Questionnaire (COMDQ).

Materials and Methods: 160 patients attending the Oral Medicine Unit of Cork University Dental School and Hospital with the following chronic oral mucosal conditions, recurrent aphthous stomatitis, oral lichen planus, mucous membrane pemphigoid, pemphigus vulgaris and orofacial granulomatosis were requested to participate in this study. Test-retest reliability was examined at a 2 week interval and responsiveness of the newly developed questionnaire was evaluated 3 months after the initial distribution of the questionnaire.

Results: Test-retest reliability was also good with intraclass correlation coefficient of 0.81. Using the global transition rating we found a statistically significant decrease in COMDQ scores ($p < 0.05$) in those patients who reported an improvement in their overall condition, a statistically significant increase in COMDQ scores ($p < 0.05$) in those patients who reported a disimprovement in their overall condition and no statistically significant difference in COMDQ scores ($p > 0.05$) in patients who reported that their condition had stayed the same.

Conclusions: This is the first discipline specific quality of life measure developed in the field of oral medicine. This study has demonstrated that the Chronic Oral Mucosal Diseases Questionnaire is a reliable measure to assess quality of life in patients with chronic oral mucosal diseases.

P3. Thalidomide in Oral Medicine Practice – the Sheffield Experience

Authors: C.O. Freeman*, A. M. Hegarty, D. Holt, R. Murphy and C. M. Yeoman. Oral Medicine Unit, Charles Clifford Dental Hospital, Sheffield Teaching Hospitals NHS Foundation Trust, Sheffield

Introduction: Thalidomide has immuno-modulating and anti-inflammatory properties and is used in the management of a number of oral mucosal conditions.

Objective: To review the cases of patients treated with thalidomide in our unit.

Method: The case notes of patients prescribed thalidomide during 2007 – 2010 were reviewed. Clinical diagnosis, outcomes and complications were noted.

Results: 20 female and 8 male patients were identified and ranged in age from 12 -72 years. The diagnoses were recurrent aphthous stomatitis (RAS) (n=11), Behçet's (n=8) recurrent erythema multiforme (n= 8) and

1 patient had lichen planus. The dose was 50mg daily, but increased to 100 or 150 mg daily in 3 patients. Nerve conduction studies (NCS) and pregnancy testing was carried out in accordance with published guidelines. There was complete resolution or significantly improved symptoms in all cases except for the patient with lichen planus. Duration of treatment varied from 1 month to 4 years and was discontinued in 4 patients due to resolution of condition, and due to side effects or as a result of NCS results in 17 patients.

Conclusions: Thalidomide is effective in the management of severe RAS and recurrent erythema multiforme; it is contra-indicated in patients who are pregnant or wish to conceive and side effects may limit duration of treatment. **Relevance:** Thalidomide is effective in the management of severe oral ulceration, but patients must be counselled and monitored appropriately.

P4. Senescent fibroblasts characterise advanced stages of oral squamous cell carcinoma

Authors: Hassona, Y¹, Lim KP¹, Cirillo N¹, Pitiyage G², Parkinson EK², Prime SS¹

¹School of Oral and Dental Science, University of Bristol and ²Department of Clinical and Diagnostic Oral Sciences, Queen Mary's School of Medicine and Dentistry, Institute of Cell and Molecular Sciences, London

Cancer associated fibroblasts are known to play a central role in the initiation, growth and spread of a broad spectrum of different tumours, including oral squamous cell carcinoma (OSCC). We examined the behaviour of fibroblasts from normal oral mucosa, epithelial dysplastic tissues and genetically stable (minimal copy number alterations – CNA; minimal loss of heterozygosity – LOH; wild type p53; wild type p16^{INK4A}) and unstable (extensive CNA and LOH; inactivation of p53 and p16^{INK4A}) OSCC. We demonstrate that fibroblasts from genetically unstable OSCC grew more slowly in 2D culture and over-expressed p16^{INK4A} and senescence associated-β-galactosidase (SA-β-Gal) relative to the other fibroblast subtypes. In view of the close correlation between SA-β-Gal activity and a DNA damage marker associated with oxidative stress (8-oxo-dGuanine), we examined the expression profile of 84 oxidative stress and anti-oxidant defence genes in fibroblasts from genetically unstable OSCC compared to H₂O₂-treated and untreated normal fibroblasts and fibroblasts from genetically stable OSCC. Relative to the controls, a common feature of fibroblasts from genetically unstable OSCC was up-regulation of genes associated with superoxide metabolism, ROS metabolism and peroxidases and down-regulation of antioxidant genes, findings that suggest a particular susceptibility of this fibroblast type to damage induced by oxidative stress. Finally, we show that fibroblasts from genetically unstable OSCC stimulated the invasion of a non-tumorigenic keratinocyte cell line into fibroblast-rich collagen gels. Taken together, the results demonstrate that fibroblasts from genetically unstable OSCC are senescent, most probably as a result of oxidative damage, and act to promote epithelial tumour progression.

Hassona and Lim share equal 1st authorship. YH is in receipt of a Clinical Fellowship from the University of Jordan and we are grateful for this financial support.

P5. A Probable Oral Lichenoid Reaction to Methotrexate

Authors: Viggor SF*, Hullah EA, McParland HM, Almeida B, Challacombe SJ. Oral Medicine, Kings College London Dental Institute at Guys Hospital, London

Background: Lichenoid drug reactions are a well recognised variant of the mucocutaneous condition lichen planus. Whilst a number of disease-modifying anti-rheumatic drugs have been implicated, to date methotrexate (MTX) has not. There is currently little evidence that lichen planus and lichenoid reactions can be differentiated clinically or histologically, so the diagnosis of a true lichenoid reaction is commonly made on clinical improvement after cessation of the offending drug.

Objectives: To report a severe lichenoid reaction which developed six months after commencing MTX and improved after dose reduction.

Case Report: A 52 year old lady presented with a 4 month history of soreness of the mouth. Her medical history included rheumatoid arthritis for which she had commenced MTX six months prior to the development of oral symptoms. Clinical examination revealed extensive ulceration of the lateral borders of the tongue as well as keratotic striations and erythema affecting the buccal mucosa. Histological examination revealed a subepithelial

lymphoplasmacytic infiltrate with perivascular extension favouring a lichenoid reaction. In view of the temporal association between the commencement of MTX and symptom onset it was felt that this was the likely cause. The dose of MTX was therefore reduced and complete resolution was achieved within a year. She remains symptom free.

Conclusions: MTX is associated with many unwanted effects including oral ulceration but oral lichenoid reactions appear to be as yet unreported. This case serves to illustrate the possibility of such reactions to a medication which has been cited as a possible treatment for lichen planus.

P6. Nicorandil induced skin ulceration in a patient with Mucous Membrane Pemphigoid

Authors: Helen McParland* Richard Cook, Jane Setterfield, Professor Stephen Challacombe. Oral Medicine Kings College London Dental Institute at Guy's Hospital

Background: Oral ulceration is a well documented complication of nicorandil, a potassium channel activator used to treat angina. The most common presentation is of a single ulcer on the tongue which is unresponsive to treatment, and can resemble oral cancer. Similar ulceration of the palate has been reported. Rarely perianal ulceration and ulceration of the leg have been described, but to date there have been no cases; as far as we know; of ulceration involving the face and none in patients already suffering from an autoimmune blistering disease.

Objectives: We report a case of nicorandil induced ulceration of the nasal bridge and tongue, in a patient with mucous membrane pemphigoid (MMP).

Case Report: A 65 year old man attended complaining of an 8 week history of an ulcer on his tongue, and a large ulcer on the bridge of his nose. Initially it was thought the lesions represented a flare up in his disease as patient had stopped azathioprine 4 months previously, and his MMP was being controlled with topical steroids only. Examination revealed no other signs of MMP so biopsies were undertaken. Histology revealed non-specific ulceration in both sites. It was noted that the patient was taking nicorandil 20mg. His lesions resolved when the drug was withdrawn.

Conclusion: Awareness of the association of nicorandil with ulceration in any part of the gastrointestinal tract, and now skin should be highlighted to help avoid delays in withdrawing the treatment and to avoid unnecessary and sometimes invasive and costly interventions.

P7. Prevalence of oromucosal lesions in children and young people

Authors: DW Anchassi*, TA Hodgson. Oral Medicine, Eastman Dental Hospital, UCLH NHS Foundation Trust

Introduction: The literature regarding the prevalence of oral mucosal lesions in children is in the most part conducted in paediatric dentistry and retrospective. The objective of the study was to evaluate the number of under 19 years old individuals seen in Oral Medicine, their presentation and diagnoses.

Method: A retrospective study was carried out of all patients under 19 yrs of age seen over a 24 month period. Clinical records were analysed including demographic data, referral source, investigations and diagnoses.

Results: Of a total of 9819 patient contacts, 343 were under 19 years old (3.5% of activity). This represented 154 patients. 39 different diagnoses were made in this group. The most common diagnosis being recurrent aphthous stomatitis (16%) followed by orofacial granulomatosis (11%). Gingival hyperplasia was diagnosed in 5.8%. Erythema migrans and erythema multiforme were seen with equal commonality (4.5%). Of the benign swellings papillomas were most commonly seen (3.8%).

Conclusion: There is a scarcity of studies looking at children and young people in an oral medicine environment, which by its nature is self-selected and differing from other studies described. In contrast with our findings, general (US) population study reported most prevalent lesions as lip/cheek biting (1.89%), followed by aphthous stomatitis (1.64%), recurrent herpes labialis (1.42%) and geographic tongue (1.05%). Retrospective study by paediatric dentists found the most frequent lesions were oral candidiasis (28.4%), geographic tongue and other tongue lesions (18.5%), traumatic lesions (17.8%), recurrent aphthous ulcerations (14.8%), herpes simplex virus infection (9.3%), and erythema multiforme (0.9%).

P8 Utility of transepithelial oral brush biopsy for ploidy analysis

Authors: Awan K, McParland H, Odell EW, Warnakulasuriya S* Oral Medicine & Pathology, King's College London.

Objective: To compare ploidy data obtained from transepithelial brush biopsy samples or surgical biopsy samples in a case-series of oral potentially malignant disorders (OPMD).

Materials and methods: 126 subjects diagnosed with OPMD (leuko/erythroplakia, lichen planus) at King's College Hospital or Guy's Hospital were investigated by several chair-side techniques. Biopsy samples were obtained from all patients by scalpel biopsy and in 74 subjects using a brush (Oral Advance™ kit). Ploidy analysis was conducted in two laboratories using the wax blocks at Guy's and brush samples transported in a liquid fixative to Perceptronix Medical Inc (Canada). Image cytometric analysis for DNA content was undertaken following monolayer preparation and staining with Feulgen-Schiff or Feulgen Thionin staining. Samples were considered diploid if the histogram showed one peak of nuclei with a DI of 0.85-1.15 and if $DI > 2.3$ as aneuploid, with two intermediate groups. In 8 brush biopsy samples the number of nuclei was inadequate for analysis.

Results: Of the 68 samples analysed using wax blocks 58 were diploid and 10 were aneuploid (14.7%). Using the brush samples 61 were diploid and 8 were aneuploid (10.6%). Combined data revealed 12 aneuploid cases. Concordance of data was examined in 44 samples. All samples reported as diploid ($n=38$) from surgical samples were also reported as diploid in brush samples, but among the 8 aneuploid samples reported from surgical samples only 6 were found to be aneuploid in brush samples. The measure of agreement by Kappa was 0.831.

Conclusion: Quantitative oral brush cytology is a suitable technique for sampling oral lesions.

P9. Title Nevus of Ota with oral mucosa involvement: A case report

Authors: Ana Poveda, John Hamburger. Oral Medicine, Birmingham Dental Hospital

Introduction: Nevus of Ota, which was first described by Tanino and Ota in Japan in 1939, is a dermal melanocytic hamartoma characterized by bluish/grey pigmentation affecting the distribution of the first and second division of the trigeminal nerve. Unilateral and bilateral forms have been described, the latter being less common. The precise aetiology and pathogenesis of nevi of Ota is not known. In addition to skin, pigmentation may involve oral mucosa and ocular structures such as the sclera, cornea, and retina.

Objectives: To describe an unusual case of Nevus of Ota with oral mucosal involvement.

Case report: We report a case of Nevus of Ota in a 35 year old female who was referred to the Oral Medicine Department at Birmingham Dental Hospital with regards to an unusual pigmentation affecting her palate, tongue and buccal mucosa. On examination further unilateral facial pigmented skin lesions were noted as well as a bluish pigmented sclera in her right eye. After consultation with ophthalmologist consultant the diagnosis of Nevus of Ota was made. The differential diagnosis, prognosis and management of this rare condition will be discussed.

Conclusion: As cases of malignant melanoma in the skin and ocular region have been described, referrals to Ophthalmology and Dermatology departments for Nevus of Ota patients would be indicated.

P10. Mucocutaneous effects of hydroxyurea (hydroxycarbamide)

Authors: Timothy Collins, Sarah J Ellison, Professor Crispian Scully. Oral Medicine, Eastman Dental Hospital, UCLH NHS Foundation Trust and Bristol Dental Hospital

Anti-neoplastic agents have long been recognised to produce mucocutaneous adverse effects, mainly mucositis. Hydroxyurea (hydroxycarbamide), sometimes employed in the treatment of disorders ranging from psoriasis to sickle cell disease, to some carcinomas, leukaemias and other malignant states, is no exception. We report a patient on hydroxyurea therapy who presented with oral hyperpigmentation. An 86 year old Caucasian female complained of brown patches on her lips. She suffered from polycythaemia rubra vera, successfully controlled with hydroxyurea over a number of years. Her medical history otherwise was non-contributory. Examination showed multiple brown-black skin macules, longitudinal melanonychia and multiple brown-black macules on both vermilions and intraorally, notably in the palate. Drug-induced hyperpigmentation has previously been reported mainly with cyclophosphamide, doxorubicin, zidovudine, and minocycline. Hydroxyurea therapy has been reportedly associated with melanonychia and cutaneous hyperpigmentation, oral hyperpigmentation, oral ulceration and, in a few patients, with squamous carcinoma of the skin or mouth.

P11. Evidence for a novel non-adrenal glucocorticoid system in the oral mucosa and its relevance to oral disease

Authors: Nicola Cirillo¹, Yazan Hassona¹, Valeria Soro¹, Massimo Pignatelli², Stephen S Prime¹

¹School of Oral and Dental Science, University of Bristol and ²School of Cellular and Molecular Medicine, Department of Histopathology, University of Bristol

Synthetic corticosteroids are used widely for the treatment of a variety of immuno-inflammatory diseases of the mouth. Little is known, however, as to whether the oral mucosa is able to modulate the local concentration of active corticosteroids. This has important clinical implications because tissue specific regulation of glucocorticoids is a key determinant of clinical efficacy of these drugs. In the present study, we show that oral fibroblasts and keratinocytes express ACTH receptors (MR2), glucocorticoid receptors (GR) and 11 β -hydroxysteroid dehydrogenases (11 β -HSDs). Both cell types are not only able to activate cortisone into the active form cortisol but also, synthesize cortisol de novo following stimulation with ACTH. Unlike keratinocytes, fibroblasts lack HSD2 and, therefore, are unable to modulate the local concentration of exogenously administered cortisol. Expression of both 11 β -HSDs was altered in oral epithelial cancers (squamous cell carcinoma and mucoepidermoid carcinoma). Blocking of endogenous cortisol catabolism in keratinocytes with the 11 β -HSD2 inhibitor glycyrrhetic acid mimics the effect of exogenous administration of hydrocortisone and prevents the detrimental effects induced by serum from patients with Pemphigus vulgaris. Taken together, the data demonstrate that a novel non-adrenal glucocorticoid system is present in the oral mucosa and plays a potentially important role in disease.

P12. Differential expression of sialyl Lewis A and sialyl Lewis X affects the metastatic potential of oral squamous cell carcinoma cell lines.

Authors: Jill Callaghan, Martin Thornhill, Craig Murdoch. School of Clinical Dentistry, University of Sheffield

Metastasis is a major determinant of poor outcome for oral squamous cell carcinoma (OSCC). To metastasise successfully tumor cells must bind to the endothelial cells that line blood vessels and leave the circulation to form metastatic deposits. Despite the importance of metastases, little is known about the way in which OSCC spread via the blood and lymphatic vessels.

Results: Using flow cytometry we found that some OSCC cell lines (TR146, Cal27) express elevated levels of the endothelial cell binding ligands sialyl-Lewis X (sLex) and sialyl-Lewis A (sLeA) compared to others (SCC4). Expression of mRNA for fucosyltransferases (FUT) and sialyltransferases (ST) which are involved in the addition of terminal sugar groups in the assembly of functional sLeA and sLex were measured by RT-qPCR. Expression of FUT III and FUT VII were elevated in TR146 and Cal27 cell lines but not in SCC4, matching the cell surface expression of sLex and sLeA in these cells. sLex and sLeA are ligands for E-selectin which is up-regulated on activated endothelium. Therefore, we examined whether OSCC cell lines expressing sLex and sLeA could bind to activated endothelial cell monolayers. Cal27 bound rapidly to activated endothelium under conditions of flow

whereas SCC4 cells failed to adhere. These data suggest that cells derived from OSCC metastasise by binding to activated endothelium in a sLeX/sLeA E-selectin-dependent manner. Developing therapeutic agents which prevent sLeX/sLeA assembly (inhibitors of sialylation) or blocking agents such as specific antibodies, peptides or oligosaccharides that target sLex, sLeA or E-selectin may be useful in preventing OSCC metastasis.

P13. Porphyromonas gingivalis intracellular invasion and immune evasion; potential virulence factors in atherosclerosis.

Authors: J. HIGHAM*, C. MURDOCH, C.W.I. DOUGLAS and M. THORNHILL. School of Clinical Dentistry, University of Sheffield

Porphyromonas gingivalis is an oral pathogen that is thought to play a role in the initiation and progression of atherosclerosis. P.gingivalis can invade endothelial cells; however, the mechanisms by which it evades immune surveillance to survive or how it promotes atherosclerosis are poorly understood. We investigated whether the gingipain proteases of P.gingivalis could degrade immune molecules involved in leukocyte recruitment.

Methods: Monolayers of human microvascular endothelial cells (HMEC-1) were stimulated with TNF- α and infected with P. gingivalis strain W50 with or without a protease inhibitor or with one of three gingipain knock-out mutants of this strain; E8 lacking arginine-specific protease, K1A lacking lysine-specific protease or EK18 lacking both proteases. Endothelial chemokine and adhesion molecule expression was measured at time-points up to 24h.

Results: Infection of TNF- α -stimulated HMEC-1 cells with P. gingivalis resulted in a significant reduction in chemokine CXCL8 and adhesion molecules, ICAM-1 and VCAM-1, expression compared to uninfected controls. Inhibition of P. gingivalis protease activity restored ICAM-1 and VCAM-1 to uninfected control levels. Use of knock-out mutants suggests that the lysine-specific gingipain Kgp was responsible for degradation of these molecules. However, lack of Kgp did not restore CXCL8 levels. P. gingivalis had no significant affect on endothelial cell viability.

Conclusions: P. gingivalis infection of endothelial cells reduces production of pro-inflammatory molecules without affecting cell viability. The reduction in ICAM-1 and VCAM-1 levels is Kgp-specific. This ability to reduce leukocyte recruitment to the infected site in-vivo may facilitate the long term intra-endothelial cell survival of P. gingivalis and promote atherosclerosis.

P14. Management of Temporomandibular Disorders: a 3 year follow up audit

Authors: Dr. H. Nettleton, Dr. R. McMillan*, Prof. JM Zakrzewska. Department of Oral Medicine and Facial Pain, Eastman Dental Hospital, UCLH Foundation NHS Trust

Background: There is increasing evidence that Temporomandibular Disorders (TMD) should be managed within a multi-disciplinary framework using a more biopsychosocial approach.

Aims: 1. To determine whether a biopsychosocial approach provides effective management of TMD patients by resulting in decreased utilisation of other healthcare services following discharge from our service.

2. To identify areas of the TMD service which could be changed to improve outcomes

Methods:

- Identify patients with diagnosis of TMD discharged from facial pain service in 2007
- Telephone administered questionnaire based on Graded Chronic Pain Scale (GCPS)
- Postal questionnaire sent if unable to contact by telephone
- Comparison of baseline outcome data with follow up outcome data

Outcomes:

- A total of 58 patients identified from baseline database
- Overall response rate 51.7%;30/58
- 2 respondents (6.7%) have been seen in the secondary care setting for TMD since discharge
- 10 respondents (30%) have been seen in the primary care setting for TMD since discharge
- 17 respondents (56.7%) have seen no healthcare providers for TMD since discharge
- Missing data permitted outcome comparison of 26 cases
- Significant GCPS disability grade in 30.4% at baseline
- Significant GCPS disability grade in 6.9% at follow up
- At follow up GCPS disability grade improvement in 82.6%, stable in 13.0%, deteriorated in 4.3%

Conclusions: The TMD service appears to provide an effective service by improving outcomes and reducing need for further use of secondary care once discharged

P15. Cytoskeleton proteins as auto-antigens in Behçets Disease

Authors: Bergmeier LA, Hamed M, Hagi-Pavli H, Adegun O and Fortune F. Clinical and Diagnostic Oral Sciences, Barts and The London School of Medicine and Dentistry

Heat shock proteins have been postulated as autoantigens driving the pro-inflammatory cytokine profile observed in Behçet's Disease (BD) patients. BD patients have both antibodies and T cell responses to HSP. Perturbation of the oral proteome may also contribute to the disease. Cytoskeletal proteins have been found associated with HSP extracted from Human cell lines and are immunogenic. We have recently demonstrated a greater level of extracellular HSP (eHSP) in the saliva of BD patients compared with healthy controls. Extracellular HSP is capable of adjuvant activity and there is growing evidence that the sublingual mucosa is a target for immune modulation. We have investigated saliva for the presence of cytoskeleton proteins and assayed the IgG antibody response in plasma to eHSP70 and cytoskeletal proteins known to associate with eHSP70.

Elisa analysis showed elevated levels of eHSP70 in the saliva of BD patients compared with healthy controls. Three cytoskeletal proteins, namely Cofilin, profilin and actin were detected in saliva by western blot of both BD patients and RAS patients as was eHSP70. These proteins were also present in some healthy control saliva.

IgG antibodies were found in BD patients to Cofilin, Profilin and eHSP70 but not to actin. There was no significant difference between the antibody response to Profilin in BD and HC plasma samples. However, there was a significant difference between the IgG anti-Cofilin response of BD and healthy controls (Mann-Whitney $p=0.0159$). Similarly if the BD samples were stratified into active and quiet disease the significance was maintained ($p=0.0280$, $p=0.0280$).

P16: SLPI Regulation of Neutrophil Elastase in The Oral Mucosa

Authors: Tanya Novak*, Eleni Hagi-Pavli, Lesley A Bergmeier and Farida Fortune. Clinical and Diagnostic Oral Sciences, Barts and The London School of Medicine and Dentistry

Background: Recurrent aphthous stomatitis (RAS) is a common disorder in which periodic oral ulcers arise. Occasionally, ulcers can be a primary indication of underlying systemic immune dysregulation as seen in Behcet's disease (BD). The mechanism by which an ulcer manifests, subsides and eventually reoccurs is not understood. A protein that has been attributed to causing mucosal damage is neutrophil elastase (NE). NE is regulated by secretory leukocyte protease inhibitor (SLPI) whereby a lack of NE regulation by SLPI and perpetual cytokine stimulation, could lead to instability of the oral mucosa and relapse of oral ulcers, increased severity, and delayed healing.

Objectives: Measure: 1) SLPI and NE in human saliva and buccal epithelial cells using ELISAs and Western Blotting 2) SLPI mRNA expression using quantitative PCR (QPCR) in RAS, BD patients and healthy controls (HC).

Results: Salivary NE levels were significantly higher in active RAS (aRAS) patients (3695.9 ± 594.5 ng/ml, $n=9$, $p \leq 0.001$) and active BD (aBD) (2893.3 ± 555.8 ng/ml, $n=45$, $p < 0.01$) compared to HC (1641.3 ± 193.6 ng/ml, $n=46$). An inverse relationship was found: when NE was high, its regulatory protein SLPI was low. Salivary SLPI levels in aBD (418.2 ± 73.8 ng/ml, $n=45$), qBD (375.8 ± 56.8 ng/ml, $n=52$) were not significantly different than in HCs (544.2 ± 84.4 ng/ml, $n=40$) or aRAS (310.4 ± 72.8 ng/ml, $n=12$). However, when an ulcer is present SLPI mRNA is upregulated. Western blotting showed NE (29.7kDa) and SLPI (12kDa) expression on buccal epithelial cells and in saliva.

Conclusion: Salivary SLPI levels are unexpectedly low during active disease even though SLPI mRNA is upregulated.

P17. Development of new microbicides against HIV-1: a collaborative project.

Authors: Karolin Hijazi and Charles Kelly. Oral Immunology, King's College London

The aim of this international collaborative project is to develop new microbicides against HIV-1. Microbicides are compounds that can be applied topically to prevent HIV transmission through mucosal surfaces. Microbicides investigated included antibodies, single domain antibodies (VHHs) and antiretroviral (ARV) drug combinations. A combination of 3 anti-HIV antibodies was formulated in hydroxyethylcellulose (Mabgel) and tested for efficacy in a macaque challenge model. Mabgel was also tested for safety in a double blind placebo-controlled phase I clinical trial. Single domain antibodies were selected from the immune repertoire of immunised llamas and subsequently screened for anti-HIV neutralising activity in vitro. Combinations of 2 or 3 HIV-1 reverse transcriptase inhibitors were tested in vitro and efficacy was compared with that of each inhibitor tested singly. Mabgel proved to be effective as a vaginal microbicide preventing infection in animals challenged with virus at 1 or 4 hours after vaginal application of the candidate microbicide. In the phase I safety trial, no serious adverse events were recorded. VHHs were selected from phage libraries using screening procedures aimed at enriching for those with specificity for the CD4 or CD4-induced binding sites on HIV-1 envelope protein. More than 50 were isolated including some capable of neutralising isolates from clades A, B and C with $IC_{50} < 1$ M. ARV combinations tested using in vitro assays demonstrated significant reductions in IC_{50} (>50%) compared with drugs tested singly and were more effective against drug-resistant HIV-1 isolates. These findings establish proof-of-principle for antibody-based microbicides and contribute to a development pipeline.

P18. Nano-vesicle delivery of chemotherapeutic drugs to oral cancer cells using polymersomes

Authors: H. E. Colley*, D. Cecchin, V. Hearnden, C. Murdoch, S. Armes, G. Battaglia, M. H. Thornhill. University of Sheffield

Polymersomes are synthetic block co-polymers that self-assemble in water to form membrane-enclosed nanovesicles. Polymersomes have the potential to encapsulate and carry chemotherapeutic drugs into cells thereby reducing the off target toxicity that often compromises anti-cancer treatment. Here, we assess the in vitro efficiency of polymersomes to penetrate and deliver their load to head and neck cancer cells (HNSCC) cultured as both monolayers and as tumour spheroids (small solid expanding tumour masses).

Polymersomes loaded with a fluorescent tracking molecule (rhodamine) or chemotherapeutic agents were applied to HNSCC monolayers or spheroids for increasing lengths of time. The cell viability, uptake and retention of polymersomes were analysed over time by MTT and flow cytometry respectively. The effectiveness of chemotherapeutic-loaded polymersomes to kill HNSCC cells was also analysed.

Polymersomes loaded with fluorescent rhodamine were internalised by HNSCC within 2 minutes of administration and maximal delivery was achieved within 30 minutes. When delivered to tumour spheroids, polymersomes are internalised by over 80% of cells within 120 hours and importantly are shown to penetrate into hypoxic regions of the tumour model. Both doxorubicin and paclitaxel were loaded into polymersomes with high encapsulation efficiencies. Furthermore, both drugs can be dually loaded into polymersomes to enable combinational delivery. Loaded polymersomes demonstrated moderately better killing of HNSCC grown as monolayers compared to the same concentration of free drug. Current work focuses on the delivery to tumour spheroids and also specific targeting to HNSCC. In conclusion, polymersomes offer a novel drug delivery system for use in head and neck cancer.

P19. The role of Semaphorins in Oral Cancer

Authors: Hunter KD, Valluru M, Staton CA, School of Clinical Dentistry and Unit of surgical Oncology, University of Sheffield

Angiogenesis is vital to the development of malignant tumours and vascular endothelial growth factor (VEGF) plays a prominent role in this process. Anti-angiogenic therapy is in clinical use, but tumours escape treatment control, partly due to the effects that many pro-angiogenic molecules elicit in the tumour cells themselves. VEGF-binding receptors neuropilin-1 (Np1) and neuropilin-2 (Np2) have recently been identified. Neuropilins are also receptors for the class 3 semaphorins, Sema3A-G, which act on growing neurons, but also compete with VEGF for Np1/2 binding on endothelial and tumour cells. Microarray analysis of oral cell cultures derived from normal, dysplastic and carcinoma tissue showed reduced expression of Sema3C and 3F in the carcinomas compared with normal cultures. No other Sema3s are differentially expressed whereas Np1 and Np2 are expressed by all of the cultures. Immunohistochemistry demonstrates reduced expression of both Sema3C and Sema3F in a panel of HNSCCs when compared with normal oral mucosa in vivo. The reduction shows moderate inverse correlation with microvascular density (3C $r^2 = 0.55$, 3F $r^2 = 0.58$). The pattern of expression in HNSCC in vivo and in vitro suggests that both Sema3C and 3F act to inhibit tumour development. Furthermore, these data suggest that Sema3C may have a different spectrum of effects in HNSCC cells compared with that previously described in other tumours, but this requires confirmation with functional experiments. **The project was supported by a grant from BSOMP**

P20. Are salivary gland ductal problems of any significance in Darier's disease?

Authors: Desouky A¹, Hegarty AM¹, Farthing P², Torres-Rendon A², Yeoman CM¹ Oral Medicine Unit¹, Oral and Maxillofacial Pathology unit², University of Sheffield School of Clinical Dentistry, Charles Clifford Dental Hospital, STH Foundation Trust, Sheffield (UK)

Introduction: Darier's disease is an autosomal dominant disorder classically involving skin and occasionally oral mucosa. There have been reports in the literature of concomitant salivary ductal abnormalities. Case details: A 32 year old female presented with erythema and swelling of the floor of mouth. She had been diagnosed at 13 years of age with Darier's disease. Skin lesions were present on the forehead, neck, trunk and limbs. No oral lesions typical of Darier's disease were present. The floor of mouth showed erythema and swelling of the left submandibular duct. A calculus was subsequently removed. One year previously the patient had presented with contralateral submandibular ductal swelling. No calculi were found. Conclusions: This case highlights the possibility of change occurring within salivary gland ductal structure and associated problems occurring in patients with Darier's disease.

P21. Plexiform Schwannoma: a rare variant of neurilemmoma.

Authors: Daniela I. Ion*, Keith Smith, Simon Atkins, Paul Speight, Paula Farthing, School of Clinical Dentistry, University of Sheffield.

Neurofibromas and schwannomas are relatively common benign tumours of peripheral nerves but only 5% of Schwannomas are plexiform in type. These qualify as cellular schwannomas and usually occur superficially. We report a case of a plexiform schwannoma occurring in a young adult with a history of multiple neural lesions.

Case report: A 19 year old male presented at Charles Clifford Dental Hospital, Sheffield, UK with a unilateral swelling of the lower lip. The provisional clinical diagnosis was mucocoele or salivary gland tumour. Only part of the lesion was surgically removed because it extended into the adjacent tissues with no apparent tissue plane. Histopathological examination showed numerous large circumscribed bundles of neural tissue composed of strongly positive S100 spindle shaped cells which were focally dense and showed palisading. No evidence of Verroca body formation was seen. Focal more myxoid, and cell sparse areas were seen just below the margins of the bundles which were intimately associated with minor salivary gland tissue and extended throughout the biopsy. There was no evidence of mitoses or pleomorphism. A diagnosis of plexiform schwannoma was made. On further investigation the patient was found to have a history of two previous neural lesions in childhood: one on the thigh and one on the chest wall.

Discussion: Most plexiform schwannomas are solitary but this patient had multiple neural lesions which raises the possibility he may have either neurofibromatosis type 2 or schwannomatosis. Further clinical investigation is advisable in these cases as neurofibromatosis type 2 may be associated with considerable morbidity.

P22 Site specific chemokine expression by oral keratinocytes.

Authors: N. ALHINDI, L. BINGLE, S. WHAWELL, and P. FARTHING, Oral & Maxillofacial Pathology, School of Clinical Dentistry Sheffield, Sheffield, England, UK

Background: Lymphocytes show a restricted pattern of tissue recirculation which is controlled by site specific chemokines and homing receptors. Three such pathways have been described in the skin, small intestine (SI) and salivary glands (SG) but that of the oral mucosa is unclear. We have shown that oral lymphocytes express both gut ($\beta 7$) and skin associated (CLA) homing receptors and hypothesise that oral epithelium produces both the gut, CCL25, the skin, CCL27, and the salivary gland associated chemokine CCL28 to attract lymphocytes into the oral mucosa.

Aim: The aim of this study is to determine chemokine expression by oral keratinocytes in both in vivo and vitro.

Methods: RNA was extracted from normal oral keratinocytes (NOK) and analyzed by Q-PCR for CCL25, CCL27 & CCL28. Controls included normal skin keratinocytes (NSK), small intestine and salivary gland RNA. Protein expression for was investigated by immunohistochemistry on tissue sections of normal oral mucosa and lichen planus and by flow cytometry

Results: Oral keratinocytes only express CCL25 in normal mucosa but in lichen planus CCL25, CCL27 & 28 were expressed. A three-fold increase in CCL25 but a 20-fold decrease in CCL27 expression was seen in NOK when compared with NSK. Levels of CCL25 were much lower than in the small intestine. Variable levels of CCL28 RNA were seen. CCL27 & CCL28 was expressed by a significantly higher proportion of NSK (75.4% & 91.3%) than OK (43% & 57.5%) ($P < 0.05$) respectively. Surprisingly similar proportions of NSK & NOK expressed CCL25 (22.4% & 26.9%) respectively.

Conclusions: In inflamed tissue oral keratinocytes express all three chemokines CCL25, CCL27 & CCL28. In vitro, compared with NSK, NOK express less CCL27 (skin associated chemokine) mRNA and protein but more mRNA for CCL25 (gut associated chemokine). Surprisingly similar proportions of NSK & NOK produce the gut associated chemokine CCL25 and more NSK than NOK produce the salivary gland associated chemokine CCL28. These results suggest multiple chemokines may attract lymphocytes into oral mucosa. However, the concept of site specific chemokine production in the skin may be an oversimplification.

P23: Osteonecrosis of the jaws in patients treated with concomitant Sutent (Sunitinib) and intravenous Zometa (zoledronic acid) for metastatic renal carcinoma.

Authors: Maraveyas A, Bozas G and Greenwood G. Hull and East Yorkshire Health Partnership

Over the past year, eight cases of spontaneous osteonecrosis of the jaws have occurred in patients with metastatic renal carcinoma. All patients were treated with Sutent initially followed by Zometa. After only one or two doses of Zometa they developed extensive and spontaneous osteonecrosis. This was not related to invasive dental treatment but did occur in patients with pre-existing dental disease and a high proportion of patients smoked.

P24 Oral Health Status Of Behçet's Syndrome Patients In The UK

Authors: N.Seoudi*, E.Hagi-Pavli, L.A.Bergmeier, D.Bibby, D.Clark, E.Cunningham, J.Buchanan, A.Tappuni, A.Abdelghani, S.Begum, M.Wilks, F.Drobniewski J.Breuer, M.A.Curtis and F.Fortune

The inter-relationship between the oral health status, aspects of immune response and the oral microbiome of Behçet's Syndrome (BS) were investigated in a cohort of 54 BS, 28 healthy controls (HC) and 8 recurrent aphthous stomatitis (RAS). The oral health of BS, HC and RAS was assessed. Oral and salivary bacteria were cultured and identified by MALDI-TOF spectrometry. Salivary viral load and the serum immunoglobulin G (IgG) to the different herpes viruses (HSV1, HSV2, VZV, CMV, EBV and HHV8) were also examined. Total RNA was purified from non-ulcerated buccal mucosal brush biopsies and checked by real time PCR for the presence of toll like receptor 2 (TLR2) mRNA and toll like receptor 4 (TLR4) mRNA. BS had statistically higher decayed, missing, filled teeth index ($p=0.016$), gingival index ($p=0.0056$), sulcus bleeding index ($p=0.0002$), periodontal probing depth ($p=0.039$) and attachment loss ($p=0.015$) in comparison to HC. There was higher colonization of the oral cavity of BS with *Candida albicans* ($p<0.05$). BS had lower CMV IgG antibody levels ($p=0.005$) and high salivary EBV shedding ($p<0.0001$). Relapsed BS oral mucosa expressed higher level of TLR2 and TLR4 mRNA in general ($p=0.01$ and $p=0.05$ respectively). High levels of TLR2 (variant b, d and e) and TLR4 (variant 3 and 4) were also observed in BS oral mucosa. In conclusion, BS patients exhibit a broadly similar oral microbiome as HC and RAS but their innate and adaptive immune responses to oral infection are different which may predispose to enhanced microbial virulence and heightened immune response.

BSOM Clinical case discussions

Chairs: John Hamburger (Session 1) and Phil Atkin (Session 2)

CD1: Paediatric Sjögren's Syndrome – a case series

Holt DJ¹, Hegarty AM¹, Hunter KD², Thornhill MH¹, Yeoman CM¹

¹Oral Medicine Unit, Oral Maxillofacial Medicine and Surgery, ²Oral Maxillofacial Pathology, University of Sheffield School of Clinical Dentistry and Charles Clifford Dental Hospital, Sheffield Teaching Hospitals Foundation Trust

Introduction: Sjögren's syndrome is seen rarely in children and may have greater implications regarding oral problems compared to adults presenting in later life.

Case Series Details: We present a series of four paediatric patients with Sjögren's syndrome. The age of onset varied from five to 16 years. Three of the four patients presented with recurrent parotid swelling. All had fatigue. Following investigation two were diagnosed as Primary Sjögren's syndrome, the other two patients as Mixed connective Tissue disease; where Sjögren's syndrome was one feature of the disease process. In each case management was sometimes complicated by age, accompanying problems and variable response to drug therapies.

Conclusions: Sjögren's syndrome is uncommon in childhood. The importance of early diagnosis and appropriate long-term management should not be underestimated.

CD2: Oral manifestations of habitual khat use

Authors: Dr Sabine Jurge*, Dr Tim Hodgson

Khat (*Catha edulis*) leaves have been chewed by centuries by people in Eastern Africa and the Arabian Peninsula. It is becoming an increasingly more significant problem in the UK.

We report 3 recent cases of oral soreness, swelling and ulceration related to use of khat. All three patients had unilateral lesions (erythema, swelling, ulceration, white patches) on the same side of khat application. All patients also had severe dental staining and gingival recession.

The histopathological examination showed chronic non-specific inflammation in two patients and ulcer on a background of psoriasiform epithelial hyperplasia with spongiosis in the third. No dysplasia or malignancy was detected.

There are reports in literature of khat chewing associated with loss of periodontal attachment, oral dryness, teeth staining, oral white patches, plasma cell gingivitis and temporomandibular disorder, but no previous reports of oral ulceration. It is still unclear if khat increases risk of oral cancer.

CD3: Munchausen's Syndrome: identification of treatment needs

Authors: Oke-Nwosu CJ¹, Cobine-Davies MYA¹, Pemberton MN², Mighell AJ¹.

¹Department of Oral Medicine, Leeds Dental Institute, Leeds, UK ²Department of Oral Medicine, Manchester Dental Hospital, Manchester, UK

Munchausen's Syndrome is a rare factitious disorder in which signs and symptoms are consciously fabricated without obvious reason. Patients may seek care from multiple clinical teams, often in different centres over extended periods of time. A patient with Munchausen's Syndrome will be described. At various times over two decades this patient received care from a large number of specialist doctors and dentists from different disciplines, in at least 5 cities. The clinical presentations involved a diverse range of symptoms and signs including some affecting the soft tissues of the oropharynx. The apparent complex medical history contributed to difficulty in accessing routine oral health care in primary care. Carious teeth requiring restoration and failed teeth requiring extraction highlighted the challenges involved in managing organic disease against a background of factitious illness. Although rare, Munchausen's Syndrome may be encountered within Oral Medicine practice and this case illustrates some of the challenges associated with this complex condition

CD4: Fibrous Dysplasia: A case report

Authors: Ana Poveda, Andrea Richards

Introduction: Fibrous dysplasia is a rare, genetic, non-inherited disorder which manifests as tumour-like proliferation of fibro-osseous tissue. A missense mutation in the gene *GNAS1* on chromosome 20 has been reported.

Objectives: To describe a case of Fibrous Dysplasia and review this unusual condition and its craniofacial manifestations and symptoms.

Case report: We report a case of Fibrous Dysplasia on a 32 year old patient who was referred by her General Practitioner to the Oral Medicine Department at Birmingham Dental Hospital following an incidental finding of bone expansion affecting the upper right quadrant. Further histopathology studies and imaging techniques including X-rays, CT scan and MRI scan confirmed diagnosis.

Conclusion: The histopathology results, X-rays, MRI and CT scan findings and management of the condition will be discussed.

CD5: Oral Presentation of Malignant Mesothelioma

Authors: Jon H. Higham*, Louise J. Murray, S. Kim Suvarna, Geoffrey T. Craig, Caroline H. Bridgewater, Patricia M. Fisher, Martin H. Thornhill

Introduction: We present an update of a case of malignant mesothelioma presenting as an oral metastasis in a 47 year old patient.

Case details: The patient first presented with two 10mm polypoid lesions of the dorsal tongue. A diagnosis of metastatic mesothelioma was made and appropriate oncology care arranged. She then developed recurrent tongue deposits on two separate occasions. She recently presented with a right parotid swelling causing difficulty in eating. Imaging revealed an extensive parotid mass extending medially to encroach on the pharynx and muscles of mastication; this was histologically confirmed as mesothelioma.

Conclusion: This is the first reported case where an oral metastasis was the presenting lesion of mesothelioma and only the second case of metastasis to salivary gland. This is also the first case where multiple and serial oro-facial metastases have occurred. The importance of imaging in the diagnosis of maxillofacial lesions is highlighted by this case.

CD6: Hyposalivation in children

Authors: DW Anchassi*, TA Hodgson. Oral Medicine, Eastman Dental Hospital, UCLH NHS Foundation Trust

Introduction: Hyposalivation is well recognized in adults, however relatively little attention has been paid to children. Hyposalivation has an impact on oral-health-related quality of life as well as increased risk of dental caries and candidosis. Our objective was to evaluate the incidence, causes and management of hyposalivation in children identified in Oral Medicine.

Method: A retrospective study identified individuals less than 18 yrs of age with hyposalivation (whole unstimulated salivary flow less than 1.5ml in 15 minutes) seen over a 24 month period. Clinical records were reviewed to extract demographic data, investigation results, underlying diagnosis and management.

Results: Of 154 patient seen under 18 years, five (aged 2-11 years) met the search criteria. Diagnoses included chronic sialadenitis, anhydrotic ectodermal dysplasia, nocturnal mouth breathing, intermittent xerostomia and sialadenitis secondary to underlying undefined rheumatological/autoimmune disease and bilateral submandibular atrophy with parotid fatty change. The mother of the child with gland atrophy had Sjögren's syndrome which presented at an early age. All patients had dental caries and 2 required dental treatment under general anaesthesia. All had ultrasound investigation and 1 had a minor salivary gland biopsy. All were prescribed saliva substitutes and fluoride use.

Conclusion: 1.5% of children seen had hyposalivation, with an associated impact on quality of life. The risk of dental caries in this group may be reduced by early identification of those at risk with targeted initial dental management.

CD7: Three cases of unusual Lichen planus and Thymoma

Authors: Hullah EA*, Viggor SF, McParland H, Kovacevich T, Warnakulasuriya S, Odell E, Shirlaw PJ. Oral Medicine, Guys Hospital, Guys and St Thomas NHS Foundation Trust

Case series: We present 3 cases of lichen planus associated with thymoma. All 3 cases were males presenting with atypical lichen planus that was unresponsive to first line therapy. One case was already known to have thymoma before being referred for management of their oral lesions and two cases developed their thymoma whilst under treatment. Two of the cases underwent thymectomy, however their lichen planus remained recalcitrant to therapy and difficult to manage even following excision of the tumour. One patient developed pulmonary MALT following Azathioprine therapy to control very active lichen planus.

Discussion: One third of thymomas are associated with paraneoplastic autoimmune diseases including red cell aplasia and Good's syndrome (thymoma combined with immunodeficiency and hypogammaglobulinaemia). One third of thymomas are asymptomatic and found incidentally. Paraneoplastic lichen planus is unusual and much less common than paraneoplastic Pemphigus. This case series poses the question as to whether the presence of a thymoma was an incidental finding in these patients with lichen planus or whether there was a link between the two diseases.

CD8: Title Dying to be Healthy

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Fish is considered to be an essential component of a healthy diet. In addition to containing an abundance of essential minerals such as iron, zinc, iodine and selenium, oily fish contains omega-3 fatty acids such as docosahexaenoic and eicosapentaenoic acids which help lower blood cholesterol so reducing the risk of cardiovascular disease. Other suggested health benefits include improving joint pain, inflammation, depression, macular degeneration, neurological function and skin conditions such as eczema and psoriasis. Many have increased the quantity of fish in their diets to improve their health without being aware of potential adverse effects associated with excessive fish consumption related to mercury ingestion.

Fish which may have high levels of mercury included swordfish, mackerel, shark, tuna, red snapper and trout. Organic methylmercury is produced by microorganisms in sediments from elemental mercury. It binds tightly to fish proteins and is easily absorbed by humans and has a long half-life. Methylmercury is a potent neurotoxin and may cause axonal demyelination. Some months following acute exposure to toxic levels of methyl mercury ataxia, blurred vision, paraesthesias and impaired auditory acuity may occur.

The cases of three patients referred to Oral Medicine for oral complaints associated with diverse symptoms ranging from fatigue, neurological disturbances including neuropathies, chronic candidosis and gastrointestinal complaints are described. Following extensive investigation all were found to have a fish laden diet with blood mercury levels in the toxic range. The presenting clinical symptoms, mechanisms of mercury toxicity and the effects of fish withdrawal from the diet are discussed.

HEAD AND NECK HISTOPATHOLOGY NATIONAL EQA SCHEME

Clinical information for Circulation 19

Spring 2011

Oral & Maxillofacial

Case

1: 5684/09	M 65 Mucocoele labial to 43/44 (East Grinstead)
2: 7358/09	F 41 White lesion left buccal mucosa (East Grinstead)
3: 4851/10	F 36 Epulis on palatal aspect of 33/34 teeth (East Grinstead)
4: UH10-26279	F 4 Poorly defined radio-opaque mass mesial to unerupted deciduous maxillary central incisor (UCH)
5: 6164/10	F 69 Swelling upper lip (East Grinstead)
6: 2795/10	F 61 Bilateral leukoplakia on lateral borders of tongue, sore on left (East Grinstead)

Oral & Maxillofacial/ENT

7: 60416/1/10	M 79 Swelling right parotid; recent FNA suspicious; CD31/CD34-positive (Leicester)
8: 1665/09	F 45 Parotid mass; superficial parotidectomy (KCL)
9: 09/18242	M 58 Lump tail of left parotid 3/12. FNA - no malignant cells. MRI – PSA? (Leeds)
10: M10347/10	M 40 Parotid tumour, Warthin's? (Manchester)
11: J10/17564	F 41 Enlarged level II LN, otherwise well; FNA showed polyclonal follicles (Belfast)
12: 31736/08	F 68 Mass in left neck 65x35x35mm; cytokeratin-negative, synaptophysin-positive, S100-positive cells around cell groups (Oxford)

ENT

13: 12251/06	M 43 Epistaxis (Sheffield)
14: UH09-20755	F 86 Slow growing painful lesion left helix; chondrodermatitis? (UCH)
15: PR21680/10	M 98 Epistaxis and nasal congestion; polyp attached to inferior turbinate (Newcastle)
16: 3892/10	F 14 Recurrent lesion in left nose, extending around optic nerve to petrous apex (KCL)
17: J10/21469	M 52 Hoarseness (Belfast)
18: L10/11049	F 45 20 mm diameter well circumscribed lesion right thyroid; thy 3 on FNA (Stoke)