FDI World Dental Federation Sessions held during recent BRISBANE CONGRESS

The FDI World Dental Federation presented two sessions – 'Global Caries Initiative: launching a new paradigm of care' and 'Dental amalgam and United Nations Environmental Programme Global Mercury Partnership: how it might affect your practice' during the recent 34th Australian Dental Congress held in Brisbane.

GLOBAL CARIES INITIATIVE: LAUNCHING A NEW PARADIGM OF CARE

In 2009, the FDI launched the Global Caries Initiative, a profession-led initiative to implement a new paradigm for managing dental caries and its consequences, one based on our current knowledge of the disease process and its prevention. The FDI is currently developing a new global caries classification and management system, which will lay the foundation for a preventive model of oral health care to effect fundamental change in health systems and individual behaviour.

The session was moderated and the introduction given by Professor Martin Tyas AM, who identified that GV Black's teaching of extensive cavity preparations, 'extension for prevention' and restoration with non-adhesive materials has left a legacy of weakened teeth and fractured cusps. General dental practice is now moving away from a 'surgical' approach to the management of caries to a 'medical' approach. At the patient level, this involves establishing the individual patient's risk factors for dental caries, and developing a treatment plan tailored for that patient. At the tooth level, the caries lesion is managed when possible by a non-operative strategy of remineralisation and/or arrest of the caries process; a restoration is placed only in specific circumstances and using adhesive materials and the principles of minimum intervention.

Professor Eric Reynolds AO* discussed the early enamel lesion and remineralisation strategies. Dental caries experience in children has increased for the first time since the introduction of fluorides, and a goal of modern dentistry is to detect enamel caries early and treat non-invasively with a remineralisation strategy. A new remineralisation technology has been developed based on casein phosphopeptide-amorphous calcium phosphate nanocomplexes (CCP-ACP) which has been demonstrated to remineralise enamel subsurface lesions *in situ* with acid resistant minerals. Professor Reynolds cited the extensive *in situ* and randomized controlled clinical trials which demonstrated the efficacy of CCP-ACP in remineralising 'white spot' lesions and slowing the progression of caries. The scientific evidence and in-surgery procedures for remineralisation of early caries lesion was presented.

Professor Hien Ngo† discussed the concepts of minimal intervention dentistry and stressed that the two major oral diseases, dental caries and periodontitis, are biofilm related, chronic and multi-factorial. The eradication of such diseases cannot be delivered through the traditional surgical method alone, and in the era of minimal intervention dentistry, dentists need to act as physicians as well as surgeons. Every member of the dental team can be included in the diagnosis, treatment of the disease and counselling of the patient. Professor Ngo's presentation explored the expanded philosophy of minimal intervention and the introduction of everyday clinical practice, with particular emphasis on caries risk assessment.

Dr Andrew Brostek‡ described his own 'minimum intervention practice'. The presentation showed how minimum intervention was successfully integrated into his busy general practice, for which a clear understanding of goals and objectives of minimum intervention was needed. Specifically, such goals are how to create, train and work with a skilled oral health team. Access to the required materials, disease tests, patient brochures and the development of necessary skills in their use are critical, together with a mechanism of review to assess the success of implementation. This model has been successful in making minimal intervention a cornerstone of Dr Brostek's dentistry, with an improved practice image and patient referrals.

DENTAL AMALGAM AND THE UNITED NATIONS ENVIRONMENTAL PROGRAMME GLOBAL MERCURY PARTNERSHIP: HOW IT MIGHT AFFECT YOUR PRACTICE

The session was moderated by Dr Julian Fisher.¶ Dr Fisher explained how governments from around the world are currently negotiating a treaty on mercury, which will include provisions on dental amalgam. The treaty will have far reaching implications, not

only for our use of dental amalgam, but also for dental practice. The session provided general practitioners with an overview of the treaty negotiations and its potential implications for general practitioners, the current science of restorative materials and how dentists are demonstrating leadership in environmental responsibility. The aim of the session is to enable practitioners to adopt 'best practices' and communicate with their patients on this issue with confidence.

Professor Gottfried Schmalz§ spoke on the clinical requirements and performance of amalgam alternatives. For direct posterior restorations amalgam is the gold standard and resin composites are the direct competitors, their main advantage being that they are tooth coloured. Literature reviews show a tendency of better longevity for amalgam than for composites, especially in children. However, a recent study reported better results for composites. Handling properties and costs are considered to be advantageous for amalgam. Toxicity data are inconsistent, and no ranking between amalgam and composites is possible. Allergic reactions seem to occur more often after contact with composites and adhesives than with amalgam, although data are sparse. Both, amalgam and its alternatives should be available for our patients.

Mr Garry Pearson** spoke on 'Amalgam waste management: a case study in community leadership: 'Dentists for Cleaner Water'. Mr Pearson, in his capacity as Project Director, detailed the key factors which had contributed to the outstanding success of this project as a professionally led sustainability initiative. The structure and administration of the scheme, in partnership with the funding agencies, and the promotion of the installation of ISO 11143 compliant separation devices was described. The message for those who place, polish and remove amalgam, but have not yet installed separation devices, is to consider this a foundational component of a required move to sustainable dentistry. This case study illustrates how the profession can respond positively to the UN Environmental Program Global Mercury Partnership. The scheme is scheduled to finish at the end of June 2011.

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