Implanted eye tooth helps blind patient see again
First osteo-odontokeratoprosthesis procedure performed in the US

MIAMI, FL, USA: A 60-year-old patient from the US has recovered her sight after surgeons in Miami implanted one of her teeth in her eye. This surgical procedure was a first in the US and undertaken at the Bascom Palmer Eye Institute at the University of Miami’s Miller School of Medicine, where the patient’s eye tooth was implanted as a base to hold a prosthetic lens. The patient was blinded in 2000 by the effects of Stevens–Johnson syndrome, a severe adverse reaction to common drugs, causing burning, blistering and sloughing of skin and involved tissue. It also frequently causes blindness, and results in 100,000 deaths per year worldwide.

Dr Victor L. Perez, Associate Professor of Ophthalmology at the Bascom Palmer Eye Institute, and his interdisciplinary team performed a modified osteo-odontokeratoprosthesis (MOOKP) procedure, a complex surgery that had until now been available only in a limited number of eye centres in Europe and Asia. Developed by the Italian ophthalmologist Prof. Benedetto Strampelli in the 1960s, MOOKP has proven effective as a solution to end-stage corneal disease, in which severe corneal scarring blocks vision and corneal transplants are no longer an option but the eye’s internal structures and optic nerve remain healthy.

“For certain patients whose bodies reject a transplanted or artificial cornea, this procedure ‘of last resort’ implants the patient’s tooth in the eye to anchor a prosthetic lens and restore vision,” explained Dr Perez.

In MOOKP, an extracted tooth and surrounding bone are shaved and sculpted, and a hole is drilled to insert an optical cylinder lens. In order to bond the tooth and lens as a bio-integrated unit, they are implanted under the patient’s skin in the cheek or shoulder. The eye specialist then prepares the surface of the eye for implantation of the prosthesis, by removing scar tissue surrounding the damaged cornea.

About one month later, mucous material is collected from the inside of the patient’s cheek and used to cover and rehabilitate the surface of the damaged eye. In the final phase, the prosthesis is removed from the cheek or shoulder and implanted in the eye. The prosthesis is aligned with the centre of the eye, and a hole is made in the mucosa for the prosthetic lens, which protrudes slightly from the eye and enables light to enter the eye, allowing the patient to see again.

“The procedure will help countless of people in the US to regain sight,” said Dr Eduardo C. Alfonso, chairperson of the Bascom Palmer Eye Institute. “Thanks to the work of Dr Perez’s team, patients in the US now have access to this complex surgical technique.”

To the Editor

Re: “FDA says mercury dental fillings not harmful” (Dental Tribune Asia Pacific No. 7+8 Vol. 7, page 5)
Pennsylvania is the second most polluted state in the US, especially in the eastern part of the state. This is due to the large amount of coal burned by power plants, factories, private homes, and the Centralia coal-mine fires. The residents are exposed to more mercury from breathing the air and drinking the water than from the silver fillings. And if all that mercury is leaking out of the fillings, why are the chicken littles of the mercury sky falling apart? I have some 40-year-old fillings still intact. I’ve been around mercury for at least 42 years, counting dental school, the Naval Dental Corps and private practice, and do not have any of the symptoms ‘the chicken littles of the mercury sky is falling’ talk about. I would guess that dentists and dental assistants would have the greatest exposure, why aren’t we dropping like flies?

Dale C. Resue, USA, 13 Sep., 2009
Head and neck cancer may aggravate periodontitis

Claudia Salzwedel

HONG KONG/LEIPZIG, Germany: New findings from the US have shown that chronic periodontitis might represent a clinical high-risk profile for head and neck squamous cell carcinoma. The strength of the association was greatest in the oral cavity, followed by the oropharynx and larynx, suggesting the need for increased efforts to prevent and treat periodontitis as a possible means of reducing the risk of this form of cancer.

Head and neck cancer figures have increased, especially in regions like Southern Asia. Each year there are approximately 400,000 cases of cancer of the oral cavity and pharynx, with another 160,000 cases of cancer of the larynx worldwide, resulting in approximately 500,000 deaths. The main risk factors for these cancers are tobacco and alcohol use.

The researchers from the University of Buffalo assessed the role of chronic periodontitis on head and neck squamous cell carcinoma, as well as the individual roles on the oral cavity and oropharyngeal and laryngeal sub-sites. They used radiographic measurement of bone loss to measure periodontitis among 465 patients, of whom 207 were controls. When they stratified the relationship by tobacco use, they found that the association persisted in those patients who had never used tobacco.

“Confirmatory studies with more comprehensive assessment of smoking, such as duration, quantity and patterns of use, as well as smokeless tobacco history are needed,” said Dr. Mine Tezal, Assistant Professor in the Department of Oral Diagnostic Sciences in the School of Dental Medicine at the University at Buffalo. “Our study also suggests that chronic periodontitis may be associated with poorly differentiated tumour status in the oral cavity. Continuous efforts aimed at identifying individuals at risk for head and neck cancer should be encouraged.”

The researchers’ findings are supported by the American Dental Association (ADA), which had previously endorsed the use of periodontal screening as one of the many steps that dentists can take to reduce the risk of head and neck cancer. The ADA recommends that dental professionals screen their patients for signs of head and neck cancer, including the use of visual inspection, palpation, and oral cavity examination. The ADA also recommends that dentists refer suspicious cases to specialists for further evaluation.

The ADA encourages all dental professionals to be aware of the relationship between chronic periodontitis and head and neck cancer, and to take steps to reduce the risk of this disease. The ADA recommends that dental professionals educate their patients about the signs and symptoms of head and neck cancer, and encourage them to seek early treatment if necessary. The ADA also recommends that dental professionals participate in continuing education on the topic of head and neck cancer, in order to stay up-to-date on the latest research and best practices.

The ADA is dedicated to promoting the health and welfare of the public through the prevention and treatment of dental disease and disorders. The ADA advocates for the highest standards of professional competence, ethics, and conduct in the dental profession. The ADA is committed to improving the oral health of all Americans, and works to ensure that all individuals have access to affordable, quality dental care.
EDINBURGH, UK: Delegates at the General Assembly of the 14th Biennial Congress of the European Society of Endodontology (ESE) in Edinburgh have elected former ESE secretary Prof. Claus Löst from Germany as their new president. He will succeed incumbent president Prof. Gunnar Bergenholtz from Sweden at the beginning of 2010. Prof. Löst is currently Clinical Director of the Center of Dentistry, Oral Medicine and Maxillofacial Surgery at the Tübingen University Hospital in Germany.

Delegates were also asked to select a site for the 2013 ESE congress, which has received bids from member societies in France, Portugal and Spain. Furthermore, the Executive Board has proposed the co-funding of a symposium in July 2010 with the Pulp Biology and Regeneration Group of the International Association for Dental Research, which will address the topics of inflammation and regeneration.

ESE, founded in April 1982, is a federal organisation representing national endodontic and dental societies in 27 European countries. This year’s congress, which was the second held in the UK (the first was the London congress in 1993), saw a record attendance of over 1,400 endodontic specialists from Europe.

New organisation makes dentists ‘cone-beam-ready’

The International Cone-Beam Institute (ICBI) is a new independent organisation of cone-beam computed tomography (CBCT) experts that aims to provide the highest level of education, training and product information for 3-D technology to dental professionals worldwide.

As a vendor-neutral organisation, it is an industry first for a company to provide information to dental professionals, future imaging centres and vendors at an international level. General information, such as the various cone-beam scanners available in the US and international markets, as well as general information on available third-party software, will be available to everyone without charge. ICBI also provides in-depth and customised vendor analysis to help practitioners understand this comprehensive technology.

Members of ICBI’s website (www.exploreconebeam.com) are able to review case studies and gain advice from CBCT experts. They also have access to special consulting services, online training and training seminars. In addition, ICBI offers a connection to oral maxillofacial radiologists who can provide reading services to aid in the interpretation of CBCT scans. The organisation also has a blog where users can exchange case studies, ideas and techniques regarding capturing the highest quality images.

The International Congress of Oral Implantologists, the world’s largest implant education organisation, fully endorses the ICBI. Partners of ICBI include Dental Tribune International and the Dental Tribune Study Club.

European endodontists reorganise in Scotland

DTI President Gunnar Bergenholtz addressing delegates (DTI/Photo Daniel Zimmermann)