AN INDEPENDENT SUPPLEMENT FROM MEDIA PLANET IN THE WALL STREET JOURNAL

Emerging technology: new impressions

BY KIRK VAN HYNING

Three-D digital scanners let dental patients avoid the uncomfortable excessive salivation and gagging caused by using gooey material to make a mold of their mouths. Ziemak Aesthetic Dental Lab in Olympia, Washington uses 3-D oral scanning and found that all of the 275 crowns it has inserted have fit, a record surpassing conventional molds. Also eliminated are bacteria getting into imperfect molds; abrasions from the stone poured into a mold; and tears and holes that typically reduce the lifespan of a crown or bridge to five years. According to Ziemek lab manager Jamie Stover, a good fit can last up to 20 years.

Dentists in Ontario, Canada's Thornhill Smile Center are getting similarly good results using the Cadent iTero ™ Digital Impression System., finding that digital scanning helps create crowns and bridges more easily and with more long lasting results than conventional molds. The system uses resin and intraoral lasers to create a 3D image of the mouth, and is fast, comfortable and accurate.

www.thornhillsmilecentre.com

www.ziemekdentallab.net

Bone and organ creation from dental stem cells

BY KIRK VAN HYNING

Harvesting stem cells from teeth can unlock family dental histories and may someday be used to grow healthy bone and tissue, effectively reversing oral damage and allowing the generation of healthy organs. Dr. John Lupori of Steamboat Springs Oral has partnered with New York-based StemSave to extract and store cells found in pulp tissue at the base of teeth. According to StemSave CEO Art Greco, scientists hope to one day re-create the bone using 3-D printers. The applications range from new teeth to replacement organs, made possible since stem cells are undifferentiated, meaning they are not classified as tissue or organs but can become either. Organs grown from one's cells are not rejected and would last one's lifetime. Dr. Bob Pensak, who elected to save his daughter's cells when she had her wisdom teeth removed, calls t "miraculous".

A crucial l saliva and bloo this developme 2008, the Ame emy for Pediatr (AAPD) found thing traceable can also be tra liva. This allows able and fast wa nose diseases – otherwise – and treatment. Davi DMD, DMSCc, School of Denti Dental Research UCLA theorizes th stem cell samples used to create de tissue and a full the near future.

Diagnosing and treating oral cancer

BY MARLENE PITURRO

Detecting stealthy oral cancers in their early stages falls to the front-line medical professionals – dentists, hygienists and physicians – in the fight against this killer that grew at an 11 percent rate in 2007. Making their jobs more difficult is contending with a new risk factor, oral/pharyngeal cancers developed through exposure to the sexually-transmitted human papilloma virus. The traditional risk factors of tobacco and alcohol use remain.

Many patients don't realize that their ... add $35-$65 to the patient's annual dental check-up bill.

A recent study published in the Journal of the American Dental Association (July 2008) by researchers at the University of North Carolina's School of Dentistry shows that such adjunctive techniques may facilitate the early detection or oral premalignant and malignant lesions. The scientists evaluated the effectiveness of these new technologies: toluidine blue (TB), ViziLite Plus with TBlue (Zila Pharmaceuticals), Microlux DL (AdDent), Orascoptic DK (a Kerr Company), and VEL ...

TREATING CANCERS

Barbara Murphy, MD, a medical oncologist and Director of Head and Neck Research at Vanderbilt-Ingram Cancer Center, sees a growing prevalence of oral cavity and oral/pharyngeal cancers, particularly in non-smokers and non-drinkers, i.e., those infected through HPV. Unlike previous generations of oral cancer patients, diagnosed in their 60's and 70's, these patients are being diagnosed at a different life stage – in their 40's and 50's. "With these younger patients we have to strike a careful balance to optimize treatment. There's much more expos ...

ORAL MUCOSITIS: CANCER TREATMENT'S DEBILITATING SIDE EFFECT

Chemotherapy and radiation have saved millions of patients' lives but often produce uncomfortable and even debilitating side effects. Oral mucositis, inflammation and ulceration of oral mucosa, affects over 40 percent of all patients undergoing chemotherapy and ionizing radiation, 70 percent of bone marrow transplantation patients, and nearly 100 percent of head and neck cancers. It appears seven to ten days after treatment and should be checked for at least twice daily.

Oral mucositis can limit patients' ability to eat or swallow as well ...

25 MILLION WOMEN I WITH THE HUMAN PAP VIRUS (HPV)

The skyrocketing incide oral cancers, now the sixth largest killing cance been linked to oral sex with infected women. Of the 25 m women infected with HPV, million carry the sexually mitted virus that causes ce cancer in women and oral c in both women and men. HP also cause genital warts, p and anal cancers. The Nat Cancer Institute ha ...