## What's New in Dentistry

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Success rates for immediate placement and immediate loading of molar implants are encouraging. When implants were re-introduced into dentistry in the early 1980's, the standard protocol for placing molar implants into extraction sites was to wait for several months to allow the socket to heal. In addition. after placement of an implant in a healed edentulous site, the time of loading of a molar implant was traditionally four to six months. But today, clinicians and researchers are suggesting that molar implants can be placed into fresh extraction sockets or loaded immediately in healed sites. Is there sufficient evidence to suggest that earlier placement and loading protocols are successful? A systematic review and meta-analysis published in the International Journal of Oral and Maxillofacial Implants (2010;25:401-415) assessed the survival of immediately placed single implants in fresh molar extraction sites and immediately restored/loaded single molar implants in healed molar sites. These researchers searched the main electronic databases. The authors identified nine studies describing 1013 immediately placed implants and seven studies with 188 immediate or delayed loaded implants. The authors discovered that the survival rate of immediately placed molar implants was 99.0%, while the immediately restored implants had a survival rate of 97.9%, with no difference between immediate and delayed loading. However, the authors acknowledge that their study has several limitations. These include the questionable quality of the existing literature, with most of the included studies classified as fair or average, as well as the great variability in study designs of previous studies. As a result, the authors state that their review shows encouraging results for immediately placed or immediately loaded implants placed in molar sites.

Routine dental visits associated with better oral health. Adult users of dental care can be divided into two categories: those who are routine attenders and those who seek care because of an acute or chronic problem. While promoting regular dental visits is one of the cornerstones of preventive dentistry, there is only cross-sectional evidence in the literature that regular dental visits lead to better dental health. Typically, only about half of the adult population in most Western

countries is routine attenders, with rates being lower among men and in particular social, ethnic, or age groups. A study published in the Journal of Dental Research (2010;89:307-311), evaluated whether longterm routine dental attenders had better self-rated oral health and lower experience of dental caries and missing teeth by age 32. This was a longitudinal study that assessed a group of 1037 individuals who were part of a health and development study. These individuals had an oral examination performed at three vears of age, and then at 15, 18, 26 and 32 years of age. Information on use of dental services was collected at ages 15, 18, 26 and 32 years. At each age, dental examinations for caries and missing teeth were conducted. Individuals were also asked to selfrate their oral health. The participation rate of the study was high, with 96% of the participants taking part in all five assessment periods. When the participants were asked whether they were routine or problem-based attenders, the authors found that routine attending prevalence fell from 82% at age 15 to 28% at age 32. However, at any given age, routine attenders had better-than-average oral health. In fact, by age 32 routine attenders had better self-reported oral health along with less tooth loss and fewer caries. The authors conclude that routine dental attendance is associated with better oral health.

Discectomy of the TMJ reduces pain and improves function. It is estimated that temporomandibular joint dysfunction may exist in 10% to 30% of the general population. Most of these individuals can be managed successfully with nonsurgical methods such as physical therapy, bite splints, moist heat, arthrocentesis, intra-articular injections, or pharmacotherapy. But about 5% of patients whose nonsurgical therapy fails, require open joint surgery. Discectomy is the most common surgery performed for the painful TMJ. The degree of success for this procedure was reported in an article that was published in the Journal of Oral and Maxillofacial Surgery (2010;68:782-789). The purpose of this study was to evaluate outcomes of patients who underwent temporomandibular joint discectomy without replacement as the primary treatment for internal derangement after failure of nonsurgical therapy. A cohort of thirty consecutive patients

with TMJ internal derangement was treated with discectomy. Although six patients were lost to followup, 24 patients were recalled and evaluated to determine their mandibular mobility and joint junction, as well as the degree of reduction in TMJ and muscular facial pain. Prior to the discectomy, all patients had moderate to severe pain in the TMJ and masticatory muscles, and/or locking of the joint. Postoperatively, 20 of 24 patients had a TMJ that was in a clinically symptom-free state or with a small, minor dysfunction. TMJ pain, muscle pain, and pain with mobility scored low, indicating a subjectively successful outcome. The authors conclude that discectomy of the TMJ as a primary surgical option significantly reduces pain and improves function in patients with moderate to severe internal derangement of the temporomandibular joint.

Periodontal disease and risk scores can be used to predict tooth loss. Periodontitis is a variably progressive and dynamic pathologic process that causes attachment loss, destroys alveolar supporting bone and can terminate with tooth loss. A goal of periodontal therapy is to stop the loss of bone and thereby preserve the natural dentition. Tooth loss due to periodontal disease varies among subjects and has been shown to be related to the severity of the disease. In addition to severity, the risk for future periodontal deterioration is a factor of tooth loss by its effect on the rate of disease progression. Is it possible to predict future tooth loss during periodontal treatment, when patients are categorized at the inception of treatment by disease severity and risk level? A study published in the Journal of Periodontology (2010:81:244-250) evaluated that research guestion. In order to determine the answer, each of nine periodontists evaluated 100 consecutive periodontal maintenance patients. The disease severity and risk level were determined from data at the initial examination. The number of teeth lost was determined from data at the initial and maintenance visits. Based upon the evaluation of this cohort of patients, the authors showed that disease scores (severity) and risk (level) scores could predict the mean tooth loss rate. The adjusted correlation coefficient (r<sup>2</sup>) was high at 88%.

Furthermore, this research model showed that only the disease score was significantly associated with the probability of patients losing a specific number of teeth. The authors conclude that classifying a patient by severity of periodontal disease may be beneficial in the management of the periodontal patient. The disease score provides an objective means to quickly determine disease severity, which leads to establishing the patient's future risk for tooth loss.

Visible presence of third molars in young adults is associated with periodontal inflammation of non-third molars-Several years ago, researchers clearly documented an association between the presence of third molars and periodontal pathology that affected adjacent second molars. But is there any relationship between the presence of visible third molars and periodontal inflammation in other areas of the mouth? A study published in the Journal of Oral and Maxillofacial Surgery (2010;68:325-329), sought to determine whether a relationship could be confirmed between four visible asymptomatic third molars and the presence of periodontal inflammation in other parts of the dentition. Two groups of subjects were identified. The visible group of 342 subjects had at least one third molar exposed and visible. The not visible group consisted of 69 subjects who had all four third molars not exposed. The authors did a thorough periodontal assessment to determine the presence of periodontal disease. Based upon their assessment, the authors found that the subjects in the visible group were significantly more likely to have at least one pocket depth of 4 mm or greater on non-third molars than those in the not visible group. In both groups, first and second molars were more likely to be affected than non-molars. The authors found that the severity of the disease was low in the adolescent and young adult subjects with only beginning stages of periodontal disease detected. However, the number of first and second molar pocket depths of 4 mm or greater tended to be higher for the visible group than for the nonvisible group. The authors conclude that the visible presence of third molars in adolescents and young adults was significantly associated with periodontal inflammatory disease of non-third molars.