Dentinogenesis Imperfecta

Scientists at the National Institute of Dental and Craniofacial Research (NIDCR) have created a mouse model with teeth that conform to the disorder dentinogenesis imperfecta (DGI) III. The model will allow scientists to learn more about how the hereditary disorder arises, and provide a basis for developing and testing new treatments. Dentinogenesis imperfecta is classified into three subtypes. The teeth can be bluish or brownish with a somewhat translucent appearance. Most of those severely affected with DGI III are candidates for dentures or implants by age 30 due to initial inter-eruption.

Obesity Linked to Periodontal Disease

Dr. Mohammad S. Al-Zahrani of Case Western’s Centers for Health Promotion and Research investigated the link between obesity and periodontal disease in young adults. Study subjects had periodontal exams and were categorised into groups according to their waist circumference and body mass index. Results showed that among people between the ages of 30 and 34, obese individuals had a 76% higher prevalence of periodontal disease compared to those of normal weight individuals. Today’s young adults drink less milk and have a higher prevalence of periodontal disease in young adults. Dr. Al-Zahrani recommends increased daily allowance of vitamin C and calcium. As a reminder, the use of transitional implants is recommended when these individual therapy routines are not yet available.

Can Milk Teeth Diagnose Asthma?

Preliminary analysis of umbilical cord samples seems to suggest a possible connection between pre-birth infants’ exposure to the minerals iron and sodium and subsequent risk of wheezing. By studying the milk teeth of children with and without asthma, researchers can check pre-birth exposure to the minerals. A child’s top two front teeth begin to develop in the womb, where tooth enamel absorbs trace elements and minerals. This permanent record of exposure contains another clue suggesting that the nature of lung and immune development in utero can greatly influence whether or not asthma and asthma will be a part of the child’s future. The study is based at the University of Bristol.

Teenagers Using Transitional Implants

It is a common dilemma: A teenager who recently completed orthodontic therapy with congenitally missing lateral incisors will require a temporary appliance to replace those missing teeth. Until this point in time, few restorative options have been available. In most cases, the patient has completed orthodontic therapy, and is wearing a removable orthodontic retainer. It is important that the orthodontist has been completed and proper inter-radicular distance of the adjacent teeth is adequate, not only for placement of the transitional implant, but also for the permanent fixture. The orthodontist will need to modify the existing retainer, or a new one after the provisional teeth are in place.

As a transition, the removable appliance is the first choice amongst orthodontists. Not only does it replace the missing teeth, but it also functions as a removable orthodontic retainer. Orthodontic retention is very important post active therapy for at least 9-12 months in which the patient wears the retainer 24 hours a day to allow for proper bone remodeling. The convenience of this appliance is quite obvious, especially when eating and talking. The social embarrassment of showing “no teeth” when eating in front of their friends can be quite disturbing. The significant success rate of osseointegrated implants is well documented. The recommended minimum age for a patient considering such treatment is somewhat vague. If we use accepted criteria regarding implant placement in the growing child, then a number of young patients who have congenitally missing teeth, specifically lateral incisors, will need to wait 3.5 years before having permanent replacements; the temporary alternatives have been limited with numerous disadvantages. The Maryland Bridge satisfies the dilemma of a removable prosthetic. However, we all know its disadvantages, especially if this is not going to be the final restoration. The bonded retainer is more difficult to maintain because of fixed attachment to the adjacent teeth and tends to debond with occlusal stress. In order to create a more “permanent” appliance, undercuts or grooves may need to be placed on the lingual of the adjacent teeth.

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1. Placement of an impression coping seat completely into the slots of the MTI fixture, so that a final impression can be taken. This laboratory-fabri-
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The idea of eliminating a removable orthodontic appliance for a young teenager is incredibly exciting. If the latter occurs, a decision must be made about whether to recement the present crown or fabricate a new one. It is recommended that if the laboratory fabricates a custom provisional, a duplicate would be made for situations where the original fractures or discors.

Case Study
A healthy 14 year old, white female presented to our office for a pre-implant work-up and evaluation of edentulous areas. She was in the finishing stages of her orthodontic therapy, and the orthodontist was ready to make sure that the space between the roots of the teeth adjacent to the edentulous spaces [Fig. 3, 6, 8, 11] were adequate for permanent implant replacement.

1. The patient was instructed to maintain good oral hygiene habits.
2. The restorative dentist takes a impressions of the transitional implant and both hard and soft tissues. All aspects of the provisional are fabricated [Figs. 4, 6, 8].
3. The appliance is returned to the restorative dentist ready for the impression.
4. The appliance is fabricated [Figs. 9, 11, 12]. During the process, a temporary crown is placed and the patient is ready for the impression.

Summary
I have presented a unique approach to temporarily restoring edentulous sites in teenagers resulting from congenitally missing maxillary laterals. The prospect of eliminating a removable orthodontic appliance for a young teenager is incredibly exciting. Both patients and their families have expressed appreciation of this effort.

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Literature