Dentigenesis Imperfecta
Scientists at the National Institute of Dental and Craniofacial Research (NIDCR) have created a mouse model with teeth deformed in a way similar to people with dentigenesis 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 treatments. Dentigenesis imperfecta is classified into three subtypes. Most of those severely affected with DGI III are candidates for dentures or implants by age 30 due to digital inter-scontent.

Obesity Linked to Periodontal Disease
Dr. Mohammad S. Al-Zahrani of Case Western’s Centers for Heart Health Promotion and Research investigated the link between obesity and periodontal disease in young adults. Study subjects had periodontal exams and were categorized 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 non-obese weight individuals. Today’s young adults drink less milk and soft drinks and non-citrus juices, which decreases their recommended daily allowance of vitamin C and calcium.

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 soda ash, and subsequent risk of wheezing. By studying the milk teeth of children with and without asthma—a later effect of exposure to the minerals.

Immediate Loading of Implants
Given the variety of results obtained, there is understandably a continued interest in the immediate loading and restoration of implants placed into the jaw. Dr. Petrucci looks at this topic in conjunction with his current research project, which has limited reports about it.

Internal vs. External Marketing
Tyson Steele explains the four components of marketing and presents a sound case for internal marketing as the better option for dental practices. Take sometime to learn how to increase your profits without breaking your budget on expensive marketing options.

Periodontal Probes
The periodontal probe is one of the dental hygienist’s most important instruments. It is used to collect several different kinds of data. These data are vital to ascertain the individual therapy requirements or success. This article aims to help with the correct selection and application of the correct periodontal probe.

Transitional Implants—Dental Tribune
It is a common dilemma: A teenager who recently completed orthodontic therapy with congenitally missing lateral incisors now requires some type of transitional appliance to replace those missing teeth. Up until this point in time, few restorative options have been available.

The treatment plan coordinated with the surgeon and laboratory procedures so that the provisional restoration can be placed within 24 hours after MTI placement. The social embarrassment of a 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.

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The prospect of eliminating a removable orthodontic appliance for a young teenager is incredibly exciting.

A healthy 14 year old, white female presented to our office for a pre-implant work-up and evaluation of edentulous areas created by congenitally missing laterals at #7 and #10 (Figs. 1, 2, 3). She was in the finishing stages of her orthodontic therapy, and the orthodontist wanted to make sure that the space between the roots of the teeth adjacent to the edentulous spaces (#6, 8, 9, 11) were adequate for permanent implant replacement.

At the time of our evaluation, the patient made numerous comments about how she “hated” her present removable appliance. I mentioned to both her and her mother that it would be approximately four years before the patient could have permanent implant placement, but that we would satisfy her immediate need with the use of a single transitional implant in each tooth gap. Their excitement about this concept led to scheduling for this transitional implant procedure.

Surgical Phase
Infiltration of local anesthetic was used in the maxillary right and left anterior segments both labially and palatally adjacent to #7 and 10. The osteotomies were performed with the longer size profile drill (Fig. 4) its sharp point makes directional placement rather easy. In this instance, because the osseous anatomy was quite evident, no flap was required. To overcome the labial concavity in this area, the osteotomy must be drilled in a more palatal direction (Figs. 5, 6). When the osteotomy is complete, the 21 mm MTI was placed to the full depth (Figs. 7, 8). It is important to note that the labial/lingual alignment is not as important as the mesial/distal orientation. This is due to the ability to bend the MTI at the neck, just below the rectangular portion. Once the alignment of the head of the transitional implant satisfies all the dimensional requirements, impression copings are placed and the patient is ready for the prosthetic phase of treatment (Fig. 9).

Prosthetic Phase
The patient, with the MTI transfer copings in place, arrives at the restorative dentist’s office ready for the impression. The restorative dentist takes a rubber base or polyvinyl impression of the maxillary arch to pick up the transfer copings. An opposing model and bite registration is obtained, along with a tooth shade. Within 24 hours, a laboratory provisional is fabricated (Figs. 10, 12, 14) using the singular modular coping supplied by the company (Figs. 11, 12). During this short waiting period, soft rubber protective caps are placed over the MTI implants to protect the tip and tongue from any undue trauma (Fig. 13).

It is important to make sure the laboratory designs the provisional crown with broad, tight interproximal contacts to allow for resistance to off-angled forces. The patient is instructed on appropriate oral hygiene procedures and evaluated. A new orthodontic retainer is fabricated or the existing one modified. Final radiographs are taken.

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. It has been 18 months since the patient in the presented case has received her transitional restorations. All aspects of the MTI implant, and both hard and soft tissue have remained quite healthy (Fig. 15). While I am convinced that this technique has great potential and merit, additional time will be required for us to be confident that these transitional implant-supported restorations will remain stable over 4 to 5 years.

Acknowledgements
Orthodontics—Dr. Clifford L. Anzilotti, Prosthodontics—Dr. Mark A. Fortunato Labor—Larry A. Mittleman, CDT

Case Study
A healthy 14 year old, white female presented to our office for a pre-implant work-up and evaluation of edentulous areas.

Fig. 1
Fig. 2
Fig. 3
Fig. 4
Fig. 5
Fig. 6
Fig. 7
Fig. 8
Fig. 9
Fig. 10
Fig. 11
Fig. 12
Fig. 13
Fig. 14
Fig. 15

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