



Case Study 2: Clinical Application

From the course entitled *Empowering Physicians, Nurses, Pharmacists and Other Non-Dental Healthcare Providers to Care for the Oral Health of Children and Adolescents*, of the *Oral-Systemic Health for Non-Dental Healthcare Providers* curriculum.



This case study illustrates the value of early oral screening by a child's PCP. As a result of implementing oral health screening in the medical office, dental caries was diagnosed at an early, treatable stage, which significantly reduced pain, infection and treatment costs.

DAY 1: A 2-year, 11-month-old boy whose family had recently relocated to the area presented to a new PCP for a well-child examination. She performed an intraoral examination and recognized the signs of ECC in the child's maxillary anterior teeth (*Figure 108 and Figure 109*). The PCP then discussed the child's diet and oral hygiene with the parent. This brief discussion revealed that the child was drinking fruit juice from a sippy cup several times a day, and had a habit of grazing on crackers and other carbohydrate-based foods rather than eating regular meals. The parent also reported that the child's teeth were only brushed a few times a week and that they were not using fluoridated toothpaste.



Figure 108. White spot lesions. Notice the white spot lesions present on the labial aspects of the child's maxillary incisors. If left unchecked, this will progress to frank decay. Photo source: Travis Nelson. Used with permission.

The PCP counseled the parent to put only water in the child's sippy cup and offer juice minimally. She discouraged grazing and instead suggested that the caregiver schedule regular meals and snacks consisting of healthy foods such as fruits, vegetables, cheeses and meats. The PCP recommended that the family begin using a pea-sized amount of fluoride toothpaste twice daily when brushing. Fluoride varnish was applied to the child's teeth and he was referred to a local dentist for evaluation.

Discussion Question: Within what time frame should this child be referred to a dental provider?

Consider: The white spot lesions and frank decay presented in this case are mild. There is no indication of pain or infection that might warrant urgent referral.

DAY 16: A general dentist evaluated the child's dentition. She determined that while carious lesions were present, they could be managed using a minimally invasive approach. The dentist also reinforced the messages of improved diet and oral hygiene.

As part of establishing the child's dental home, the family was counselled regarding growth and development of the mouth, injury prevention and appropriate use of fluoride products to reduce caries risk. They were also provided an emergency telephone number to contact the dentist in case of dental trauma. The decay was treated atraumatically



Case Study 2: Clinical Application (continued)

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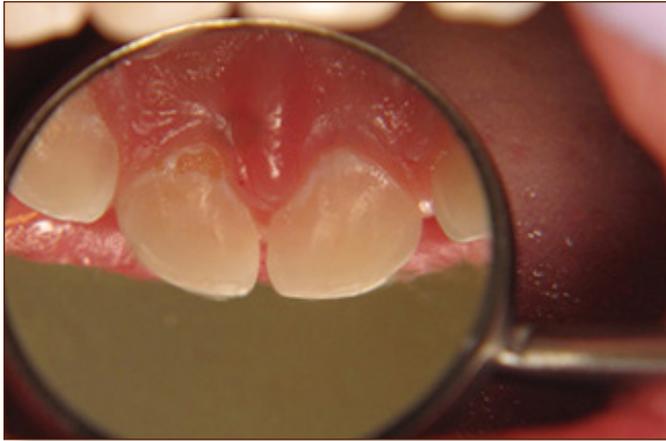


Figure 109. Caries lesions. Small caries lesions have formed at the gingival margin on the lingual aspects of the same teeth. Photo source: Travis Nelson. Used with permission.

by removing carious dentin with a dental instrument and applying an adhesive dental material containing fluoride (Figure 110). This treatment was performed while the child rested comfortably in the knee-to-knee position. A three-month follow-up appointment was made to evaluate the repaired lesion and apply fluoride varnish.

Discussion Question: How might you incorporate the message of healthy diet into your anticipatory guidance for pediatric patients?

Consider: Most PCPs regularly discuss healthy diet with patients in the context of maintaining optimal weight. The key messages you are already giving patients about healthy diet can be tailored to include oral health benefits by simply adding "...and this will help keep your child's teeth healthy, too."

DAY 115: Three months after the initial visit the family returned to the dental office for re-evaluation. A knee-to-knee examination was conducted, revealing that the adhesive restoration applied at the last visit remained intact. The child's mother informed the dentist that she was no longer allowing her child to drink juice in a sippy cup, and that she was doing her best to select fresh fruits, vegetables, cheeses and meats as between-meals snacks.

The dentist applauded the parent's efforts and reinforced the importance of diligently brushing the child's teeth



Figure 110. Sodium fluoride varnish. Fluoride varnish is applied to all teeth, including those with visible white spots as well as those without visible signs of demineralization. Photo source: Travis Nelson. Used with permission.

twice daily with a pea-sized amount of fluoridated toothpaste. Fluoride varnish was applied and a return visit was scheduled for three months later.

DAY 206: At the three-month return visit, the dentist found that the white spot lesions had not progressed and the repaired teeth remained intact. The mother reported that she had been following the diet and hygiene recommendations discussed previously. The dentist again applied a fluoride varnish to all of the child's teeth.

The dentist determined that based upon the at-home changes made by the family, the child was no longer at high risk for developing new caries. The parent was encouraged to continue the healthy diet and dental hygiene practices and a follow-up examination was scheduled for six months later.

CONCLUSION: An astute PCP quickly identified early caries lesions in this child. By paying close attention to his teeth during the examination, intervention was possible and caries progression was prevented before this child needed GA for full mouth dental rehabilitation.

HCPs can make a real difference in their pediatric patients' lives by implementing oral screening beginning at 12 months of age.