Why is the Dentist Involved?

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Disclosure

I have no financial disclosures or related conflicts of interest.

Objectives

• Define the role of the pediatric dentist
• Describe breastfeeding concerns you should take to the pediatric dentist
• Describe pediatric dentist’s surgical techniques
• Discuss breastfeeding’s impact on oral health

WHAT IS A PEDIATRIC DENTIST?

Types of dentists

• General/Family dentist
  – 4 years of college
  – 4 years of dental school
• Pediatric dentist
  – Additional 2-3 years of residency
  – Hospital experience
• Oral surgeon
  – Additional 4-6 years of residency
• GPR residency
  – Optional 1 year residency with hospital experience

UMN Masonic Children’s Hospital

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Pediatric Dental Residency Programs

- 96 pediatric dental residency programs
  - 5 programs in California
- 2 – 3 years after dental school
- Results in a certificate
- Optional board-certification process
  - 90% of pediatric dentists are board-certified

Pediatric Dentists

- Approximately 9,200 pediatric dentists in the US
  - ~750 in California
- Specialize in infants, children, adolescents, individuals with special health care needs
- Focus on growth and development
- Extra training in behavior management

Breastfeeding Concerns

- Natal and neonatal teeth
- Pre-dentate ankyloglossia and frena attachments
- Post-dentate dental caries and malocclusion

Natal & Neonatal Teeth

- 1:1,000 – 1:30,000 live births
- Early eruption of lower primary incisors
  - Not “extra”
  - Typically erupt at 6 – 9 months
- Natal = present at birth
- Neonatal = present within the 1st month of life
- Immature

Sequelae
- Aspiration risk
- Sublingual ulceration ("Riga-Fede disease")
- Breastfeeding issues
  - Nipple ulceration (?)

Treatment
- Monitor
- Palliative enameloplasty or restorative covering
- Extraction

Natal & Neonatal Teeth

- Extraction indications
  - Mobile teeth
  - Injury to the tongue and soft tissues
  - Interference with breastfeeding

- Extraction considerations
  - Anesthetic
    - Benzocaine contraindicated
  - Potential for hemorrhage
  - Behavioral approaches

Ankyloglossia & Frena Attachments

**Pre-dentate**
- Infancy
  (breastfeeding and bottle feeding)

**Post-dentate**
- Elementary school-aged
  (speech articulation and therapy)
- Toddlerhood
  (early speech, self-hygiene and dental caries)
- Early adult dentition
  (orthodontic and periodontal concerns)

Guideline on Infant Oral Health

“Discussion regarding atypical frenum attachments that may be associated with problems with breast-feeding. In some cases, frenuloplasty or frenectomy may be a successful approach to facilitate breast-feeding; however, there is a need for more evidence-based research to determine indications for treatment.”
Pediatric Dentists

**What we can do**

- Promote breastfeeding
- Work with IBCLCs, pediatricians, ENTs, other health care providers to coordinate care
- Perform surgical procedures to correct diagnosed issues
- Support more research in this area

**What we need you for**

- Diagnose breastfeeding issues
- Identify indications for surgical procedures
- Further educate dentists on breastfeeding issues
- Support more research in this area

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Pediatric Dentists’ Current CE

[Images of dental surgical equipment]

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Pediatric Dental Surgical Tools

<table>
<thead>
<tr>
<th>Tool</th>
<th>Familiarity</th>
<th>Availability</th>
<th>Hemostasis</th>
<th>Tissue Ablation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scalpel</td>
<td>Familiar</td>
<td>Readily available</td>
<td>Potential for bleeding complications</td>
<td>May be inadequate</td>
</tr>
<tr>
<td>Cautery</td>
<td>Familiar</td>
<td>Readily available</td>
<td>Provides good hemostasis</td>
<td>Adequately ablates tissues</td>
</tr>
<tr>
<td>Laser</td>
<td>Less familiar</td>
<td>Expensive capital investment</td>
<td>Provides good hemostasis</td>
<td>Adequately ablates tissues</td>
</tr>
</tbody>
</table>

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Behavior Management

[Image of a child and a dentist]

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BREASTFEEDING AND ORAL HEALTH

[Images of breastfeeding and oral health]

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Used with permission from Dr. Dusty Janssen, Parkview Pediatric Dental
Early childhood caries

- Early childhood caries is the most common chronic disease of childhood
- 50% of Kindergarteners have had at least one cavity
- Disproportionately affects children of color, low SES
- Infectious disease process through transmission

Dental Caries: The Process

- Fermentable carbohydrates
- *Streptococcus mutans* and other cariogenic bacteria
- Dietary acid
- Time

Breastfeeding and Dental Caries

- Exclusively breastfeeding is NOT linked to dental caries
  - May be protective against ECC because of its other health benefits
- Contains components that inhibit growth and attachment of oral bacteria
  - Lactobacilli sp.
  - Human casein
  - Secretory IgA

Breastfeeding and Dental Caries

- Breastfeeding up to a 1 year
  - Meta-analysis showed lower risk of dental caries in those who breastfed longer compared to those who breastfed less than 1 year (Tham 2015)
- Breastfeeding after the 1st year
  - Canadian study showed breastfeeding more than 24 mos was significantly associated with 2-3X increase in ECC (Wong 2017)
- NHANES study found no evidence of a relationship between duration and increased risk of caries
  - (Tanaka 2015)

Breastfeeding and Dental Caries

- With eruption of teeth, the oral microbiome changes
- New bacteria + varied sugars can turn the natural sugars in breast milk into a substrate for cariogenic bacteria
- Frequency affects risk due to buffering capacity
  - Ad libitum
  - Nocturnal feedings

Breastfeeding and Malocclusion

- Breastfeeding may be beneficial to prevent future malocclusions
- Promotes ideal jaw development
  - Craniofacial bones
  - Facial muscles
  - Tongue position and coordination
- May protect against misaligned primary teeth
  - Modulated by non-nutritive sucking habits
References