DISCLOSURE

I do not have any relevant financial/non-financial relationships with any proprietary interests

Reference

Reference Manual: AAPD
Pediatr Dent 2013-2014
Purpose

- Pediatricians play a vital role in the diagnosis and treatment of oral conditions
- Communication between pediatricians and pediatric dentists is paramount to optimum patient care

Overview

Part I
- Newborn Anomalies
- Eruption Problems
- Orthodontic Concerns
- Soft Tissue Lesions
- Dental Infections

Part II
- Lymphadenopathies
- Discolored Teeth
- Trauma
- Prevention
- What’s New!

I. Newborn Anomalies
Newborn Anomalies

- Natal / Neonatal teeth
- Inclusion cysts
  - Epstein’s pearls
  - Bohn’s nodules
  - Dental lamina cysts

CASE #1

Newborn male:
- What is your diagnosis?
- What is your treatment?
- What do you tell the parents?

Natal/Neonatal Teeth

- 1 in 2000-3500
- Present at/or soon after birth
- 90% are true primary incisors
- Riga-Fede’s disease: tongue trauma
- Ellis-van Crevald Syndrome
- Mobility/Aspiration—usually poorly formed
- Breastfeeding complications
Natal / Neonatal Teeth

Twins: 4 Years Old

CASE #2

- Two week old female:
  - What is your diagnosis?
  - What is your treatment?
  - What do you tell the parents?
Inclusion Cysts
- 80% incidence in newborns
- Epstein's Pearls: midpalatal raphe (epithelial remnants)
- Bohn's Nodules: labial and lingual of alveolus, palate (mucous gland tissue)
- Dental Lamina Cysts: crest of alveolus
- Shed spontaneously
- Treatment: observe; reassure parents

Epstein's Pearls

Bohn's Nodules
Dental Lamina Cysts

II. Eruption Problems

- Normal teething
- Eruption hematoma
- Delayed eruption
- Premature loss

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Teething

- Lower, front teeth usually erupt first
- Average: between 6-10 months of age
- Last baby tooth erupts between 23-33 months
- Increased crying, drooling, objects in mouth; over 50% have problems
- Changes in appetite and sleeping habits
- Mild temperature elevations

5 months: “Angel” 8 months: “Baby from Hell”

Teething Remedies

- Topical anesthetics 5 min. before meals
  - Oragel, Numbzit
- Acetaminophen 1 hr. before meals/bedtime
- Cold, soft, pureed fruits, cereals, dairy products
- Teething toasts/biscuits
- Refrigerated, water-filled rings/wet washcloths

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CASE #3

- Eight year old female:
  - Asymptomatic
  - Dark bluish-black lesion
  - What is your diagnosis?
  - What is your treatment?
  - What do you tell the parents?

Eruption Hematoma

- Bluish, dome-shaped swelling
- Dilatation of the follicular space
- Blood or tissue fluid
- Treatment: Observe
Delayed Eruption
- Down's Syndrome
- Hypothyroidism
  - Juvenile myxedema
  - Cretinism
- Cleidocranial dyspl.
- Hypopituitarism
- Achondroplastic dwarfism
- Low birth weight
- Cleft palate
- Osteopetrosis
- Rickets (Vit D dep)
- Osteogenesis
- Gardner Syndrome
- Apert's Syndrome
- Hunter's Syndrome
- Ellis-van Crevald
  - Chondroect dysplasia

Cretinism

Premature Loss of Teeth
- Diseases of Bone:
  - fibrous dysplasia
  - Rickets
- Diseases of Periodontium:
  - prepubertal periodontosis
  - Papillon-Lefevre
- Diseases of Metabolism:
  - hypophosphatasia
- Diseases of Blood:
  - leukemia
  - cyclic neutropenia
  - Chediak-Higashi

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Premature Loss of Teeth (cont.)

Physical/Chemical Injuries:
- acrodynia; facial burns

Benign/Malignant Tumors:
- histiocytosis group; Langerhans cell group

Deviations in Growth/Development:
- natal teeth; hemihypertrophy

Dental Anomalies:
- dentin dysplasia; odontodysplasia

III. Orthodontic Concerns

Orthodontic Concerns

- Habits
- Tongue Tie
- Ectopic Eruptions
Habits

Non-nutritive Sucking Habits

- Pacifiers
- Thumbs / Digits
- Other “Stuff”

Non-nutritive Sucking (NNS)

- “Sucking” is normal at an early age
  - Stimulation
  - Security
  - Nourishment
- Stop in “two waves”:
  - 50% stop between 24-28 months
  - 90% stop by First Grade
- Digit habits most difficult to terminate
- Consider intervention prior to eruption
  Perm Incisors (6 years)
  - Gentle persuasion / behavior modification
  - Fixed tx: cribs, rakes, “bluegrass”

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NNS May Result in:

- Anterior open bites
- Posterior crossbites
- Increase overjet
- Linguoversion of mandibular incisors

Non-nutritive Sucking (NNS)

Pacifier

Thumb

Degree of Deformity

- Intensity
- Frequency
- Duration
Pacifiers

Orthodontic pacifiers
- Nuk; Mam
- Newborn; Infant; Toddler
- Less deformity

Hard, large pacifier
- More deformity

Counseling: Between 2 and 3 Yrs:
“Self Correction”

Before

After

Appliances: After 6 years

“Rake”

“Reminder”

“Bluegrass”

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CASE #4

- One year old male:
  - Asymptomatic; eating well; mild speech problems
  - What is your diagnosis?
  - What is your treatment?
  - What do you tell the parents?

Tongue Tie

- Usually only partial
- Result of a short lingual frenum
- Rarely causes a speech problem
  - possibly "t", "th", "s", "sh" sounds
- Routine frenectomy is discouraged (for correcting speech problems)
- Frenectomy only if correcting a periodontal problem or adult issues

Ectopic Eruption

- Tooth size / arch length discrepancy
- Highest frequency is in lower incisor area
- Treatment:
  - Severe crowding: Observe
  - Mild crowding: Consider eruption guidance

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IV. Soft Tissue Lesions

Apthous Ulcers
- Central necrosis with erythematous halo
- Involves “unbound” mucosa
- Duration: 10-14 days
- Etiology: Unknown (bacterial, viral, auto-immune)
- Behcet’s Syndrome (oral, genital, ocular)

Primary herpes

Other viral lesions
- Varicella / Zoster (chicken pox / shingles)
- Coxsackie A (herpangina)
- Coxsackie A-16 (hand, foot and mouth)

Candidiasis
Case #5

3 year old male:
- Fever; malaise; lymphadenopathy
- What is your diagnosis?
- What is your treatment?
- What do you tell the parents?

Primary Herpes: Systemic Manifestations
- Fever
- Irritability / malaise
- Headache
- Lymphadenopathy
- Pain on swallowing
- Systemic features *precede* oral lesions

Primary Herpes: Location
- Generalized over oral mucosa
  - Attached
  - Unattached
- Occasionally extraoral
  - Chin
  - Nose
  - Eyes
Primary Herpes: Attached and Unattached

Primary Herpes: Usual Age and Sex

- Early childhood
- Rarely seen in adults (or over 6 years)
- Rarely seen before 6 months
- No sexual predilection

Primary Herpes: Avoid

- Steroids
- Topical caustics
  - Silver nitrate
- Antibiotics
  - Unless “rare” secondary bacterial infection
- Salty, spicy, citric foods/liquids
Primary Herpes: Clinical Course
- Mild temperature elevation for 7-10 days
- Duration is 10-14 days
- Greatest discomfort from days 3-7
- Probably day 5 when seen in sick call
- Heal spontaneously without scarring

Primary Herpes: Treatment
- Palliative and supportive
  - Mouthrinses
    - Avoid alcohol containing products
  - Food supplements
    - Avoid supplements that can potentially produce diarrhea
  - Force Fluids
    - Carbonated drinks can sting/burn mouth
  - Analgesics
    - Avoid aspirin containing products

Primary Herpes: Summary
- Primary herpes is a self-limiting disease caused by the herpes simplex virus
- Oral ulcerations are the most common feature and they are highly contagious
- Treatment is supportive.
Herpes Whitlow

Varicella-Zoster Virus

- "Chickenpox":
  - Begins on trunk-spreads to limbs and face
  - Crops of pruritic vesicles on skin and mucous membrane
  - Palate is most common site
  - Fever, malaise precede lesions
  - Resolves in 7-10 days
  - Infectious 24 hours before to 6-7 days after vesicles appear

Coxsackie A Virus:
(Herpangina)

- Peak incidence from May to October
- 5 day incubation period
- Vesicle formation and fever
- Lesions occurs on soft palate, tonsillar pillars, uvula, posterior pharynx, fauces
- Treatment is supportive; self-limiting; resolves in 7-10 days

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Coxsackie A-16 Virus (Hand-foot-mouth)

- Peak incidence from May to October
- 5 day incubation period
- Vesicle formation and fever
- Lesions occur similar to Coxsackie A, plus palms and soles
- Treatment is supportive; self-limiting; resolves in 7-10 days

Case #6

- 8 month old male:
  - Asymptomatic; eating well; afebrile
  - What is your diagnosis?
  - What is your treatment?
  - What do you tell the parents?
Acute Candidiasis (Thrush)

- Common inhabitant of the oral cavity
- Raised, white, furry patches
- Multiplies when host is immune-compromised
- Newborn: acquires from mother with untreated vulvovaginitis
- Angular cheilitis

Acute Candidiasis (Thrush)

- Common in children with leukemia
  - General physical debilitation
  - Immune suppression
  - Prolonged antibiotic therapy
  - Cortico-steroid therapy
  - Chemotherapy
  - Poor oral hygiene

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Topical Nystatin
- Rx: Nystatin Suspension 100,000 U/ml
- Disp: 60 ml
- Sig: 200,000 U four times per day (Infants)
- 400,000 U four times per day (Child)
  for one to two weeks
- Also, Nystatin Popsicles 500,000 Units
  every 6 hours
- Key: Antifungal agent must contact the fungus (i.e. the bleeding base)

Topical Clotrimazole
- Rx: Clotrimazole 10 mg troches
- Disp: 70 troches
- Sig: Dissolve troche in mouth 5 times per day for 14 days (children > 3 years)

Systemic Fluconazole
- Rx: Fluconazole 100 mg tabs (or oral suspension 10 mg/ml)
- Disp: 8-15 tabs (or 35 ml bottle)
- Sig: Take 2 tabs the first day and then one tab daily by mouth (or 6 mg/kg the first day and then 3 mg/kg for 7-10 days)
V. Dental Infections

Case #7A

- 10 year old male:
  - Pain; febrile; swelling; lymphadenopathy
  - What is your diagnosis?
  - What is your treatment?
  - What do you tell the parents?

Acute Dental Infections

- Results from nonvital / degenerative pulp
- May be:
  - Confined to alveolar process
  - May extend beyond cortical barrier to periosteum
  - Invade surrounding soft tissue
- Decisions:
  - Antibiotics?
  - Extract vs. Endo?
  - Emergency extraction vs. Delayed Extraction?
  - Hospitalization?
Acute Dental Infections

- Localized
- Cellulitis

Localized Lesion

Maxilla:
- Risk for Cavernous Sinus Thrombosis
- Deamonte Driver, 12 yr. old Maryland boy who tragically died from a dental infection (Feb, 2007)

Cellulitis

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Cellulitis

- Mandible:
  - Risk for Ludwig's Angina

CASE #7B

- Four year old female:
  - Pain intra-oral, upper left
  - Infra-orbital swelling
  - Fever, lymphadenopathy
  - Malaise, not eating

- What is your diagnosis?
- What is your treatment?
- What do you tell the parents?

The End: Part I