Examination, Diagnosis & Treatment Planning: Considerations for the Pediatric Dental Patient
Many Starts...

...One Ending

Tuesday, June 5, 2012

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Bartosz

- 5 year old male
Findings

- Demographics/Socioeconomics - NSF
- Medical History
  - Patient is medically healthy
    - Appendix removed 3 years ago
- Risk Assessment - high
  - Poor oral hygiene, frequent sugary treats, fluoride exposure limited to tap water and toothpaste, active caries, deep fissuring
- Extraorally
  - Findings appear within normal limits
- Intraorally
  - Soft tissue normal
  - Caries detected
    - #A Lingual, #B Occlusal, #I,J Occlusal, #L Occlusal, #K Lingual. #F-D, #G-M
- Radiographic Survey
  - #I, J, T show deep restorations requiring replacement
- Behavior
  - Frankl 4
Dental History

- #B was removed by PostGrad Pedo as an Urgent Care issue.
- Patient was referred to PreDoc Pedo for band and loop space maintainer #A-C and Comprehensive Care.
- Patient was very compliant with dental procedures and had no behavioral issues.
Radiographs

Pulps Completed W/ No Full Coverage & Recurrent Decay

Ext. Indicated

L, K, S- Decay with Pulpal Involvement

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Radiographs

Decay #F-D
#G-M
Problem List - Review

- Socioeconomic
  - Language
  - Economics
    - Public Aid
    - Insurance
    - Cash pay
  - Guardianship
- Motivation
  - Positive
  - Seeks Only Urgent Care
- Medical
  - Allergies
  - Compromising Conditions
- Soft Tissue
  - Perio Status
- Risk Factors
- Dental
  - Pain
  - Oral Lesions/Abscess
  - Developmental Anomalies
  - Defective Pits & Fissures
  - Proximal/Extensive
- Occlusion
  - AP/Horizontal/Vertical
  - Alignment
  - Premature Loss
  - Space Management
- Behavior/Fear/Anxiety
  - Cooperative
  - Disruptive/Anxious
  - Sedation
- Home Care
- Esthetic Concerns

Tuesday, June 5, 2012
## Treatment Plan

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<th>Description</th>
<th>Site</th>
<th>Surface</th>
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Over $1100
Alternative Plans

- Extract #L
  - Instead of SSC and Pulp
  - Patient was covered by insurance, so cost was not an issue
- Keeping #L will allow preservation of space
- Space maintainer – lingual arch
  - #30 was completely unerupted and space maintenance would be difficult

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Rationale

- **Space Maintainer #A-C:**
  - Necessary due to early ext. #B. (2\textsuperscript{nd} Primary molar and Primary Canine expected to be retained until Age 10-12)

- **#F-DF composite**
  - Necessary for esthetics (Alternative- strip crown not needed)

- **#G-MF composite**
  - Necessary for esthetics

- **#I,J- SSC**
  - Required due to previous pulp therapy and failing composite restoration.

- **#L,K,S- Pulp/SSC**
  - Indicated due to decay extended to pulp chamber

- **#T- Extract**
  - Indicated due to mobility and advanced dental caries.
Prognosis Statement

- Entire dentition has a good prognosis
- #30 may drift forward mesially and should be reevaluated for space maintenance following eruption
  - (lower 2\textsuperscript{nd} Premolar erupts Age 10-12)
- OHI and prophy should improve patients oral health
- Patient’s father was very responsive to suggestions
- Patient’s oral hygiene has improved
Outcomes: Right
Left
Mandibular
Examination, Diagnosis & Treatment Planning: Considerations for the Pediatric Dental Patient

Images from Personal Collection, Pinkham’s “Pediatric Dentistry” and the Web

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Examination

“Data Gathering”
As a review, a complete examination encompasses

Initial Interview
Clinical Evaluation
Radiographic Survey
Data List

- Socioeconomic
  - Language
  - Economics
    - Public Aid
    - Insurance
    - Cash pay
  - Guardianship
- Motivation
  - Positive
  - Seeks Only Urgent Care
- Medical
  - Allergies
  - Compromising Conditions
- Soft Tissue
  - Perio Status
- Risk Factors
- Dental
  - Pain
  - Oral Lesions/Abscess
  - Developmental Anomalies
  - Defective Pits & Fissures
  - Proximal/Extensive
- Occlusion
  - AP/Horizontal/Vertical
  - Alignment
  - Premature Loss
  - Space Management
- Behavior/Fear/Anxiety
  - Cooperative
  - Disruptive/Anxious
  - Sedation
- Home Care
- Esthetic Concerns
Treatment of Minors – Legal Guardianship

- Expanded family
- Caregiver not necessarily guardian
- Initiating adult ≠ guardian
- Identify who is guardian
- Cannot proceed even with exam or radiographs
- Permission
  - In person
  - Signature on treatment plan
  - By witnessed telephone call
  - (sometimes written letter)

Parent/guardian must stay on-site for the entire dental visit
Anyone under the age of 18
Administrative Data

- Name & Preferred Name
- Birth Date
- Gender
- Telephone Numbers
- Address
- Parent’s Data
- Siblings
- Adoption Status
- Reason for Bringing Child to Office
- MD’s Name & Phone & Address
- Emergency Numbers
- Billing Information – especially if divorced
Medical History
self explanatory, plus some helpful questions

- PMH
- HPI - Current Treatment
- Hospital Stays
- Emergency Room Visits
- Allergies
- Medications
- Immunizations
- Difficulties in School
Dental History

- CC - Chief Complaint
- PDH - Previous Visits
- Reason for Leaving Another Office
- Dental IQ
- Cooperation Level
- Family Fears of Dentistry
- Family Dental Characteristics
- Habit History
- Preventive Profile
- Risk Assessment
Clinical Evaluation

- General Appraisal
- Extraoral Head & Neck
- Intraoral Soft Tissue
- Intraoral Hard Tissue
- Occlusion
- Oral Habits
General Appraisal

- Gait
- Speech
- Hands
- Stature
- Behavior & Intellectual Development
Extraoral Head & Neck

- Recognize Normal
- Record Abnormal
  - Symmetry
  - Color
  - Form
  - Consistency
  - Texture
  - Surface characteristics

- Maxilla
- Mandible
- TMJ
- Skin
- Eyes
- Ears
- Nose
- Lips
- Regional Lymph Nodes
EOE - ExtraOral Examination
Lymphatic Drainage – Head & Neck
Cat Scratch Disease
EOE - Naevus Flammeus
EOE
EOE

Tinea Captis
(fungal infection)
EOE
EOE

Hemifacial Microsomia
EOE
EOE
EOE
Red, White & Blue

Dentinogenesis imperfecta type I - afflicted with osteogenesis imperfecta, blue sclera
Pink Eye (Conjunctivitis)

- Conjunctivitis
- Inflammation of the conjunctiva, the tissue that lines the inside of the eyelid and helps keep the eyelid and eyeball moist
- Very contagious
EOE

- Ear
- Otitis Externa
  - Swimmer’s Ear
EOE

- Otitis Media
- Middle ear infection
  - (later in series)
EOE
Cleft Lip (when does it occur?)

- Fusion failure - clefting
- 1:800 births
- Normally completed by 8 weeks
- Most common birth defect
IOE- Intraoral Soft Tissue

- Lips
- Mucous Membranes
- Cheeks
- Gingiva
- Tongue
- Floor of Mouth
- Hard & Soft Palates
- Visible Throat
  - Posterior Pharyngeal Wall
  - Tonsils
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Peutz Jeghers
Same Disorder
IOE
IOE

(How Old?)

Self Inflicted Wound

Self Inflicted Wound
Eruption Hematoma
amalgam tattoo
self-inflicted
hereditary fibromatosis
melanotic macule
pyogenic granuloma
operculum
peripheral ossifying fibroma
peripheral ossifying fibroma
enlarged fungiform papillae
median rhomboid glossitis
mucocoele
mouth-breather
hemangioma
lymphangioma
lymphoepithelial cyst
white sponge nevus
pigmented fungiform papillae
Lingual Thyroid

What is it?
Geographic Tongue

- Benign Migratory Glossitis
- Condition that occurs in up to 3% of the general population
- Most often, patients are asymptomatic
- However, some patients report increased sensitivity to hot and spicy foods
- Etiology and pathogenesis are still poorly understood
- The condition affects males and females and is noted to be more prominent in adults than in children
Geographic Tongue

- Classic manifestation
  - Area of erythema
  - Atrophy of the filiform papillae of the tongue
  - surrounded by a wavy or indented (serpiginous), white, hyperkeratotic border.

- The patient often reports spontaneous resolution of the lesion in one area, with the return of normal tongue architecture, only to have another lesion appear in a different location of the tongue.

- Lesion activity may wax and wane over time, and patients are occasionally free of lesions.

- If lesions occur at other mucosal sites, the condition is termed *erythema migrans*.
Fissured Tongue – Scrotal Tongue

- Benign condition
- Characterized by numerous shallow or deep grooves or furrows (fissures) on the back (dorsal) surface of the tongue
- Surface furrows may differ in size and depth, radiate outward, and cause the tongue to have a wrinkled appearance
- Condition may be evident at birth (congenital) or become apparent during childhood or later

Healthy 10 year old
Fissured Tongue – Scrotal Tongue

- Reports suggest that the frequency and severity of fissured tongue appear to increase with age.
- In some cases, fissured tongue may develop in association with infection or malnutrition.
- In other affected individuals, it may occur with certain underlying syndromes or may be a familial condition, suggesting autosomal dominant inheritance.

Trisomy 21
Hairy Tongue

- Commonly observed condition of defective desquamation of the filiform papillae
- Characterized by:
  - a hypertrophy and elongation of filiform papillae
  - with a lack of normal desquamation
- May be associated with antibiotic therapy and opportunistic candida infections
- Color generally black
  - Colors from candy, mouthwash or anything with a colorant
- *Lingula villosa*
Pathophysiology

- Precipitating factors for hairy tongue include:
  - poor oral hygiene
  - use of medications (especially broad-spectrum antibiotics)
  - therapeutic radiation of the head and the neck
- All cases of hairy tongue are characterized by a hypertrophy and elongation of filiform papillae, with a lack of normal desquamation
  - Normal filiform papillae are approximately 1 mm in length, whereas filiform papillae in hairy tongue have been measured at more than 15 mm in length (diameter of a quarter)
IOE - Normal
Tori – What’s the Problem?

Radiographs!
Ranula
Fordyce Granules (aberrant sebaceous glands)
Self-Inflicted

PostAnesthesia

Chronic Sucking
What Do You See?
IOE

Inflammatory Hyperplasia

Ecchymosis - Candy

Newborn Cyst

Torus
Bifid Uvula – (Almost) Cleft Palate
Oropharynx
Kathy
IOE- Intraoral Hard Tissue

- Number
- Size
- Color
- Malformations
- Age Appropriateness
  - (dental age versus chronological age)
Teeth
Teeth
Teeth
Case

- CC: bad breath
- Sour taste in mouth
- Heartburn
GERD
Differential

- Bulimia
- Carbonated beverages
  - Held in mouth
Teeth

- Eruption sequence
- Age appropriateness
Occlusion

- Primary Dentition
  - Mesial Step
  - Flush Terminal Plane
  - Distal Step
- Class I, II, III
- Crossbites
- Midline deviations
- Overbite/Overjet
- Vertical Problems
Occlusion
Occlusion
Occlusion

- Anterior crossbite
Occlusion

- Posterior crossbite
Habits

- Digit Sucking
- Dummy Sucking
- Tongue Thrust
- Nail Biting
- Mouth Breathing
- Bruxism
- Tobacco Use
Radiographic Survey

- Intraoral
- Extraoral
- Special Views
Radiographic Survey

- *When indicated*, the radiographic examination for children must be completed before the comprehensive oral health care plan can be developed.
Treatment Planning

“The foundation upon which the (prevention and) rehabilitation superstructure is constructed.”
Computer & Head Full of Data
Now put it all together

- Identify the Problems
- Prioritize Treatment
- Organize & Sequence
- Preventive Program
Computer & Head Full of Data
Now put it all together

Taking in to Consideration:
Caries Risk
Treatment Options
Behavior
Advantages of Treatment Planning

- Diagnostic decisions are made at one time – no re-diagnosing at each appointment
- Saves valuable chair time
- Permits the office and family to arrange a series of appointments in the correct time frame
- Permits posting of fees per appointment, assisting in family budgeting
- Permits you or assistant to prepare the required instruments and materials ahead of time
Problem List

- Socioeconomic
  - Language
  - Economics
    - Public Aid
    - Insurance
    - Cash pay
  - Guardianship

- Motivation
  - Positive
  - Seeks Only Urgent Care

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Tuesday, June 5, 2012
Sequence Design - consider

- Patient Management
- Urgency
- Convenience
- Prerequisite Treatment
Guidelines

- Provide the apprehensive patient with one brief relatively easy experience
- Work in quadrants
- Early appointments
  - Lower arch
    - Direct vision
    - Right hand/left quadrant anesthesia (\& vise versa)
- Urgent need first
- Sequencing
- Complete treatment with a favorable experience
- Plan for the worst, hope for the best
- Stick to treatment plan avoiding deviations which may confuse parents, assistants and billing personnel
Quick Summary

More to Come
questions?