

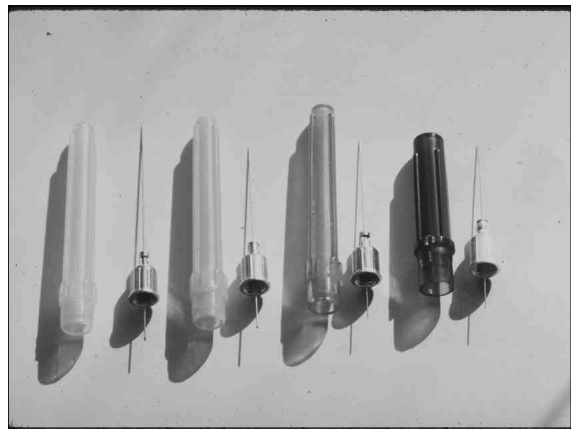


## Local Anesthesia for the Pediatric Patient

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Course Director

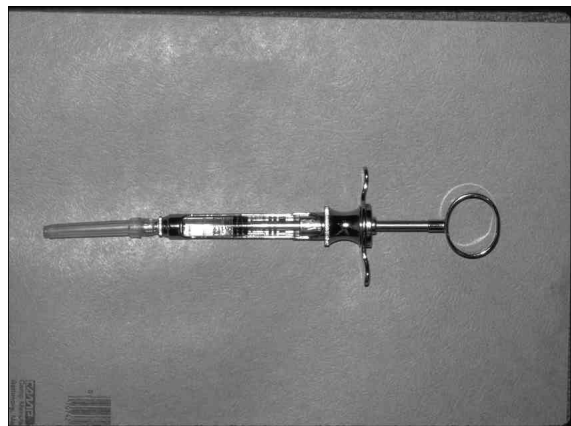
### Lidocaine 2%

- 1.8 cc per Carpule
- x 2% = 36mg(lido) per Carpule
- Max Dosage: 2.2 mg/lb or 4.4mg/kg.
- Epi 1:100K or 0.018mg/carpule
- Role of epi



### Gauge of Needle

- 27 Gauge Larger Than 30
- Perceptible Pain Difference?
- Better Aspiration Ability ?
- 30 Ga. Slows Rate of Injection
- Long, Short, and Ultra-short
- Bevel faces bone



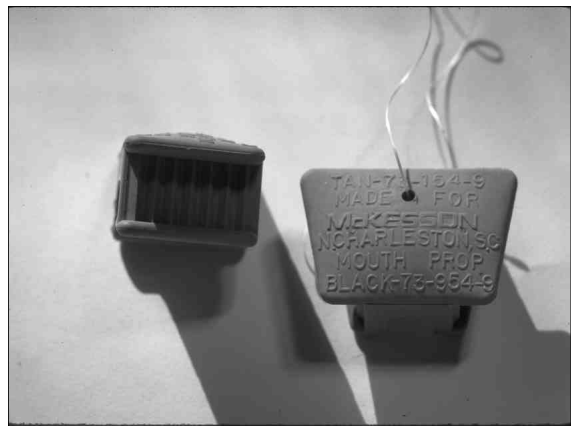


### Behaviour Management Techniques for L.A.

- ✓ Warm up to your patient
- ✓ (fav. Cartoons, Activity etc.)
- ✓ Tell, show, do?
- ✓ Euphemisms - "Sleepy juice" (x hurt/pain)
- ✓ Distraction and verbal communication
- ✓ Positive reinforcement
- ✓ Reward
- ✓ Breathe/count to 10
- ✓ Bathroom - micturation reflex

### Local Anesthesia techniques

1. Operator and chair position
2. Patient head and hand stabilization
3. Topical anesthesia - technique and limitations
4. Keep syringe out of patients view
5. The biteblock
6. Aspirate and inject very slowly
7. Lip jiggling
8. Mouth rinse, massage area and seat patient upright



## Assessment of Local Anesthesia

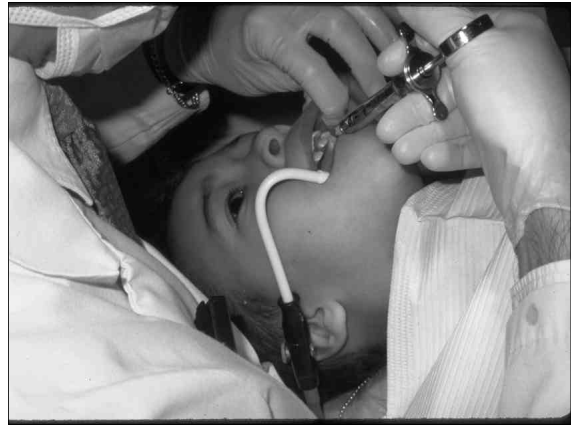
Onset of anesthesia:

- Soft tissue vs hard tissue
- Subjective and objective testing

## L.A. Techniques

1. Mandibular Anesthesia - block vs infl
2. Maxillary Anesthesia - palatal tissues
3. Periodontal ligament injection (pdl)
4. Long buccal





## Topical Anesthetics

- Use Acceptable Tasting Brand
- 120 Seconds Minimum
- Effective only on Non-keratinized Areas
- Pressure Anesthesia for Keratinized Areas
  - Ball Burnisher
  - Increasing Pressure > Blanching

## Case scenario

A 7 yr old male presents for restorative care ( DO-RSN #T ). The patient weighs 35 kg/70 lbs.

Discuss the mode of anesthesia (block vs infl) and maximum recommended dosage in mg and carpules for this patient.

## Case Scenario

Block

Max dosage = 2.2 mg/lb or 4.4mg/kg

$70 \times 2.2 = 154\text{mg}$  (lido)

36 mg of lido and 0.018mg of epi = 1 carpule

$154 \div 36 = 4.2$  carpules ( 0.0756mg of epi )

## L A Overdose

- Causes - intravascular injection, excess dosage
- CNS depression
  - drowsiness
  - seizures
  - disorientation
  - Loss of consciousness
- CVS - ↓HR ↓CO CV collapse

## OVERDOSE PREVENTION

- Know pt. Hx, Wt.
- Calculate max dosage and use the smallest qty to achieve adequate anesthesia
- ASPIRATE and inject slowly
  
- MANAGEMENT - BLS, transport to medical facility

## DOCUMENTATION

1. L.A. contains lidocaine and epinephrine.  
THESE ARE DRUGS
2. Chart entries must include dosage(in mg), site, route of administration.

Example:

36mg of lido(2%) with 0.018mg of epi was administered as an IAN block for a pulpotomy on #T using RD isolation. PICPF

## AHA guidelines

Posted on coursework.

Excerpts.....

1. Pre-medication needed for ortho bands placement and pdl injections.
2. Pre-medication not needed for pulpotomy or LA

## Pediatric Exodontia

Dr. S Lal

## Indications

1. Gross decay/unrestorable teeth
2. Tooth abscess/infection
3. Over retained primary teeth
4. Orthodontic reasons
5. Root tips

## Pre-op workup

- ✓ Obtain X-ray on the day of ext
- ✓ Explain and obtain consent from the parent before you start the procedure
- ✓ Explain to the child that he/she has a "Sugar bug in his tooth that needs to be wiggled"
- ✓ Topical anesthesia
- ✓ Know max recommended dosage
- ✓ Med hx

## Pathology



- Furcation involvement with internal root resorption.
- Tx : Ext #T, Sp.mgmt?

## Pathology

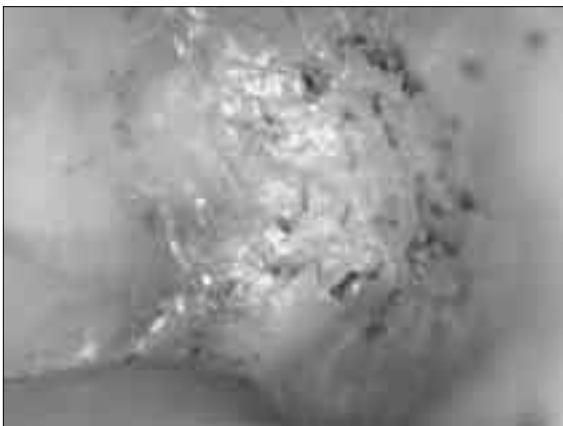


- Internal resorption with furcation involvement.
- Tx- Sp.mgmt impressions followed by ext# T

## Anomalies

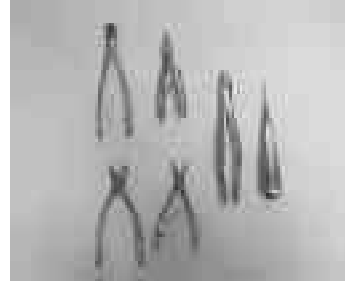


- Over-retained primary 2nd molar due to unfavorable pattern of root resorption
- Tx- Ext #T





### **Armamentarium**



### **Getting Started**



### **Taking the Proper Precautions**



### **Don't Forget the Finger Rest**



### **Grasping the Instruments**



### Wafer Thin Roots



### Making Room for the Permanent Dentition



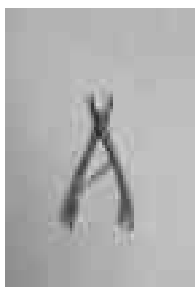
### Root Close-up



### Gross Caries



### Baby Cowhorns



### Post-op care

- Check for any root breakage vs(x-ray)
- Compression of bony socket
- Hemostasis - positive pressure-5min
- Gauze pack
- Post-op instructions





## Pediatric Rubber Dam Application

- Isolation
- Prevents:
  - Aspiration
  - Materials Contamination
- Behavior Management Aid
  - Excessive Talking
  - Tongue Interference

## Area of Isolation

- Clamp tooth distal to treatment tooth
- Isolate one tooth either side of treatment site

## Rubber Dam Clamp

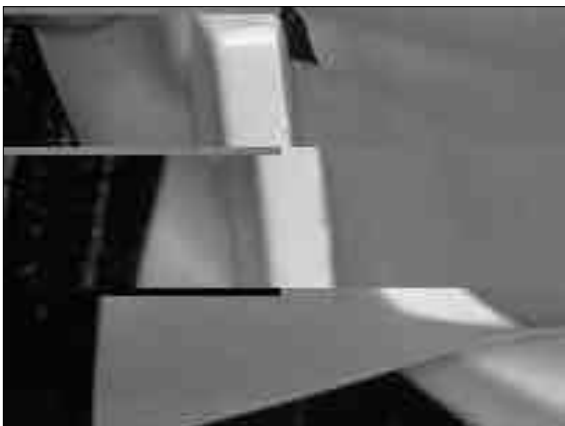
- Seat Well Via Finger Pressure
- Breakage
  - Occurs at Bow
  - Lingual Aspect: Aspiration Danger
- Retrieval:
  - Floss Tied through Lingual Forcep Hole
  - Peds clamps- 27, 27N, 14, 14A

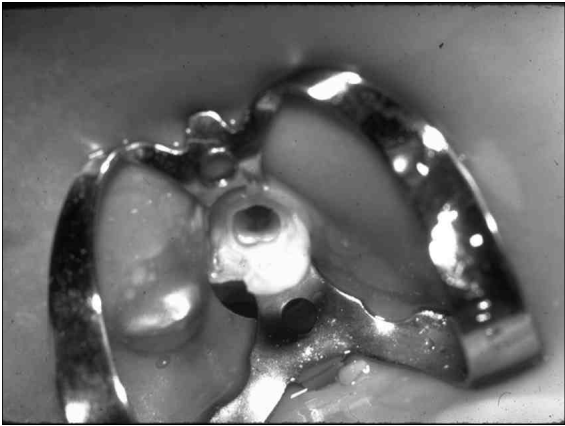




**Maxillary Anterior Isolation**

- Avoid 227 Clamp...Traumatic
- 2 “Large” Contiguous Holes
- Stretch from Canine to Canine
- Ligate if Necessary





Thank you !!

