

**SYSTEMIC**

**DISEASE**

# *Objectives of patient evaluation*

- *Establishing Diagnosis*
- *Determining pre-existing medical conditions*
- *Discovering concomitant Disease*
- *Managing emergencies*
- *Patient management*

# ANAEMIA

## *General signs*

- *Lassitude*
- *Weakness*
- *Pallor*
- *Breathlessness*
- *Ankle swelling in severe cases*

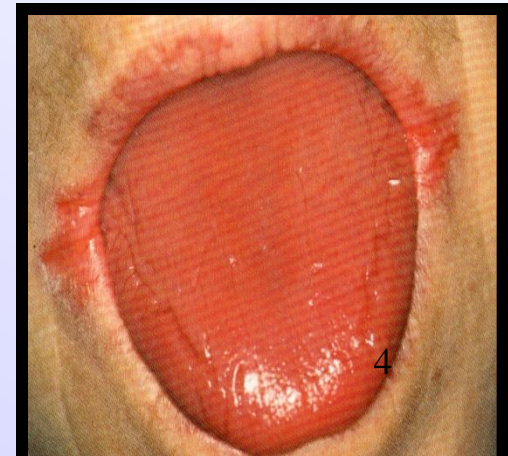
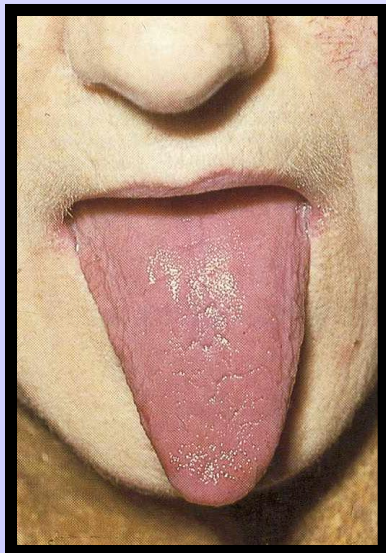
## *Oral Signs*

- *Glossitis*
- *Angular cheilitis*
- *Pallor- soft palate & tongue*
- *Papillary atrophy*

# ANAEMIA

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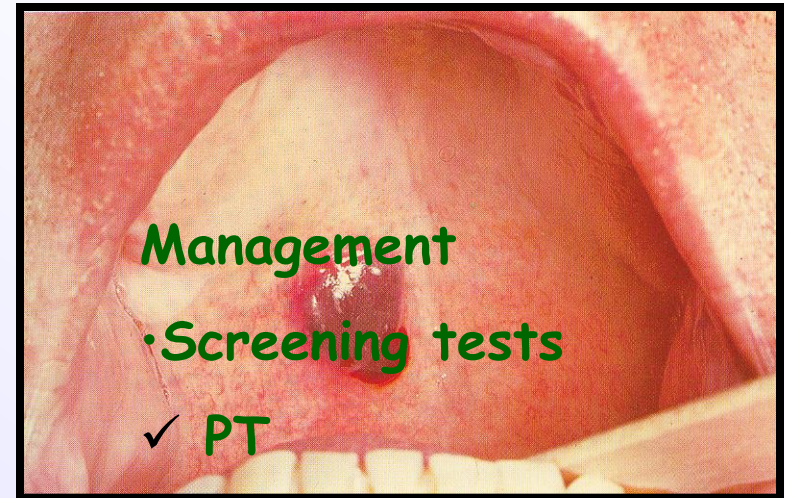
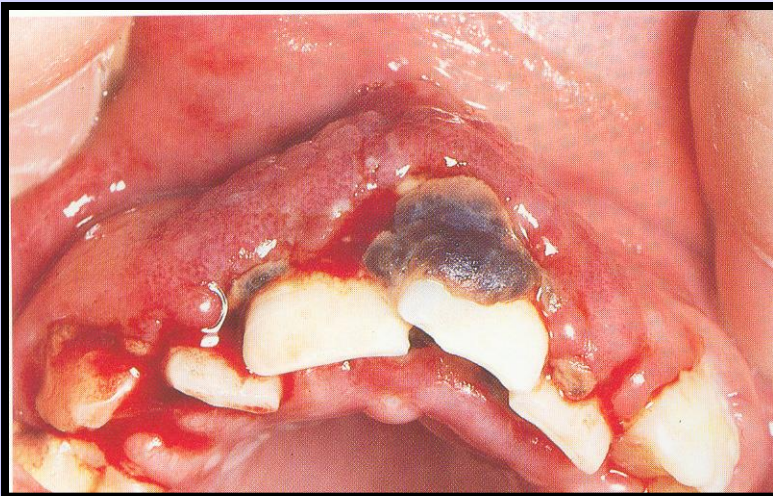
## *Dental considerations*

- *Minimal blood loss*
- *Remember delayed wound healing*
- *↑ risk of infection of wounds*

# Bleeding Disorders

## Oral Manifestations

- Excessive/ spontaneous bleeding
- Petechiae
- Hematomas



## Management

### • Screening tests

✓ PT

✓ PTT

✓ Platelet count

✓ Coagulation time

✓ Bleeding time

■ Replacement option

■ Avoid aspirin & others

## CARDIOVASCULAR DISORDERS

### CARDIAC

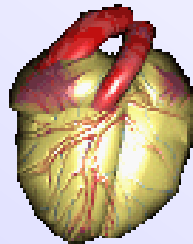
- H/o Rheumatic fever
- Ischaemic heart disease
- Cardiac surgery
- Pacemaker

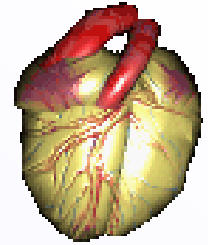
## CARDIOVASCULAR DISORDERS

### CARDIAC

#### Signs

- Chest pain
- Dyspnoea
- Swelling of ankles
- Palpitations
- Hypertension

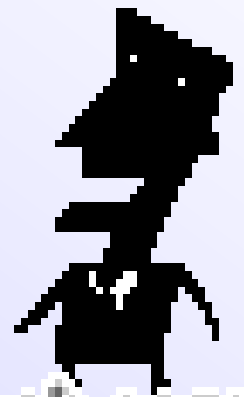




## CARDIAC

### CARDIOVASCULAR HISTORY

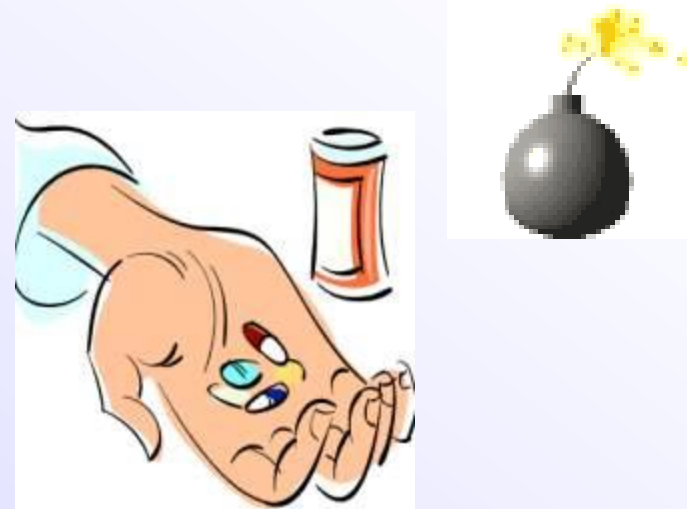
- Do you have breathlessness on exertion like climbing stairs or walking fast?
- Do you suffer from dizziness, palpitation with profuse sweating?
- Do you have pain in left side of chest on exertion or emotional outburst?



## Rheumatic Fever- Bacterial Endocarditis

### Prophylactic antibiotics before dental procedures

- Tooth extraction
- Periodontal Surgery
- Endodontic Rx
- Incision of dental abscess



- Patient not allergic to penicillin- **3g Amoxicillin 1 hour before surgery**
- Pt allergic- **1.5g erythromycin stearate, 1-2 hrs before surgery, 0.5g every 6 hrs later for 3 days**

## **ISCHEMIC HEART DISEASE**

- **Angina Pectoris**
- **Myocardial Infarction**
- **Arrhythmias**
- **Cardiac Surgery**

## ISCHEMIC HEART DISEASE

### Angina Pectoris

- Squeezing, substernal pain
- Radiating - jaws, L. shoulder, inner arm
- Pale, ashen, diaphoretic
- Palpitations
- Dyspnoea

### Myocardial Infarction

- Protracted and severe chest pain
- Radiation
- Nausea, vomiting
- Palpitation, shortness of breath

## ISCHEMIC HEART DISEASE

### Angina Pectoris

#### Management

- Shorter appts
- Prophylactic N.G
- Sedation
- Hospitalization if no improvement

### Myocardial Infarction

#### Management

- Minimize stress
- Sedation



## HYPERTENSION

- Normal - 120/80 mm Hg
- Controlled - upto 140/ upto 90
- Mild - 140-160/90-105
- Moderate - 160-170/105-115
- Severe - 170-190/115-125
- Malignant - Severe (often 190+/125+) assoc. with CNS symptoms such as blurring of vision, headaches or changes in mental status



# HYPERTENSION

## Dental Management

- Control of anxiety
- Advanced dental procedures and simple surgical pro.- adjunct sedation
- Poorly controlled- chances of profuse/vigorous bleeding



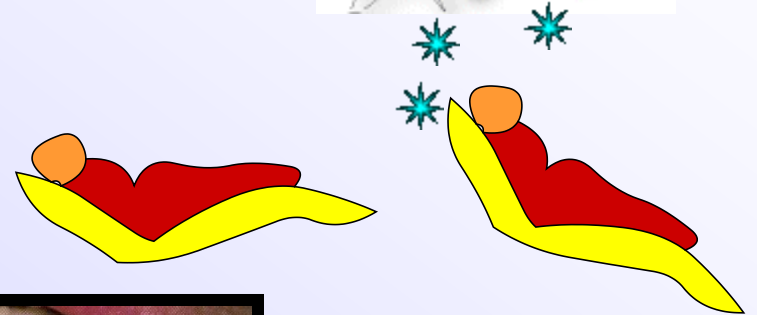
Moderate

-hospital + proper sedation/ GA

# HYPERTENSION

## Dental Considerations

- Drug induced gingival hyperplasia
- Orthostatic hypotension



## PREGNANCY

## & likelihood of pregnancy



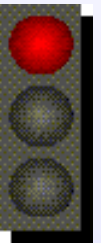
- First confirm if pregnant
- Take H/o trimester, note complications
  - H/o spontaneous abortion
  - Hypertension
  - Anemia
  - Psychological factors & signs of obvious stress

## PREGNANCY

## &amp; likelihood of pregnancy

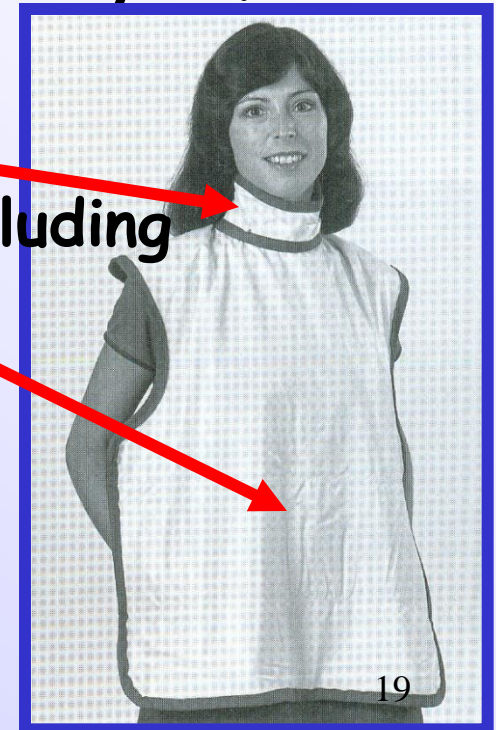


- 1<sup>st</sup> trimester: **Maximum organogenesis**  
Fetus susceptible- teratogenic drugs  
abortion
- 2<sup>nd</sup> trimester: **Optimal for Rx**
- 3<sup>rd</sup> trimester: **Syncope & hypertension risk, sec. to fetal position, ↑ risk of anemia, ECLAMPSIA, hypertension**



## SPECIFIC GUIDELINES

- Preventive Dental prophylaxis- beginning of 2<sup>nd</sup> and 3<sup>rd</sup> trimester
- Non-deferable Rx(e.g caries control) 2<sup>nd</sup> tri.
- R.G contraindicated- except emergency. If done lead shielding mandatory
- Medical clearance for all drugs including anesthetics, analgesics, antibiotics



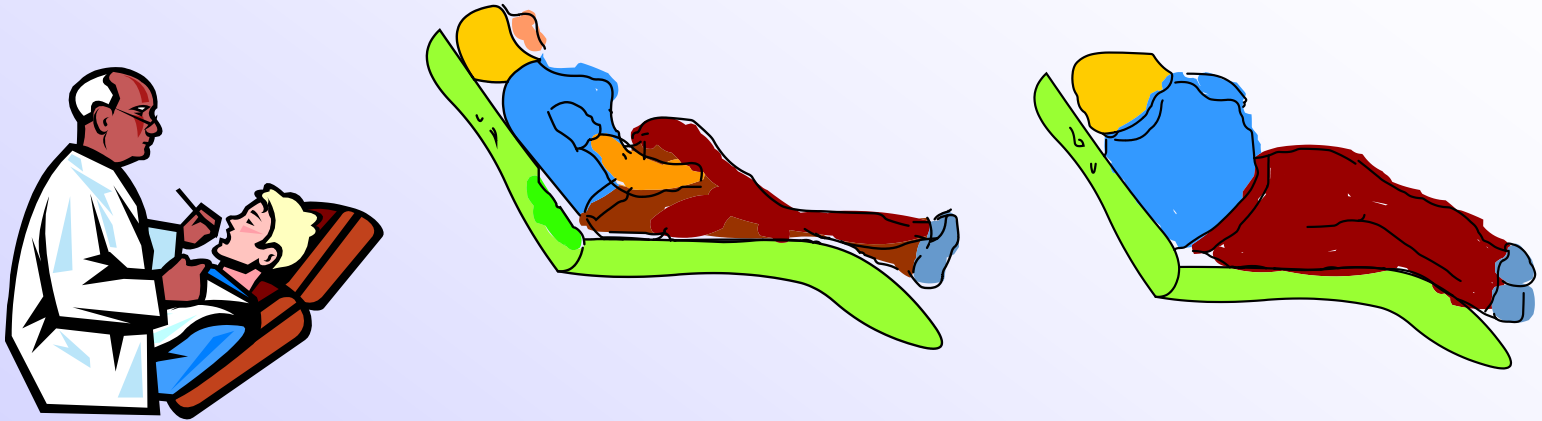
## SPECIFIC GUIDELINES

- Drug use in pregnancy

|   | Drug Category  | To be avoided   | Preferable                                   |
|---|----------------|---|--|
| 1 | Analgesics     | Aspirin<br>Mefenamic acid<br>Pentazocine                                      | Paracetamol                                  |
| 2 | Antimicrobials | Tetracycline<br>Metronidazole<br>Sulfonamides<br>Rifampicin<br>Aminoglycoside | Penicillin<br>Erythromycin<br>Cephalosporins |
| 3 | Other          | Diazepam<br>Corticosteroids<br>Nitrous oxide                                  |  |

## SPECIFIC GUIDELINES

- 3<sup>rd</sup> trimester - supine hypotension syndrome



- Elective Dental Rx- last month avoided



# INFECTIONS

## Tuberculosis



# INFECTIONS

## Tuberculosis

### Potential problems related to dental care

- Infection contracted by dentist
- Transmission



## Oral lesions Associated with HIV Infection

### Fungal infections

- Candidiasis
  - pseudomembranous
  - erythematous
  - hyperplastic
  - angular cheilitis

### Bacterial infections

- Necrotising gingivitis
- Progressive periodontitis

### Viral infections

- Herpetic stomatitis
- Hairy leukoplakia
- Herpes Zoster

### Neoplasms

- Kaposi's sarcoma
- Squamous cell Ca.

## Oral lesions Associated with HIV Infection

Neurological disturbance

Unknown etiology

- Recurrent aphthous ulceration
- Delayed wound healing
- Submandibular lymphadenopathy

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Unknown etiology

- Recurrent aphthous ulceration
- Delayed wound healing
- Submandibular lymphadenopathy
- Xerostomia
- Idiopathic thrombocytopenia

## LABORATORY DIAGNOSIS

Screening → Confirmatory

Confirmatory - 1. Western Blot test

2. Polymerase Chain reaction (PCR)

-research procedure using the  
viral genetic material

**Latest AIDS definition - when CD4 cells count  
drops below 200 cells/ mm<sup>3</sup>**

**Normal - 500 - 600 cells/ mm<sup>3</sup>**

**PROBLEMS**

**Time to search for a new profession !**

- Reliability

And

'window period'

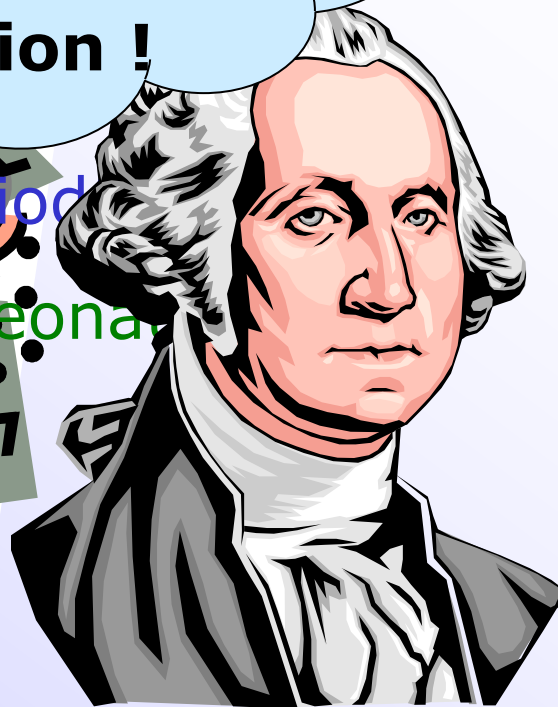
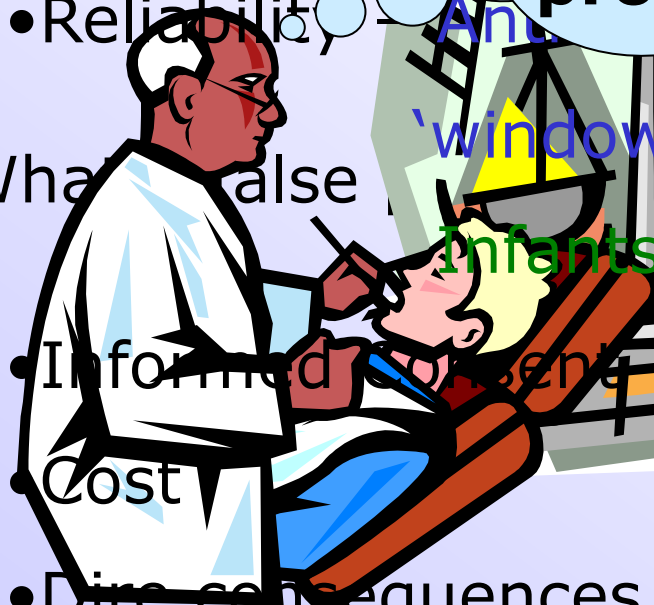
Infants & neonates

What else

- Informed consent

- Cost

- Dire consequences



Dental surgeon

Court Case

**PROBLEMS**

I'll retain my chair and regain my hair !!



Dental surgeon



Hair Dresser

## CONTAMINATION CONTROL

### Considerations

- All bodily secretions
  - HIV in saliva, tears, breast milk, urine
- CMV, EBV spread by oropharyngeal secretion
- Dental RX
  - Stimulation of bleeding
  - Aerosol sprays from high speed hand pieces
  - Use of ultrasonic devices

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## CONTAMINATION CONTROL

### Personal Protective measures

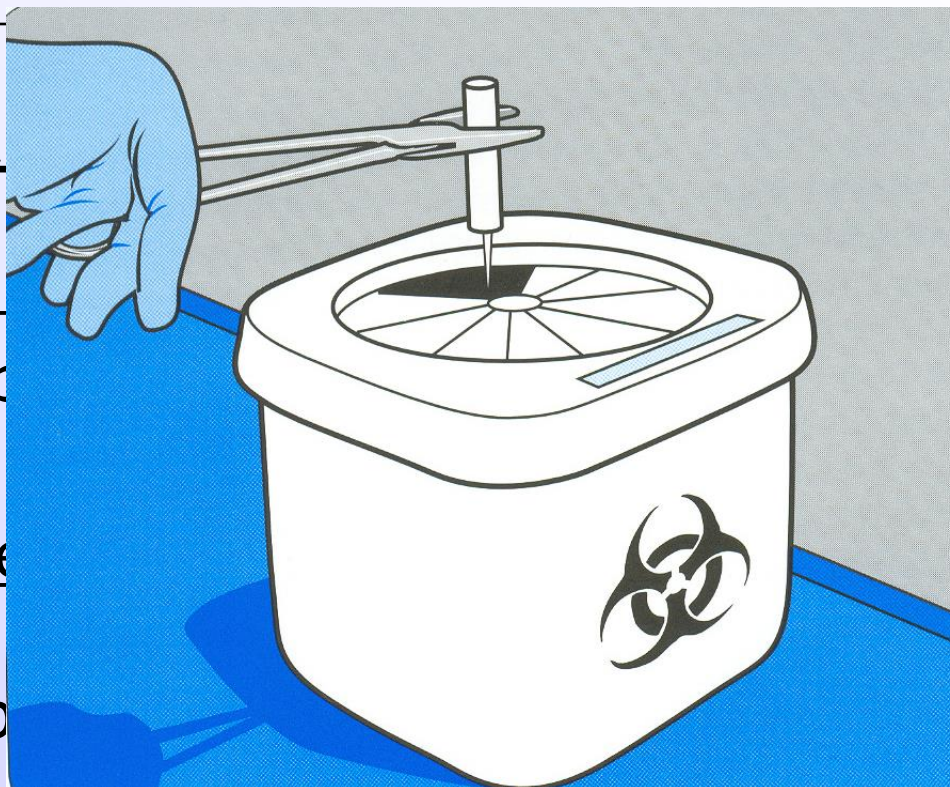
- Personnel with exudative lesions
  - no invasive procedures
- Radiograph – Dentist places film (*sealed pkt*)
  - Other manipulation – assistant
- Care in handling scalpel blades, disposable needles, Burs, discs, endodontic instruments- use forceps/ pliers to insert/ remove sharp instruments.

**CONTA****Personal**

- A pre- op

**Instrume**

- Disposable
- Disposable needles, syringes, scalpel blades should be placed in hard puncture- resistant con.



t

haemostat

## CONTAMINATION CONTROL

### Instrument Disposal and sterilization

- Instruments – first detergent solution



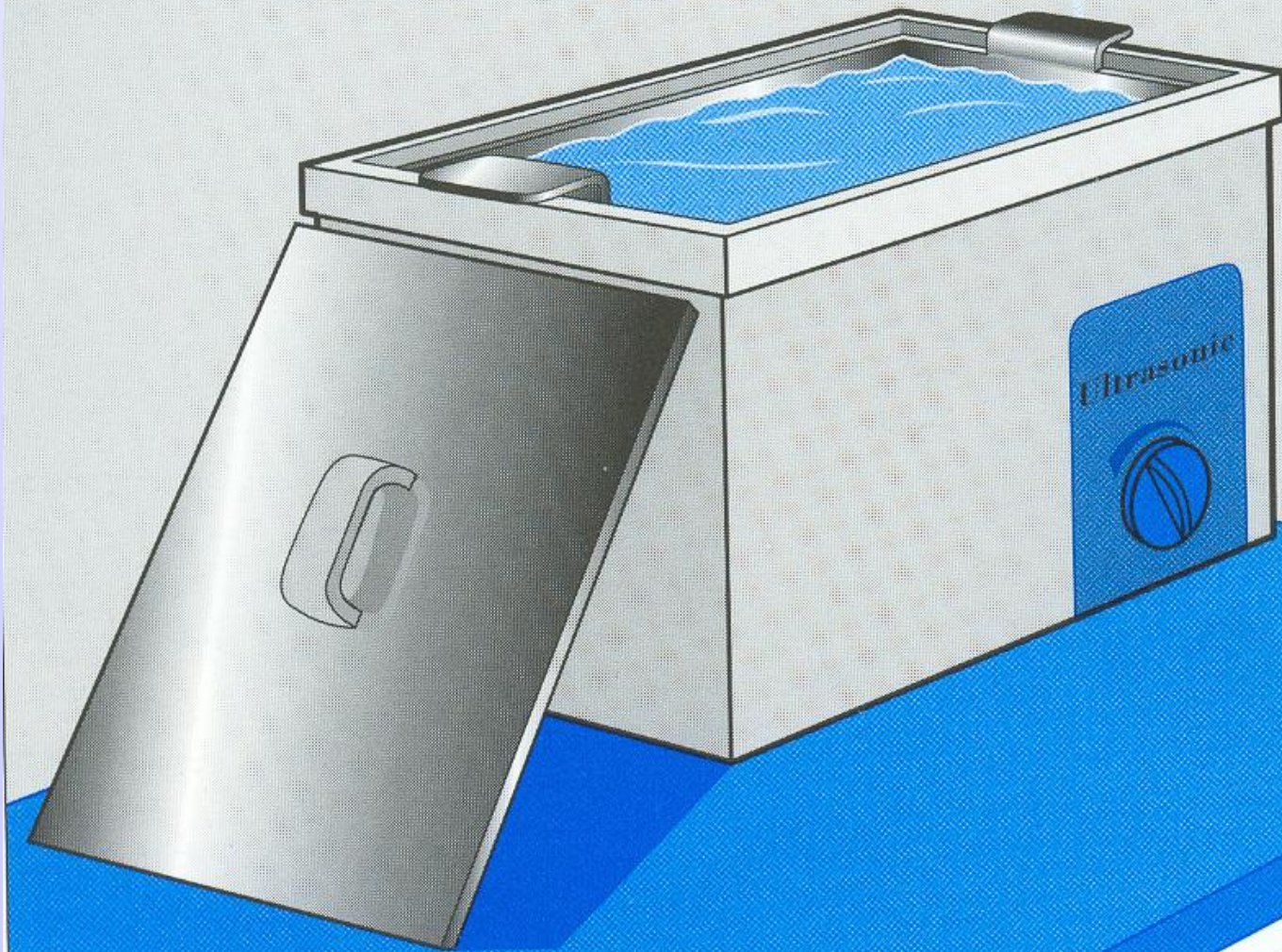
autoclaving or dry heat

↓ (*if not possible*)

chemical vapor sterilization







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## **CONTAMINATION CONTROL**

### Instruments

- Matrix bands- Dispose OR clean & autoclave with holder
- Saliva ejector – If plastic, dispose
  - If metal, clean & autoclave
- Drinking cups - Dispose

## **CONTAMINATION CONTROL**

### Impression Procedures

- Alginate – Disposable trays
  - Gloves while pouring impression
  - Cast soaked in dilute Na.Hypo soln.
- Rubber base – Rinse with dilute Na. Hypo. soln.  
before pouring

## CONTAMINATION CONTROL

Waste disposal



**Infected**

Visible blood, heavily  
soiled with saliva

**Non - Infected**

**All used instruments, gloves and  
pathological specimens to be handled with  
GLOVES**

## H I V in saliva

- Infectivity of HIV ↓ on exposure to saliva
- Mixed saliva - possible
- Pure parotid saliva **X**

## **Management of AIDS**

### Anti retroviral drugs

- AZT or zidovudine (ZDV), nucleoside reverse transcriptase inhibitors (NRTI)
- non-nucleoside reverse transcriptase inhibitors (NNRTIs)- efavirenz (EFV), delaviridine (DLV), and nevirapine (NVP).
- combination therapy is referred to as highly active antiretro- viral therapy, or HAART.