COMMON CHILDHOOD EMERGENCIES

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COMMON CHILDHOOD EMERGENCIES

WE ARE GOING TO LOOK AT :

- Abdominal Pain
- Headaches
- Head Injuries
- Ears
- Seizures
- Respiratory emergencies
- Shock
- Rash

IF WE HAVE TIME :

- Toothaches
- Broken Teeth
- Abrasions
- Cuts
- Wounds
- Eyes
- Burns
- Bleeding
- Safety

Vomiting and/or Diarrhea

- Vomiting and/or diarrhea can require emergency care if a child becomes dehydrated.
- If the child can't keep anything down or has severe diarrhea, watch for signs of dehydration such as
  - Sunken eyes
  - Dry mucus membranes
  - Abnormally low amounts of urine.

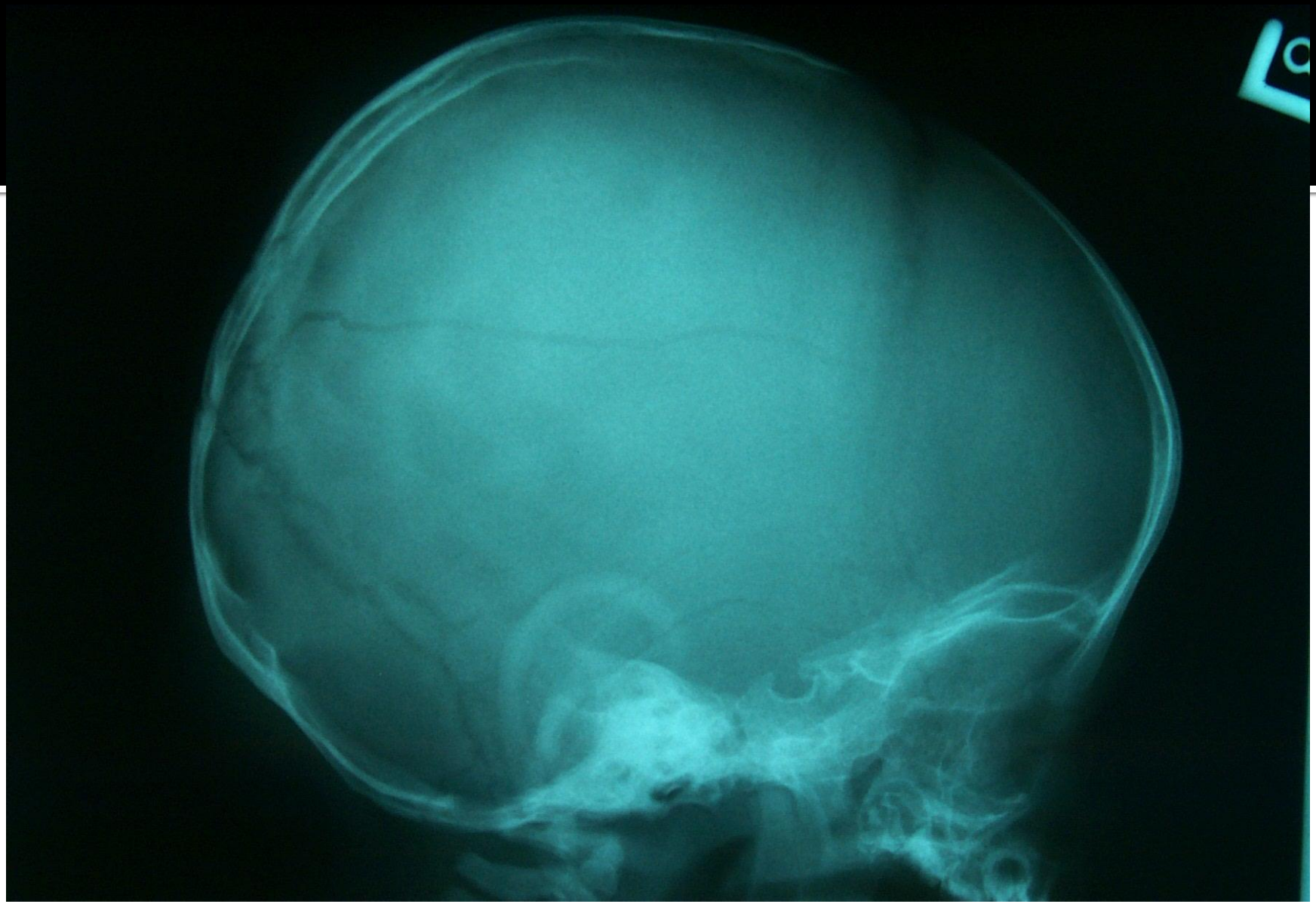
Head Injury

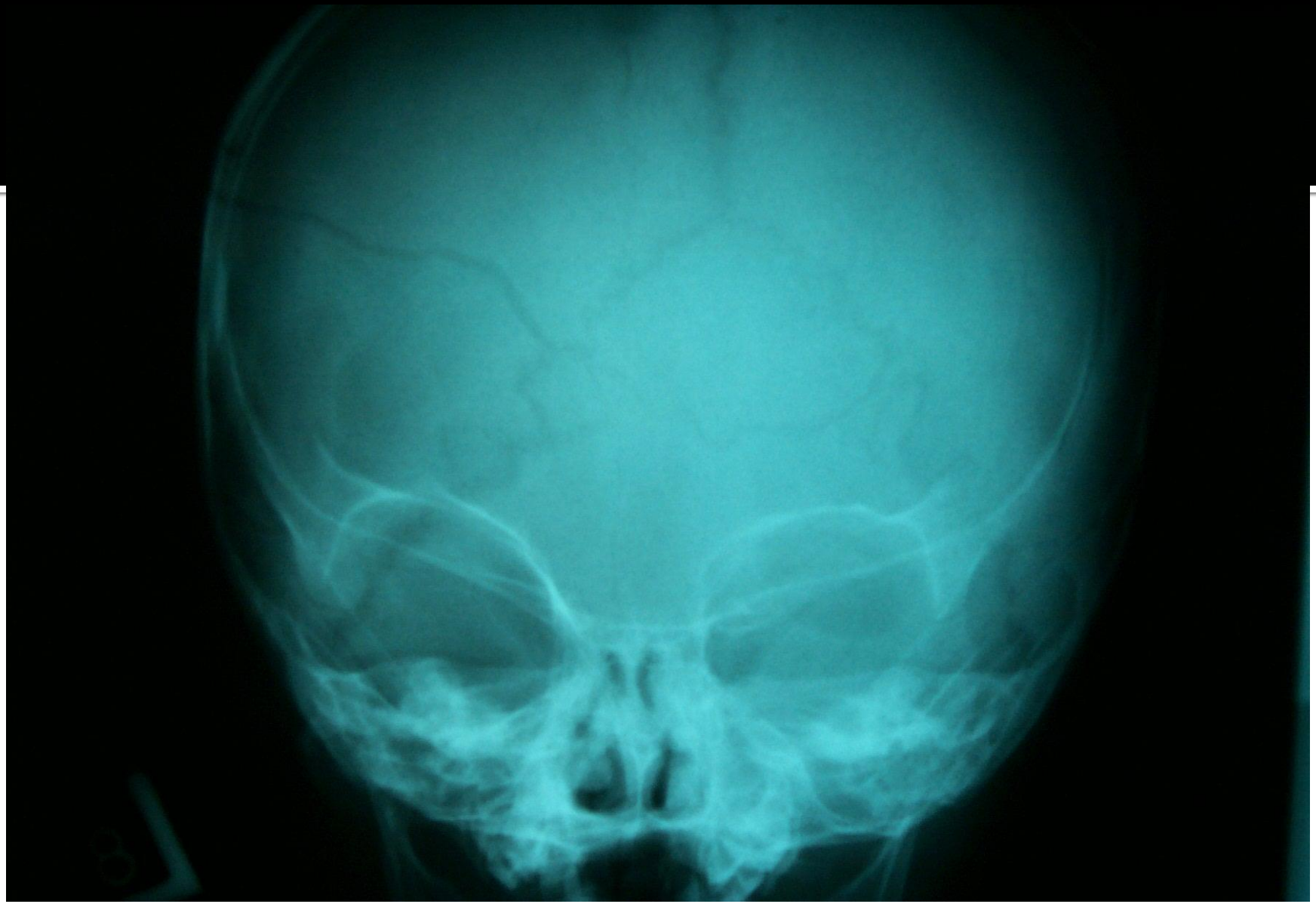
Case 3

- 6 month old samy fell of a chair
- Landed on his head

What would you do ?

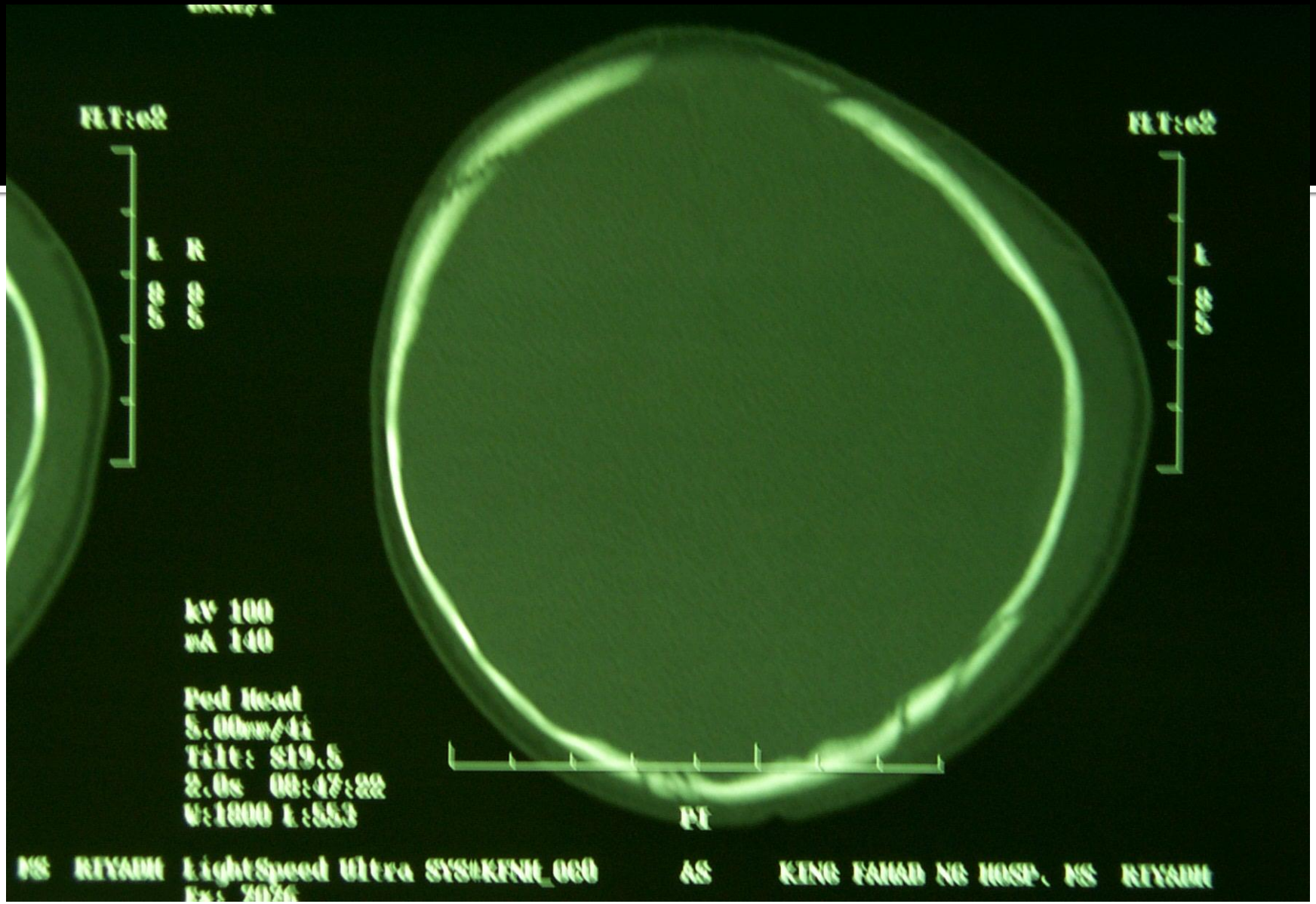
- Skull X-ray
- CT scan of Brain





Skull X- ray indications

- Possible penetration
- Previous craniotomy with indwelling shunt
- Suspected child abuse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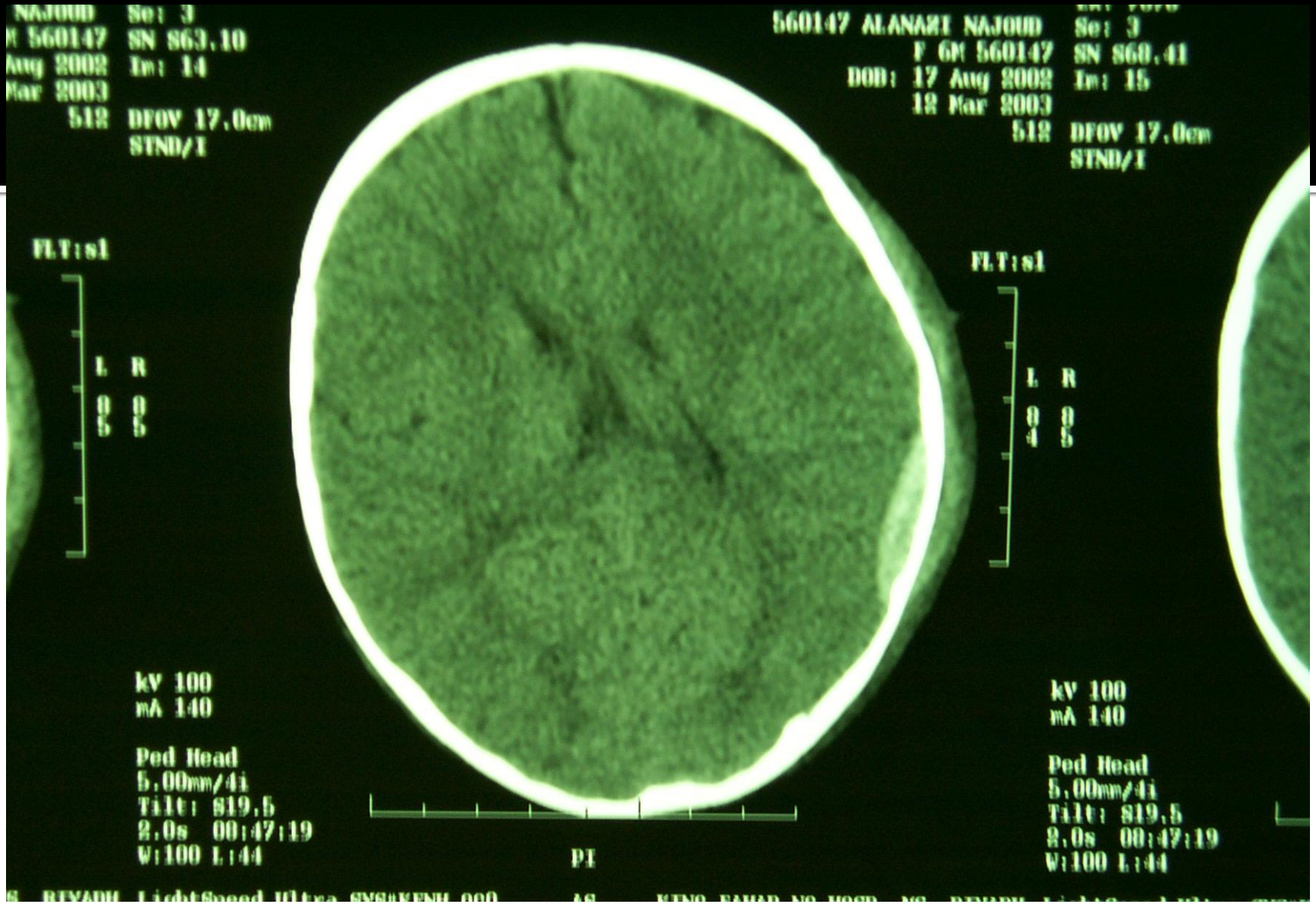
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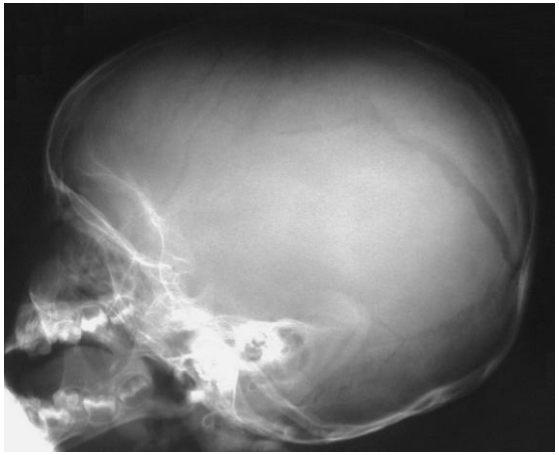
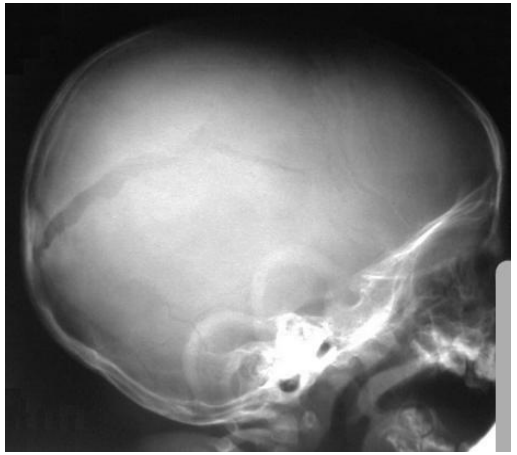
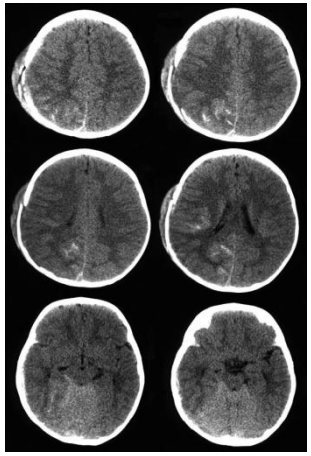
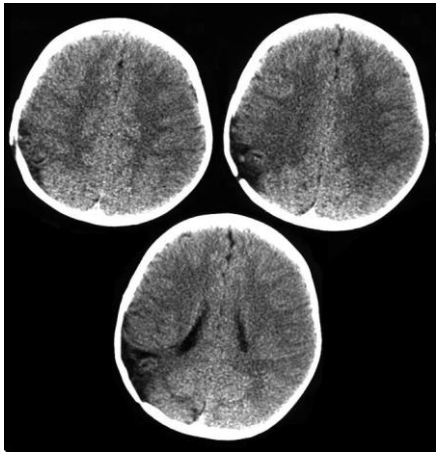








Seizure with Fever

What should You do?

- A 2 yrs old girl
- Had a fever of 39.8°C
- Post ictal after a Tonic Clonic Seizure

- Would you do Lumbar Puncture?
  - How about blood work?
  - How about a CT?

AAP Guidelines for seizures associated with fever

- LP: strongly considered in an infant less than 12 months of age; careful assessment is mandatory in an infant 12-18 months of age; and LP is not necessary if history and physical exam are not suspicious for meningitis in an infant older than 18 months
- LP is recommended in children with first complex febrile seizure or with persistent lethargy or prior treatment with antibiotics

AAP Guidelines for seizures associated with fever

- Routine Serum Electrolytes, Ca, Phos., Mg, CBC or glucose are of limited value in the absence of suspicious history(V/D) or abnormal physical exam in infants older than 6 months.

Respiratory Distress

- CT/MRI are not helpful. It might be considered in prolonged focal seizure with no clear etiology
- EEG is of limited value in the evaluation of febrile seizures.

Respiratory Distress

- Respiratory distress refers to difficulty breathing and taking in enough oxygen.
- Causes may include choking, asthma, an infection, or pneumonia.
- The signs of respiratory distress are:
  - Coughing
  - Wheezing
  - labored breathing (especially flaring of the nose and use of chest and neck muscles to aid breathing)
  - Grunting
  - turning blue.

Respiratory Emergencies

The most common

- Asthma
- Croup
- Pneumonia

Asthma

What Do You Usually Do?

- 4 yrs old girl
- With moderate-severe asthma attack

- What would you do in ER?

Management

- History
  - Age of start
  - Treatment given
  - Compliance
  - Aggravating and reliving factors
  - Steroid usage
  - Admission to ICU

Management

- Physical Examination:
  - Vital signs
    - RR and Saturation
  - Chest Exam
  - Neurological Exam
  - Classification of asthma
    - Mild
    - Moderate
    - severe

Management

- Start with ABCD
  - Give oxygen to keep Saturation > 92%
  - Start Bronchodilators
    - Sulbitamol (Ventolin)
  - Start Steroids
    - Oral Vs IV
  - Monitor Vital signs and physical exam

Continuous Albuterol

- Use is becoming more in ER
- Safe as nebulizations
- Faster improvement
- Side effects

- Craig VL, et.al. Efficacy and safety of continuous Albuterol Nebulization in children with severe status asthmaticus. Pediatr Emerg Care 1996;12:1-5.
- Katz RW, et al. Safety of continuous nebulized albuterol for bronchospasm in infants and children. Pediatrics 1993;92:666-669.

CORTICOSTEROIDS

- Summary
  - If the asthmatic child is incompletely responsive to bronchodilator therapy, early initiation of a short course of high-dose oral corticosteroids seems prudent, particularly if there is a history of repeated emergency care requirements or hospitalizations
    - prednisone or prednisolone, 1-2 mg/kg/day (maximum 60 mg/day divided BID for 3-7 days
    - tapering not necessary
    - avoid if active varicella or herpes infections are present
    - pituitary-adrenal suppression must be considered if high-dose steroids are administered for longer than 10 days or if 4 or more "short courses "are given per year

Would you do a Chest X-ray

LABORATORY STUDIES

- Chest Radiographs
  - ***Not* recommended for routine ED assessment of the child with an asthmatic exacerbation (1997 NIH Guidelines)**
    - seldom adds additional useful information which would alter clinical management
    - reserve for cases with suspected complicating cardiopulmonary processes (such as pneumothorax or pneumomediatstinum) and for the severe, unresponsive exacerbation requiring PICU admission
    - in an otherwise healthy child with an asthmatic exacerbation, a focal density on a CXR almost always represents segmental atelectasis rather than bacterial pneumonia

CROUP

Croup

- 4 yrs old Mona is coming with
- Inspiratory stridor,typical cough,sat 91%

- How many would give her mist?
- How many think it really works?

Management

- History
  - Onset
  - Treatment given
  - Fever association
  - Aggravating and reliving factors
  - Child condition
  - Recurrence
  - Admission to ICU

Management

- Physical Examination:
  - Vital signs
    - RR and Saturation
  - Chest Exam
  - Neurological Exam
  - Classification of Croup
    - Mild
    - Moderate
    - severe

Management

- Start with ABCD
  - Make the child comfortable
  - Give oxygen to keep Saturation > 92% if needed
  - Start steroids
    - PO
    - Nebulizer
    - IM
  - Monitor Vital signs and repeat physical exam

Pneumonia

- 8 years old Nora
  - Hx fever for 6 days
  - Cough for 3 days more at night
  - SOB
  - Given amoxil for 3 days

  - What is next?

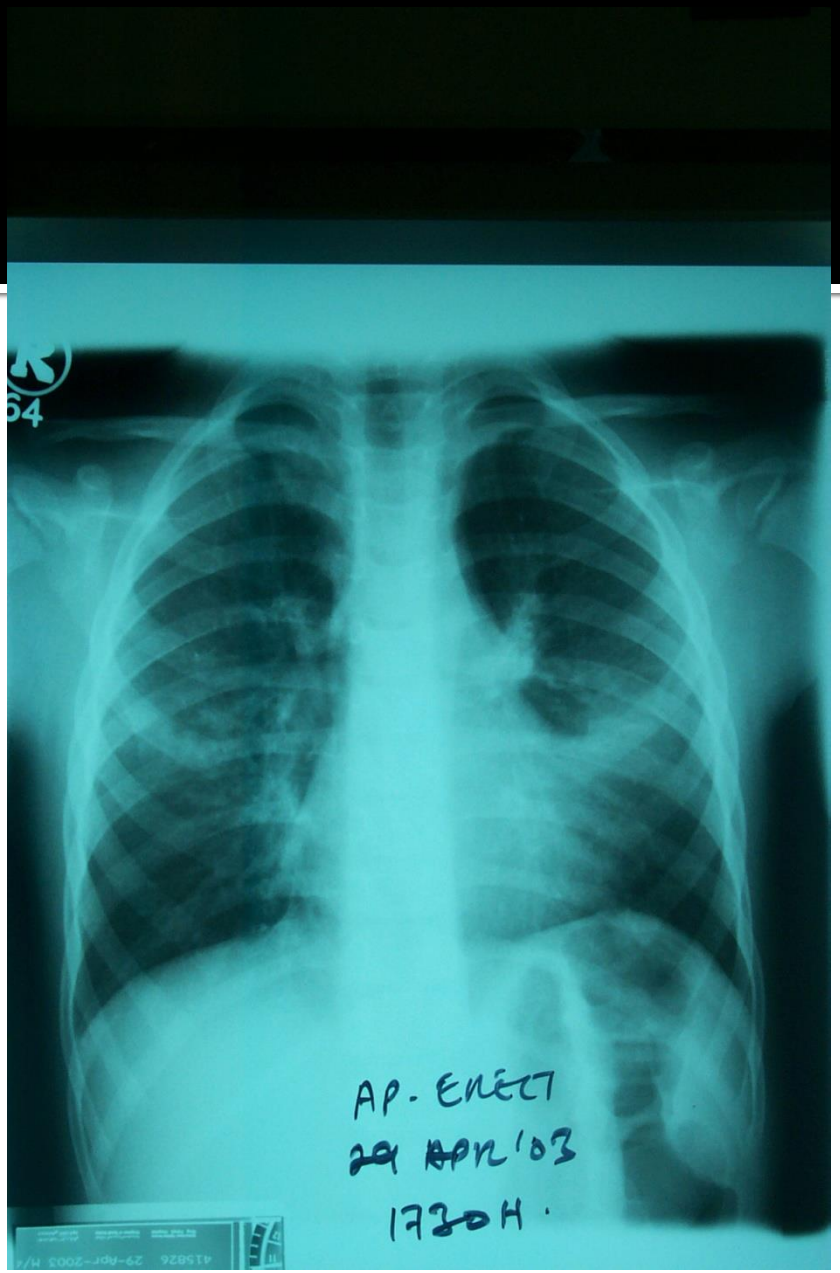
Pnumonia

- History
  - Very important to remember:
    - Prolonged fever
    - Associated symptoms
    - Contact with ill persons
    - previous or chronic illnesses
    - Previous treatments

On Examination

- Generally looking well
- In mild respiratory distress
- ENT exam normal
- Chest Clear

- Who is with CXR?
- Who is with CBC?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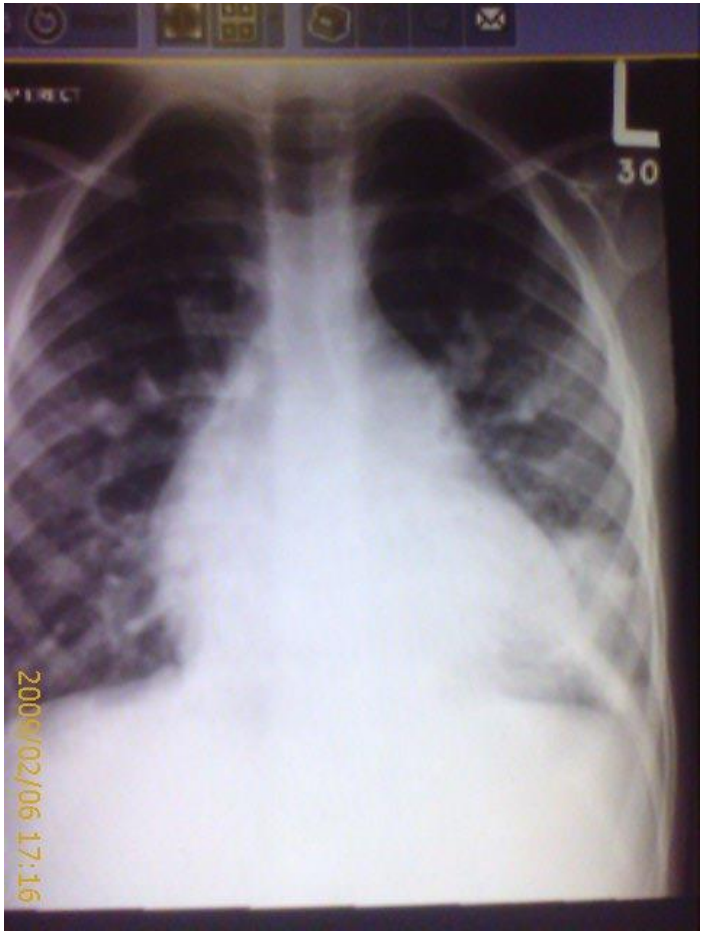
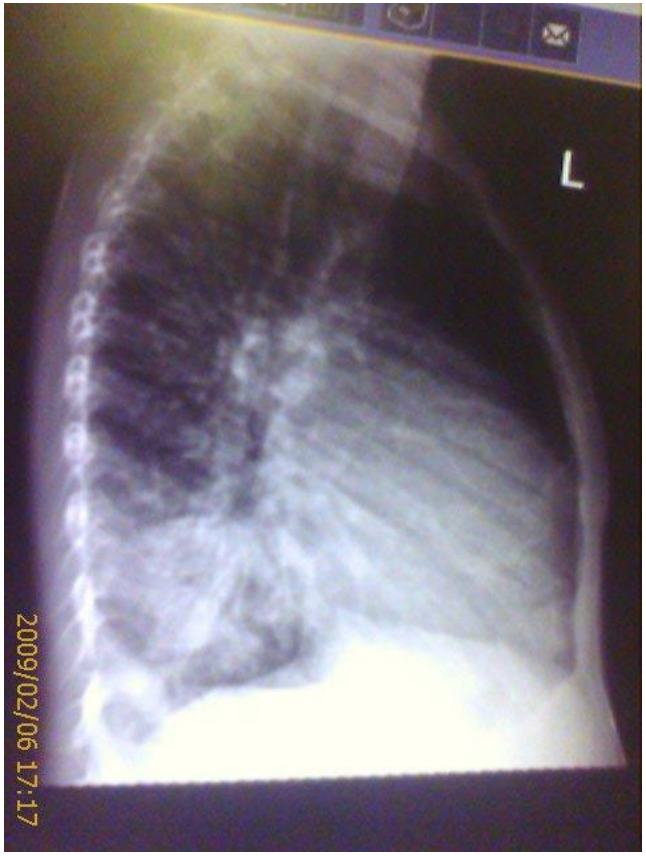
What is your diagnosis?

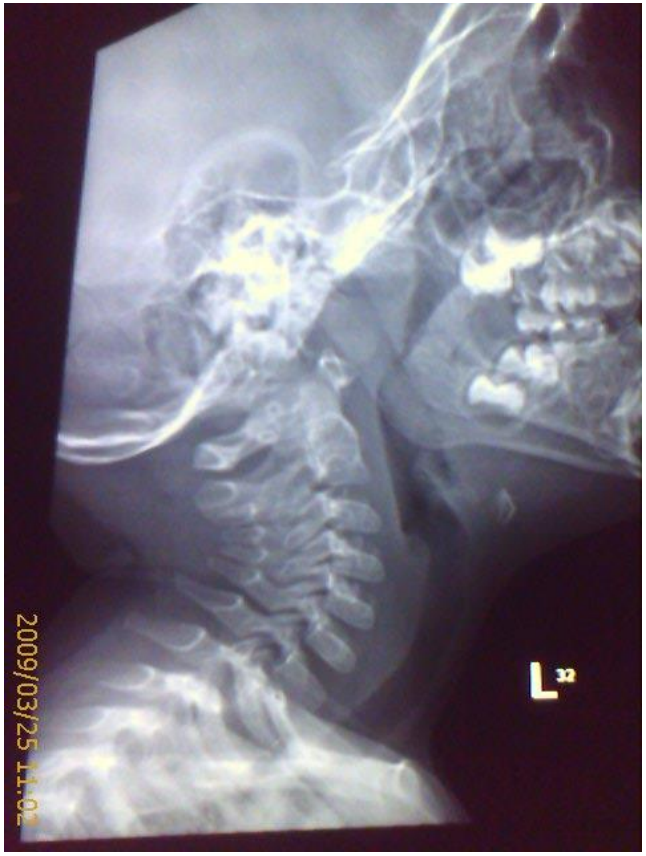
Mycoplasma pneumonia

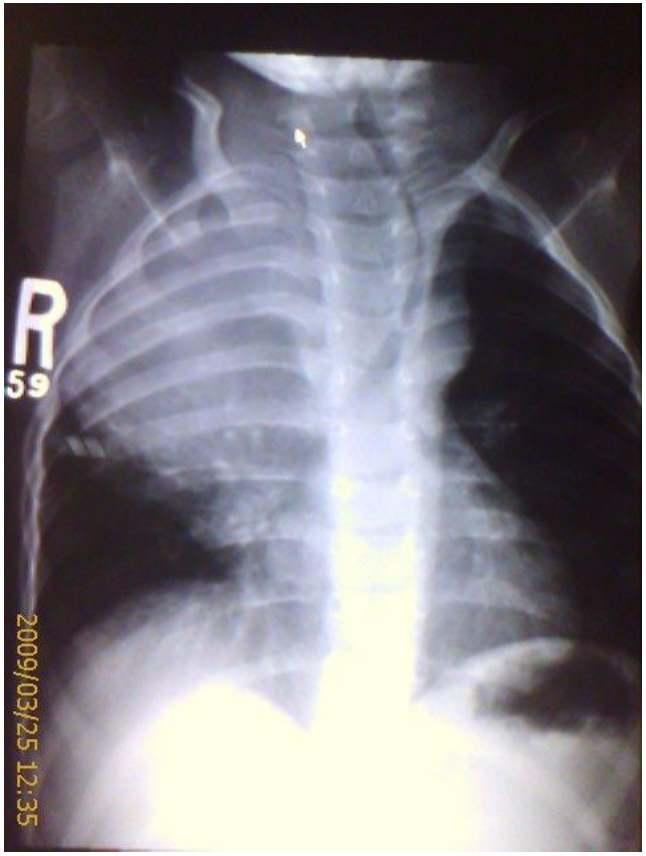
Ask for A test ?





I salute him





Ears – Otitis Media

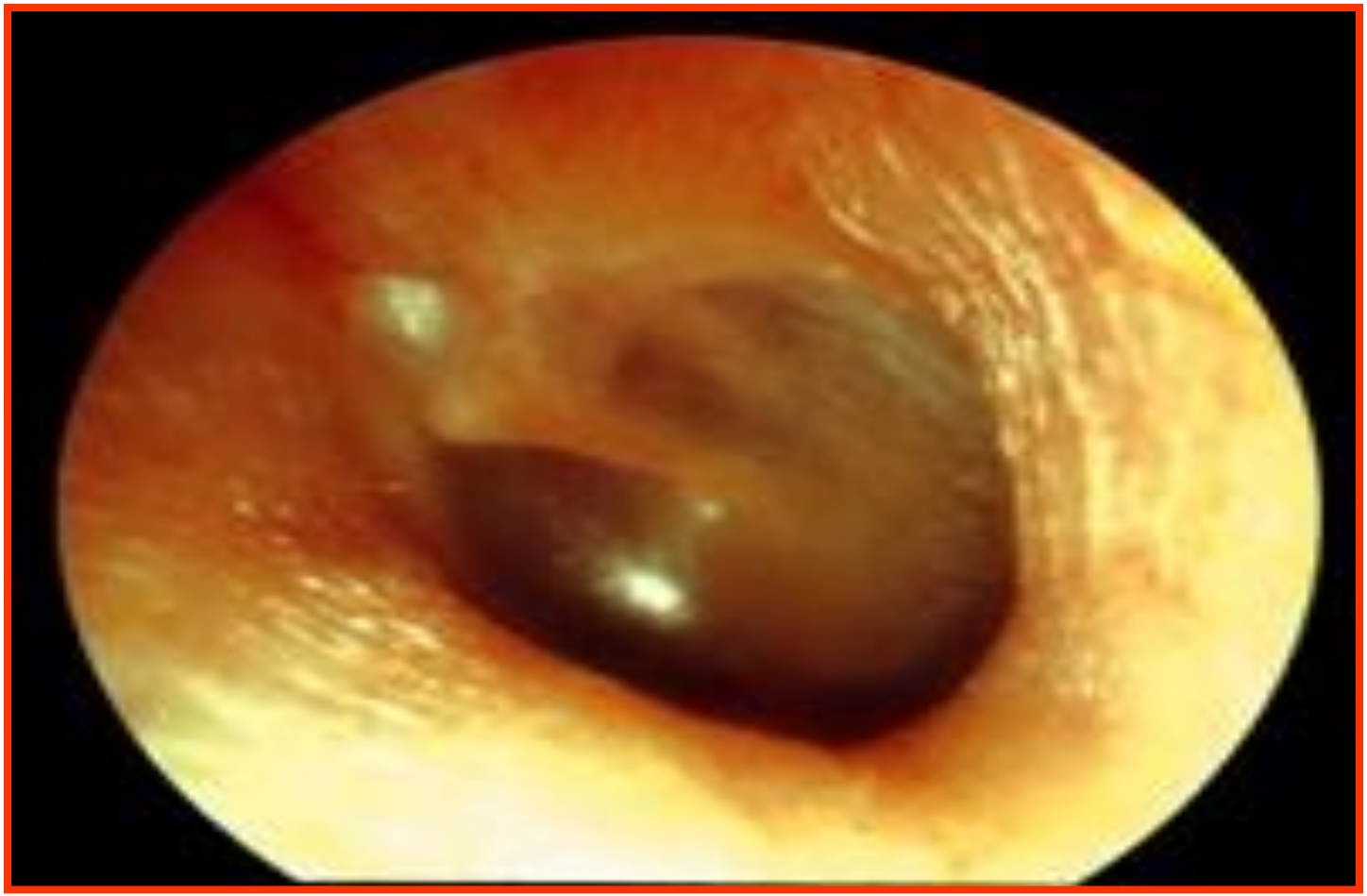
- History
  - Check
- Physical Exam
  - standard

Ears – Otitis Media

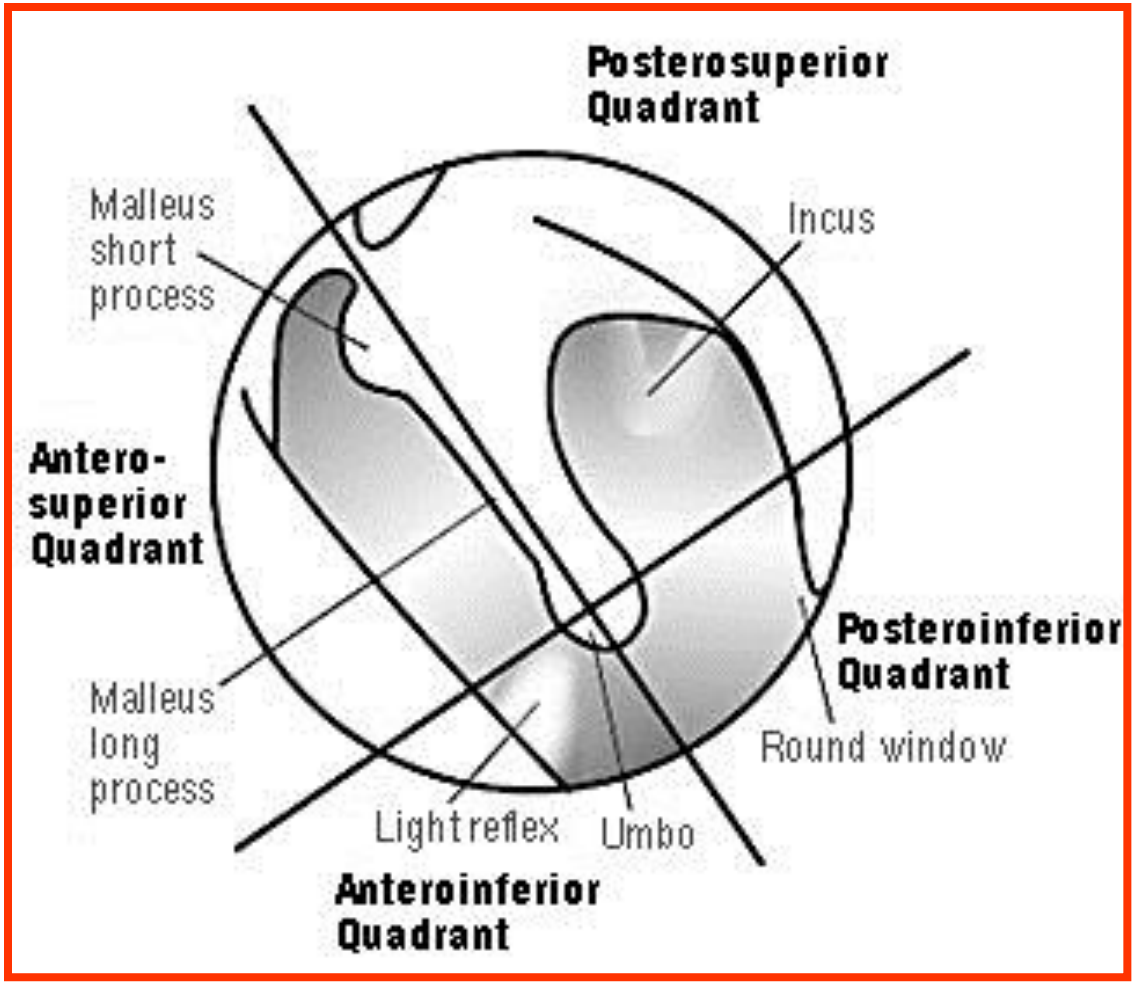
- 1 year old coming to your office
  - Fever for 2 days
  - Runny nose
  - History of family with viral illness

  - What would you examine?

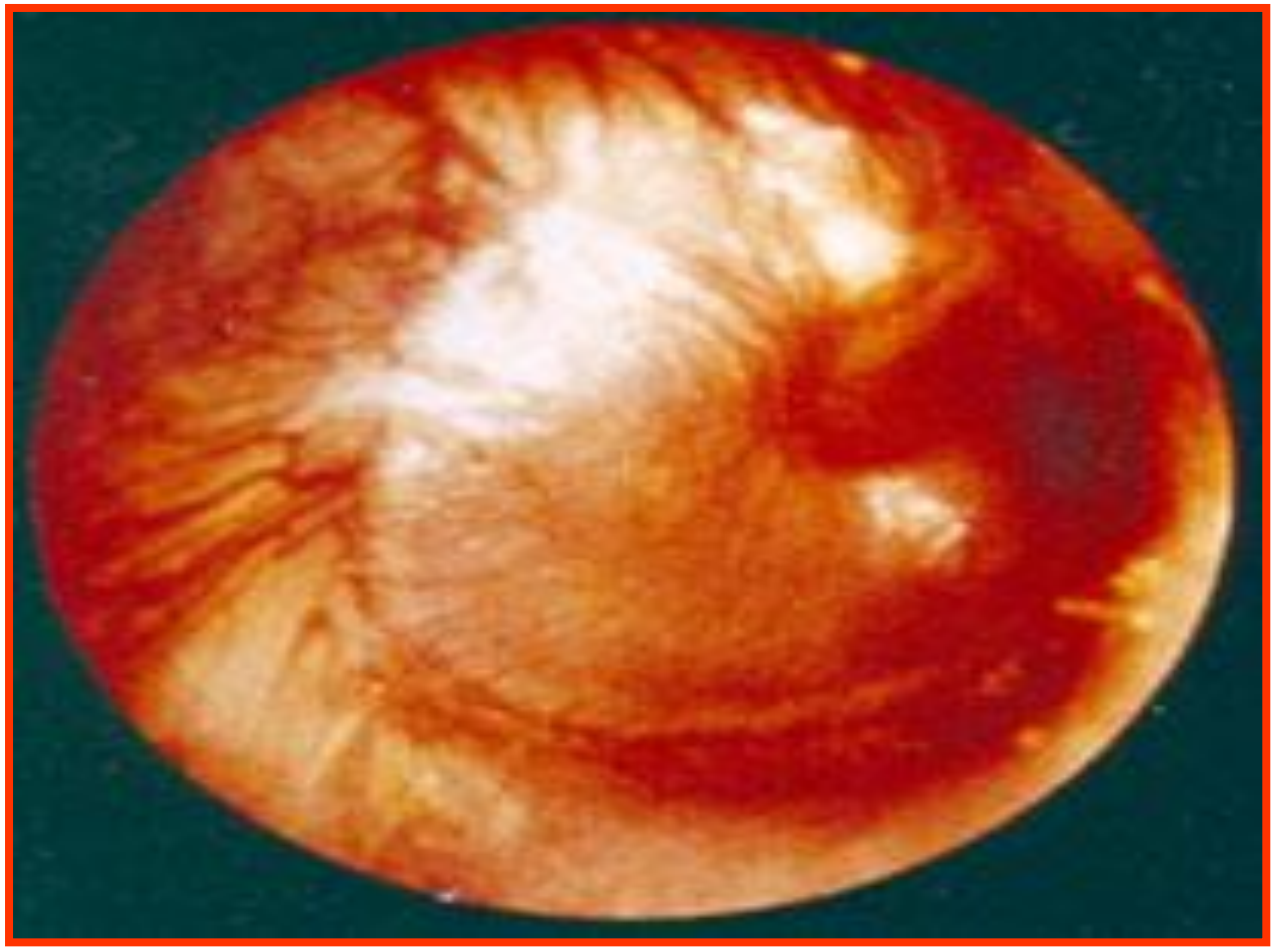
Otitis Media



Otitis Media



Otitis Media



Management

Age	Certain of AOM	Uncertain of AOM
<6 month	Antibiotics	Antibiotics
6 – 23 month	Antibiotics	Antibiotics if severe Observe if non severe
>24 month	Antibiotics if severe Observe if non severe	Observe

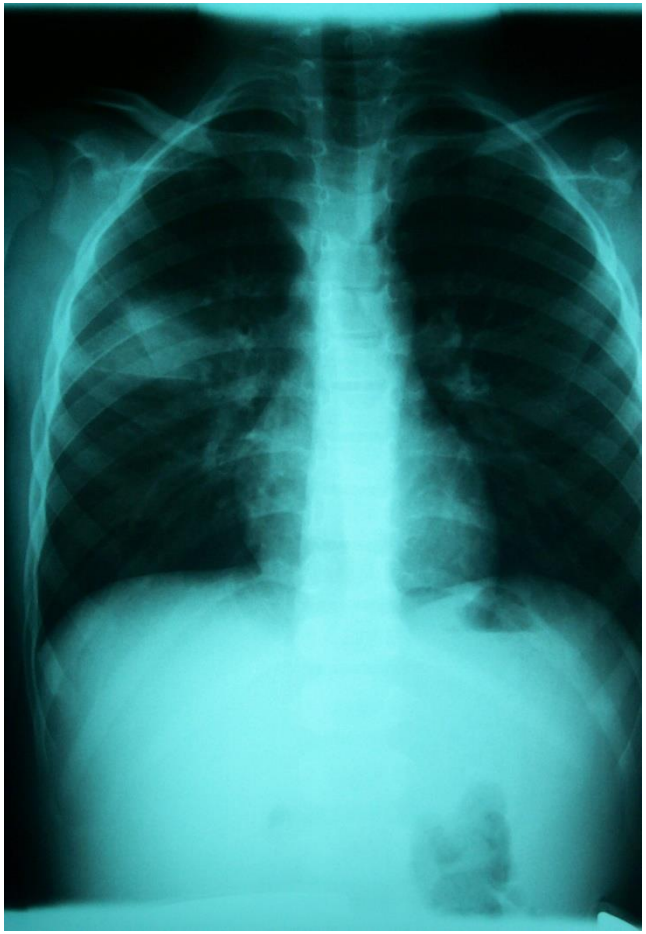
Otitis Media

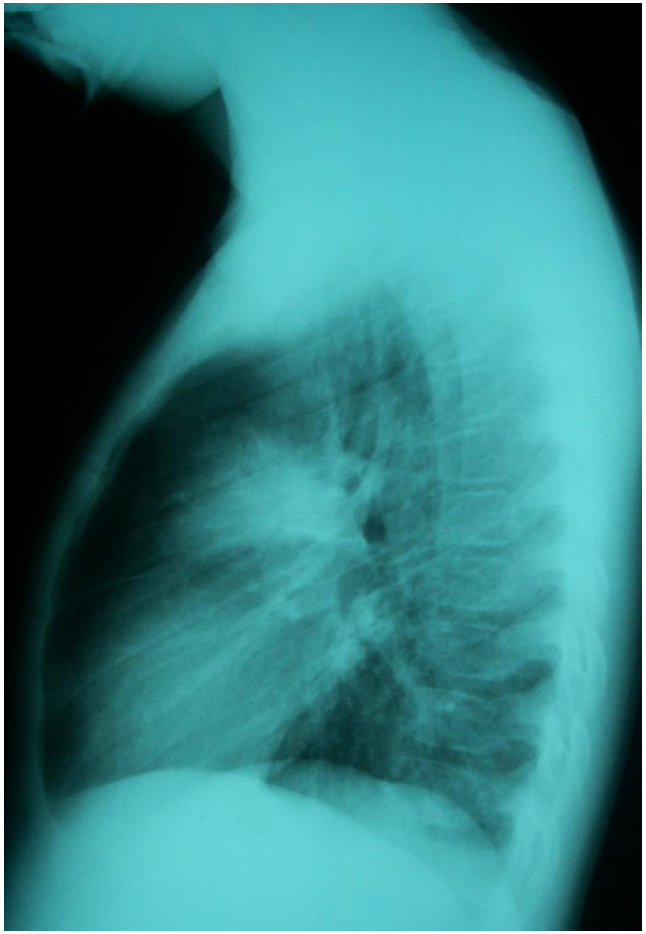
http://www.aap.org/otitismedia/www/vc/ear/index.cfm

AAP & AAFP 2004, www.aap.org

NYS DOH 2002, www.abxuse.health.state.ny.us


نصر سيدول ٦٠ ديازينون
مبيد حشرى مركز قابل للإستحلاب
NASRCIDOL 60 Diazinon
Emulsifiable Concentrate
مبيد حشرى فسفورى فعال على هيئة محلول مركز قابل للاستحلاب
للقضاء على الطفيليات الخارجية على أجسام الحيوانات .
للإستعمال البيطري فقط
الأصلى
قابل للإشتعال
حذير - خطر - سام
التركيب الكيماوى
الماده الفعاله ديازينون ٦٠ ٪
مواد غير فعالة ٤٠ ٪
الإسعافات الأولية
- يجب إبعاد المبيد عن متناول الأطفال .
- عند البلع : يجرى التقيؤ القسرى للمصاب بأدخال اليد بالفم أو إستعمال محلول ملحى ويستدعى الطبيب
- عند الاستنشاق : يوضع المصاب فى الهواء الطلق ويستدعى الطبيب
- عند ملامسة المبيد للجلد : يغسل مكان الملامسة بالماء والصابون جيداً .
- عند ملامسة المبيد للعين : تغسل بالماء النظيف لمدة ١٥ دقيقة .
- مضادات التسمم : تستعمل مادة الأتروبين سلفات .
رقم التسجيل : ٢٤٤٧- ١٥٠-١٦ رقم الدفعة : ١٥
تاريخ الإنتاج : ١٩٩٩/٥ رقم التشغيلة : ٤/ ١٩٩٩
تاريخ إنتهاء الصلاحية : ٢٠٠١/٥ السعة





Rashes

- Certain typical presentations
  - Measles
  - Mumps
  - Rubella
  - Chicken pox
  - Roseola infantum
  - Herpes
  - Eczema

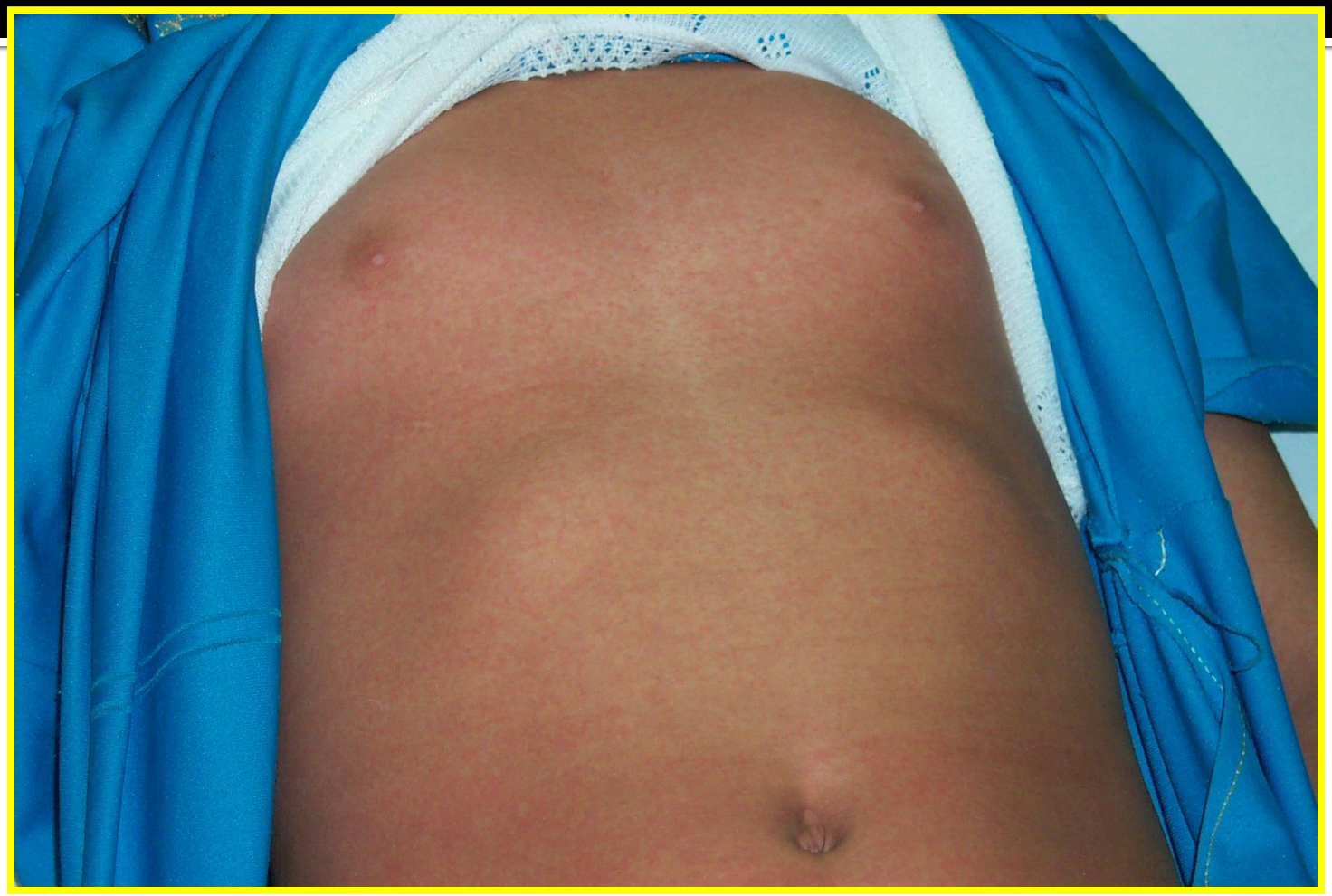
Rashes

- History
  - Start of the fever
  - Start of the rash
  - Distribution of the rash
  - Other body systems involved
  - Associated symptoms
- Physical exam
  - Description
  - Distribution
  - Systemic examination

Rash

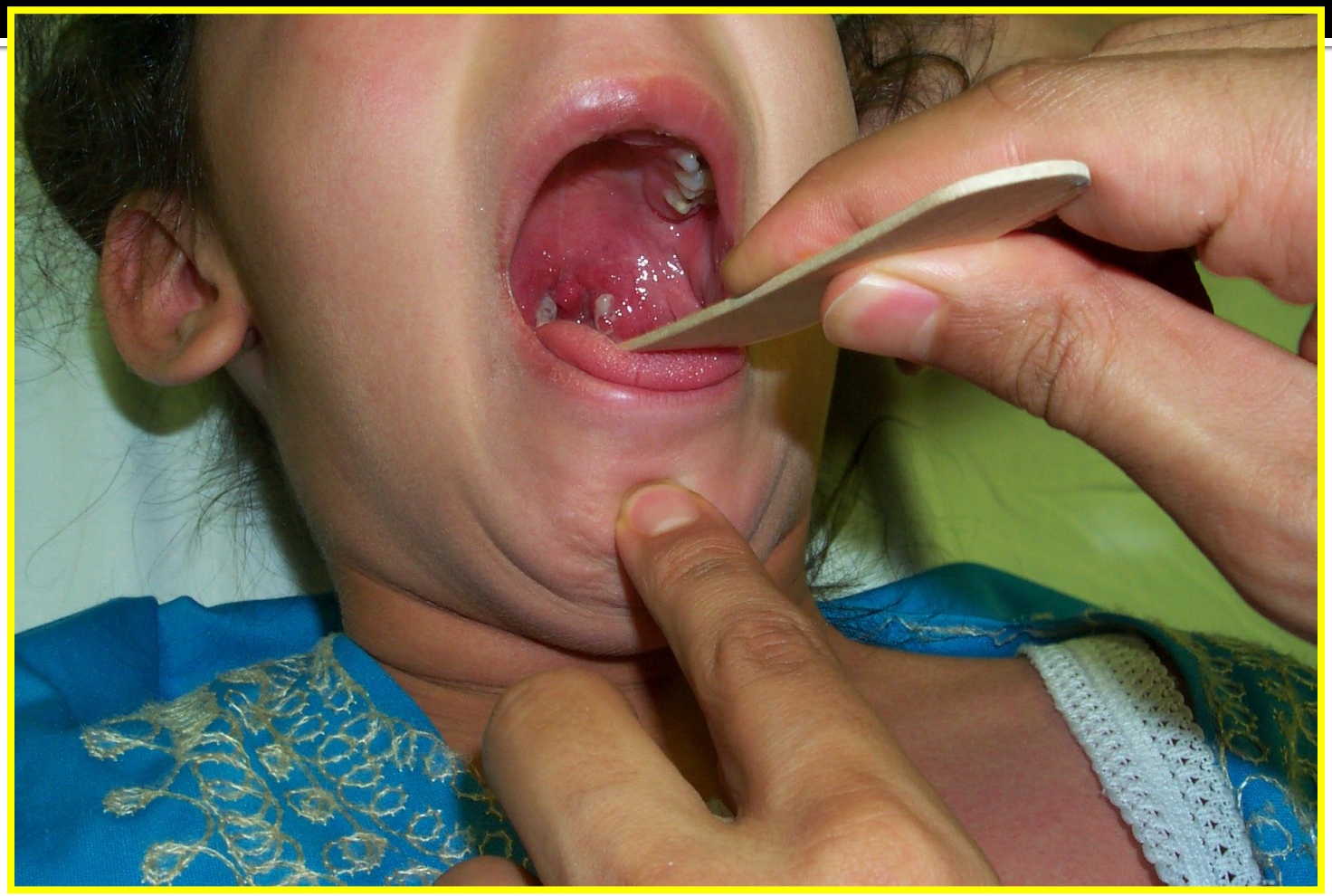
- 6 years old salma coming with history:
  - fever for 4 days.
  - Non itchy generalized Rash 2 days.

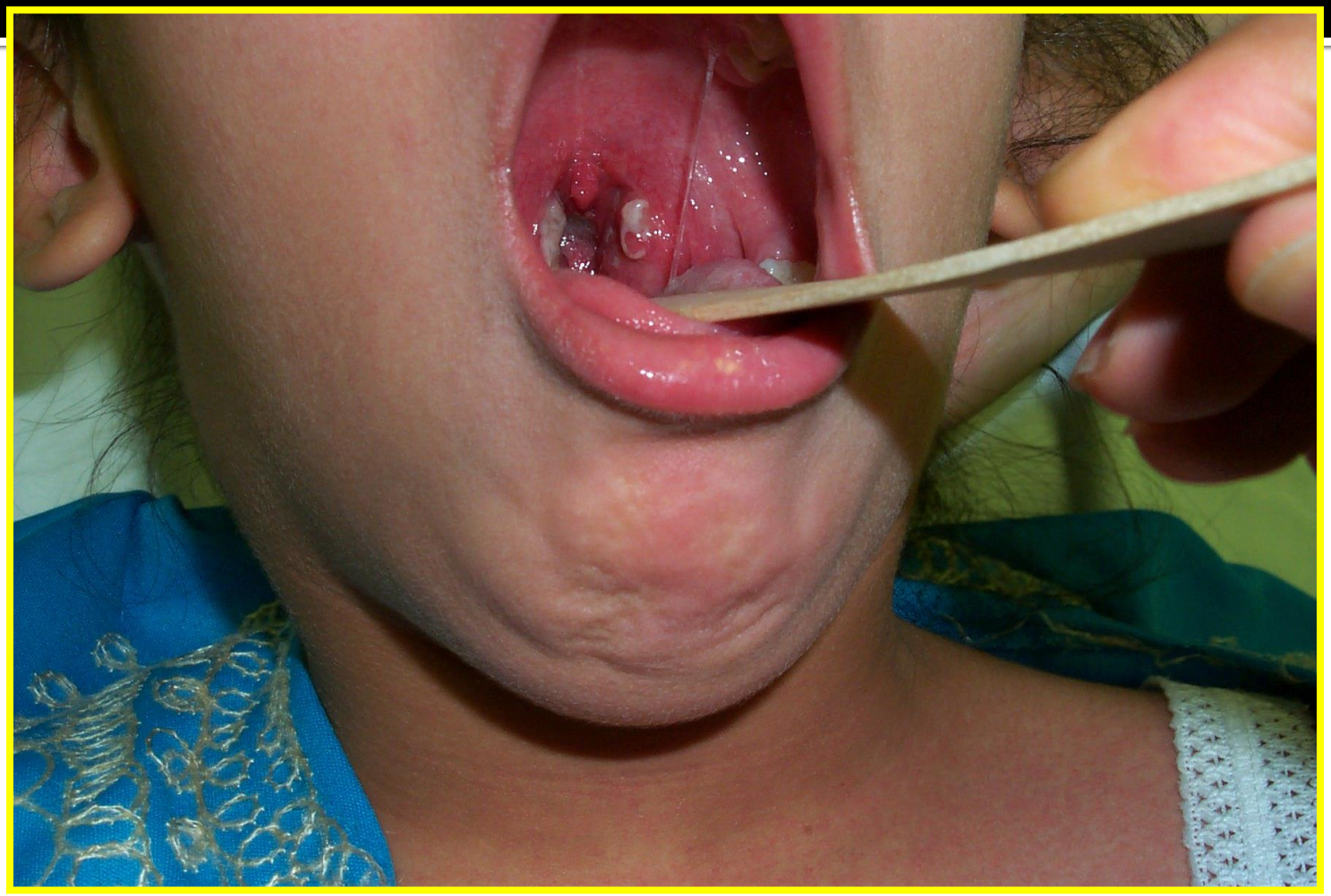
  - What is your next step?



What is next?

- Would you like to examine any thing else?





What is your diagnosis?

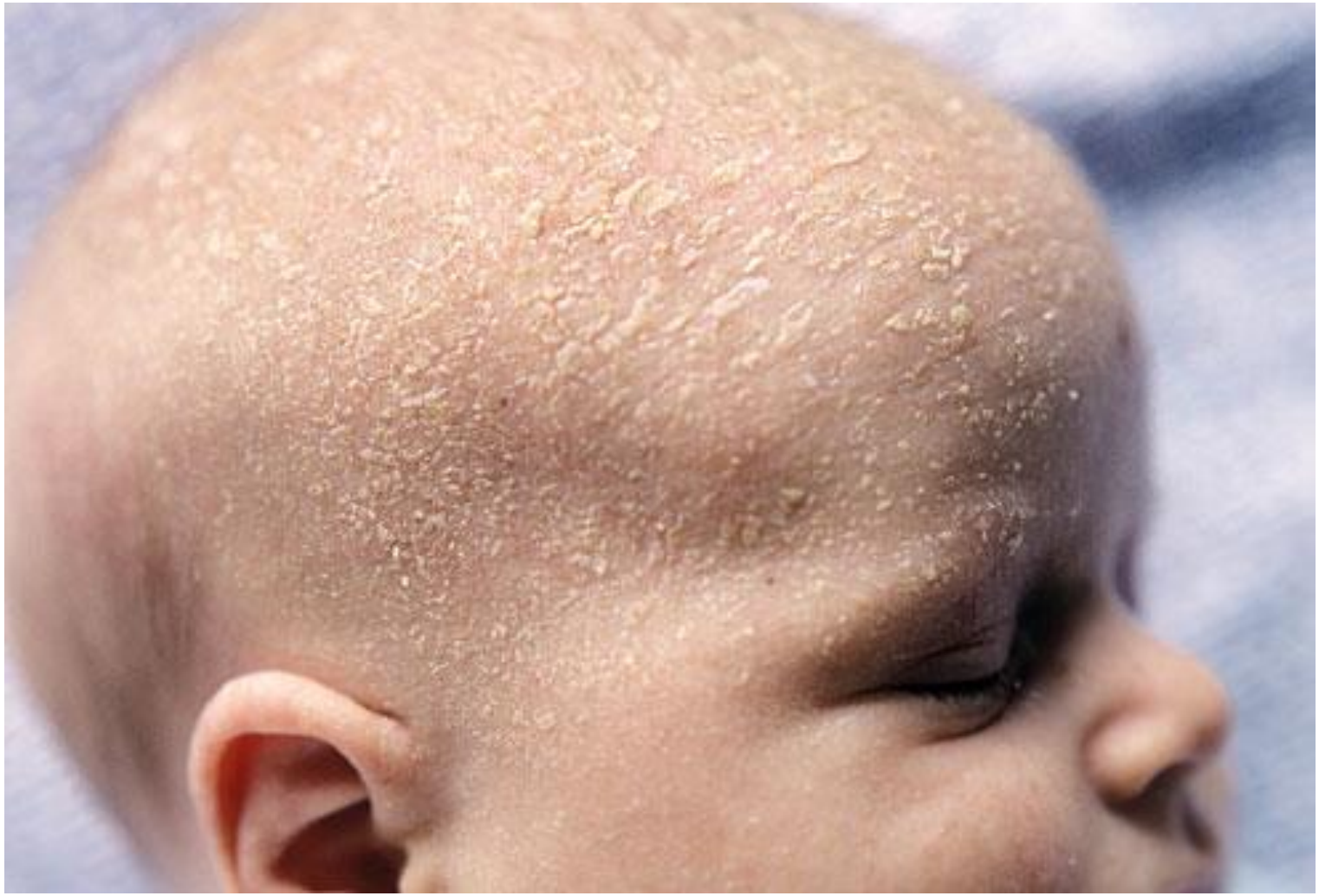
Scarlet fever

- Etiology
  - group A beta hemolytic streptococcus
- Clinical manifestations
  - Fever
  - sandpaper
  - erythematous rash
  - strawberry tongue
  - lymphadenopathy
  - desquamation as rash fades

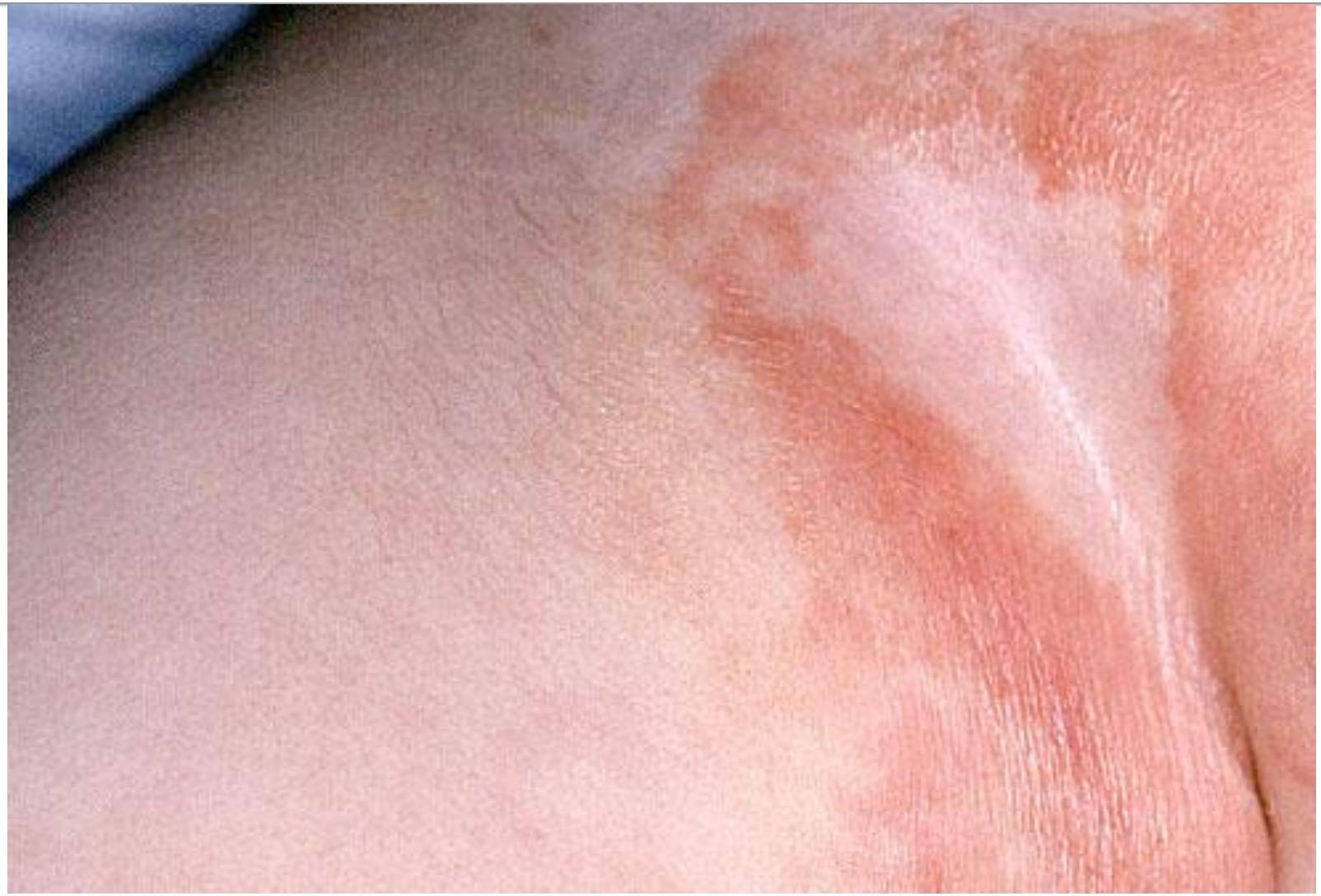
Scarlet fever

- Differential diagnosis:
  - Drug rash
  - Infectious mononucleosis
    - rash is similar, especially in children taking amoxicillin with this infection
  - Kawasaki disease
    - usually has conjunctivitis which is absent in scarlet fever, arthralgia,arthritis
  - Toxic shock syndrome
    - similar rash, but presents in teenage girls (scarlet fever rare in this age group)

Cradle cape

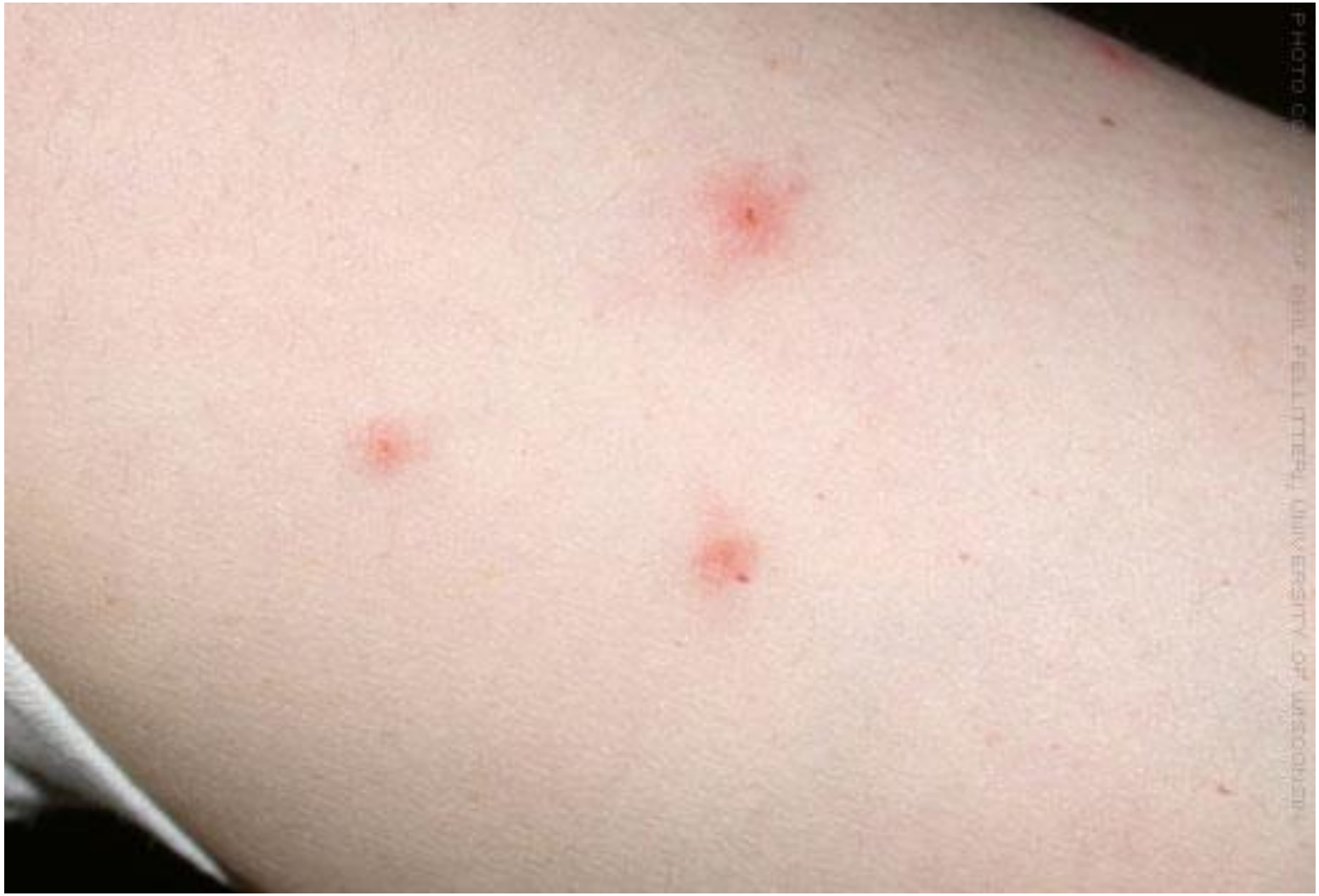


Diaper Rash



Milia

Bug bites



Jaundice

Allergic Reactions

- History
  - Ingestant Vs inhalational Vs Contact
  - Symptoms at presentation
  - SOB, DOB, DOS,
  - Previous exposure and reaction
  - Itchy or non itchy
- Physical Exam:
  - ABCDE
  - Confirm signs – e.g.. Strider, wheezing

Case 8

- 3 year old female presenting with
  - Cough , SOB
  - Noisy Breathing
  - Generalized itch
  - Generalized rash of sudden onset
- What Do you want to do ?

Emergent or Non Emergent

- Airway compromise
  - Upper – stridor
  - Lower - bronchospasm
- Cardiovascular collapse
  - Hypotension
  - Syncope
  - Tachycardia
  - Arrhythmia

What is Next?

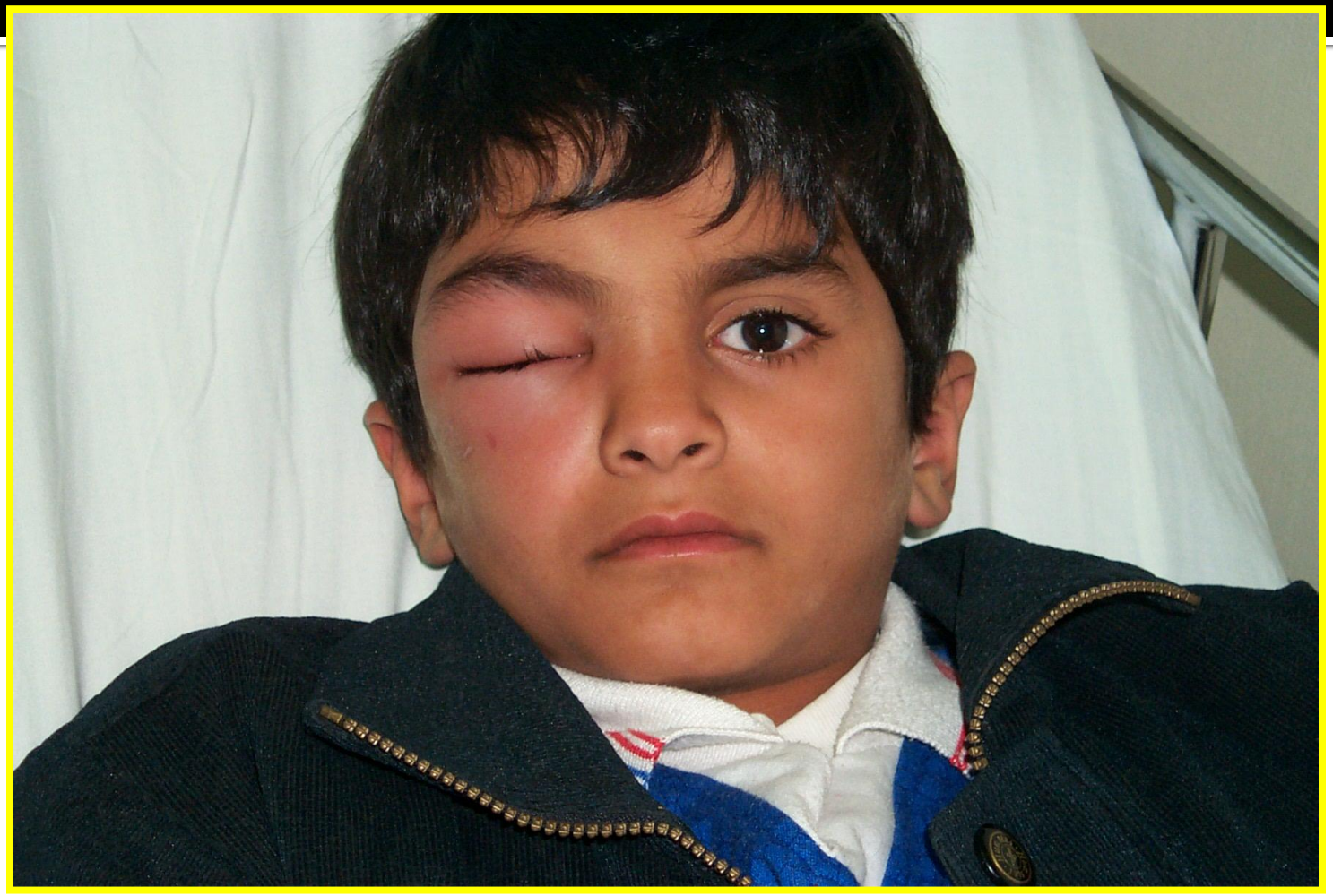
- ABC – priority
- Upper airway obstruction
  - Oxygen
  - Racemic epinephrine
  - IV epinephrine
  - ETT
- Bronchospasm
  - Ventolin
  - Epinephrine .01 mg/kg (1:1000) SC/IM

Continue

- Diphenhydramine IV 1-2mg/kg
- Cimetidine / Ranitidine
- Steroids

Infectious cases

- 8 years old Abdullah coming with a swelling in the right eye.
  - Fever for 3 days
  - Unable to see with this eye past 1 day
  - Previously healthy.



Cellulitis

- Etiology:
  - 1.) Periorbital
    - Staphylococcus, possible H. influenzae B bacteremia
  - 2.) Orbital
    - S. aureus,
      - related to trauma,
      - sinus infection

Cellulitis

	Periorbital	Orbital
Fever	Yes	Yes
Lid edema	May be severe	Severe
Proptosis	No (mild)	Yes
Chemosis	No (mild)	Yes
Pain @ eye movement	No	Yes
↓ Eye movement	No	Yes
↓ Vision	No	Maybe
Leukocytosis	Yes	Yes

Cellulitis

- Differential diagnosis:
  - 1.) Trauma — history helps
  - 2.) Allergic reaction (bug bites)
    - these are usually not tender, fever unlikely, often see evidence of insect bite
  - 3.) Tumor — unlikely to develop so quickly

Meningococcal Meningitis

- Overcrowding provides ideal conditions for transmission of meningococcal.
- you need to have a high index of suspicion near to seasons
- Some of the organisms causing the disease are notorious to kill
- Vaccine is available for high risk group

Meningococcal Meningitis Diagnostic Findings

- In younger children
  - Initial presentation is non specific include:
    - Fever
    - Hypothermia
    - Dehydration
    - Bulging fontanel
    - Lethargy
    - Irritability
    - Anorexia
    - Vomiting
    - Seizures
    - Respiratory distress
    - Cyanosis
- In older children
  - In addition to ones mentioned
    - Nuchal rigidity
    - kernig's sign
    - Brudzinski's sign
    - Headaches

Meningococcal Meningitis Ancillary data

- Lumbar puncture
  - CSF is the basis for evaluation
  - Analysis of fluid:
    - Cell count
    - Glucose
    - Protein
    - Gram stain
    - Bacterial culture
    - CSF/Blood glucose
    - Latex agglutination
- CBC & differential
- Electrolytes
  - Glucose
- Chest X-Ray
- CT scan
  - Focal neurologic signs
  - Seizures
  - Evidence of mass effects.

Meningococcal Meningitis Management

- **Initial Management**
  - Stabilize the patient
  - Adequate airway & ventilation
  - IV access
  - Vital signs
  - Evaluation for:
    - Hypoxia
    - Dehydration
    - Increased ICP
    - Acidosis & DIC
    - Electrolyte abnormalities
- **Antibiotics**
  - Ceftriaxone
  - Vancomycin
- **Cerebral edema**
  - Pco2 35
  - Manitol 0.5 g /kg
- **Seizures**
  - Diazepam
  - Lorazepam
  - Phenobarbital
  - Phenytoin`

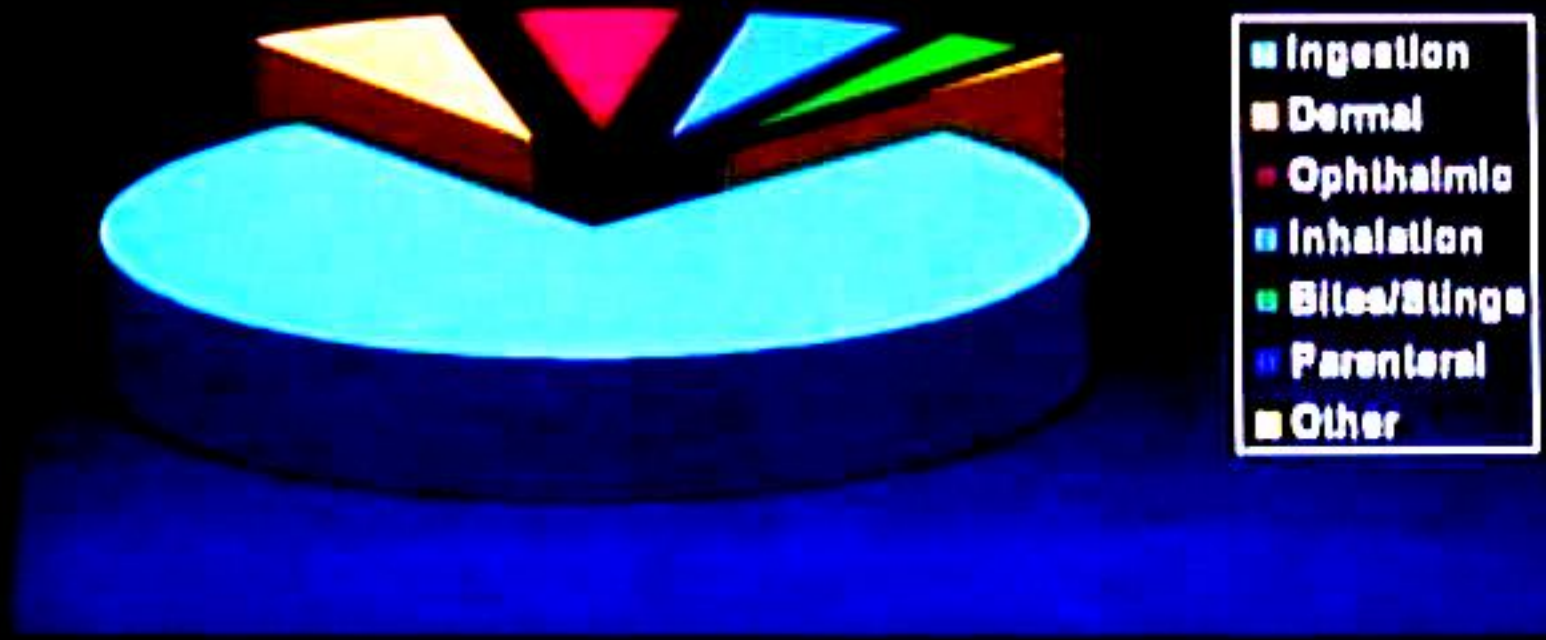
What Is A Poison?

A poison is anything which can cause damage to the body.

Some examples are:

- Acetaminophen
- Aspirin
- Carbon Monoxide
- Cough & cold preparations
- Acids, lye
- Antifreeze
- Gasoline
- Insecticides
- Iron preparations
- Paint
- Rat poisons
- Rubbing alcohol

Routes of Poisonings



Poisoning Locations

- Home 87%
- "Unknown" 6%
- Workplace 3%
- Other Residence 2%
- School 1%
- Restaurant 1%

POISONING

A	B	C
ACCIDENTAL	SUICIDAL INTENTIONAL ABUSE/MISUSE	HOMOCIDAL MUNCHHAUSEN BY PROXY

ACCIDENTAL POISONING

ONE OF THE MOST COMMON MEDICAL EMERGENCIES IN CHILDREN

PHARMACEUTICALS

- IRON SUPPLEMENTS
- ANTIDEPRESSANTS
- CARDIOVASCULAR AGENTS
- SALICYLATES

- OPIOIDES
- ANTICONVULSANTS
- THEOPHYLLIN
- ORAL HYPOGLYCEMICS

NON PHARMACEUTICALS

HYDROCARBONS
PESTICIDES
ALCOHOLS
DRAIN AND OVEN CLEANERS

PREVENTION OF POISONING

- CHILDPROOF CAPS
- DISPENSING LIMITED AMOUNT OF MEDICATION
- LOCKING MEDICINE CABINETS
- MEDICINE IS *NOT* CANDY.
- DO NOT PUT DANGEROUS AGENTS IN DRINKING GLASSES OR BEVERAGE BOTTLES.
- KEEP HOUSEHOLD CLEANERS OUT OF REACH OF CHILDREN.

TREATMENT

GET

THE

POISON

OUT

Febrile infant

- Age < 1 month
  - Full septic work up
  - Admission
  - Antibiotics
- Age 1-3 month
  - Partial septic work up
  - Low risk / High risk
  - Decide

THANK YOU