NORMAL LITTLE BUGGER STUFF

1. Sleep
   a. When is a baby going to sleep all night? 6 months
      1) total sleep = 14 hrs
      2) longest sleep period 10-11 hrs
      3) # of naps = 2
      4) no longer need to be fed @ night
   b. Sleep position? "Back to Sleep" → prevents SIDS

2. Feeding
   a. Don't give solid food until > 4 mo (need good head support)

3. Crying:
   a. Colic
      1) Periods of unexplained crying and irritability
      2) 10-20% of children
      3) "Rule of 3's"
         a) 3 hours of crying (@ same time of day; usu afternoon or evening)
         b) 3 days a week
         c) begins in 1st 3 weeks of life
         d) improves by 3 mo of age
   b. Normal crying
      1) @ 2 wk → 1 hr / d
      2) @ 6 wk → 2 hrs / d
      3) @ 8 wk → PEAKS
      4) @ 12 wk → 1 hr / d
   c. Differentials
      1) Idiopathic
      2) Colic
      3) Heat / cold
      4) Lying position
      5) Illness
         a) Surgical abdomen
         b) Infections (OM, UTI, Meningitis)
         c) GI (constipation, gas, GERD, intussesception)
         d) Trauma / Abuse
         e) Testicular torsion

4. Temper Tantrums
   a. Ignore them
   b. Separate from situation or other children

5. Short stature
   a. Constitutional short stature
      1) NOT A DISEASE! Normal variation…
      2) Characteristics:
         a) Fhx of delayed puberty
         b) Delayed dentition in pt
         c) Delayed bone age < normal growth rate
         d) Most will have catch-up growth → nl final height
      3) W/u:
         a) Plot on growth curve
         b) Look @ parents
         c) Bone age study
   b. Familial short stature
      1) Height below nl on growth chart
      2) Bone age accurate

6. Development

PROTECTING THE LITTLE BUGGERS

7. Vaccines
   a. Contraindications & Precautions
      1) Contraind to Live: Allergy, ImmSupp, Uterine Preg
      2) Contraind to Inactiv: Allergy, Encephalitis
      3) Precaution to either: Illness
   b. ImmComp pts:
      1) NO - OPV, VZV
      2) OK – DPT, MMR?
   c. Pertussis contraindications: Previous vaccine → T>103º F, adverse rxn, collapse synd, encephalopathy after 1st 7 days, seizure
      1) zlf fever < 103 → DaPT

8. Abuse
   a. Si/Sx of Shaken Baby Syndrome:
      1) retinal hemorrhage
      2) subdural hematoma
      3) burns: donut butt, stocking & gloves, cigs
   b. Ecchymosis DDx
      1) Over buttocks
         a) Henoch-Schonlein purpura (Anaphylactoid purpura)
            i) Peaks in winter months
            ii) May follow viral / bacterial infection

9. Safety
   a. Carseat
      1) Face back of car (since infant head control is weak & head is large for body)
      2) 1 yo or > 20 lbs → Face forward
      3) 4 yo or 40 lbs → Booster seat
      4) 6 yo → Booster seat
      5) 8 yo → legally don’t need booster seat
   b. Ipecac
      1) Use with large pills
      2) DO NOT use with
         a) Corrosive substance, hydrocarbon
         b) Pinpt pupils
         c) Comatose pt
         d) Absent BS
         e) Shock
         f) _ ICP
         g) _ BP
         h) CNS depressants
            i) TCA → since it induces _ LOC in 20 min
      3) May be used @ home w/in 1 hour of ingestion
      4) Causes emesis in 20 min
      5) 30% of toxin remain in gut even if given w/in _ hr of ingestion
      6) Dose
         a) 6 mo → 5 mL
         b) 1 y → 15 mL
         c) > 1 y → 30 mL
   c. Gastric Lavage
   d. Activated charcoal
      1) 1 gm per kg
      2) does not work for Fe, Lithium, CN, etoh, acids and alkali
   e. Radiopaque substances on KUB – “CHIPPED”
      1) Chloral hydrate, Ca++ carbonate
      2) Heavy metals
13. Respiratory Distress Syndrome
   a. Aka hyaline membrane dz
   b. Pathophys:
      1) Surfactant deficiency → lung compliance
      2) Diffuse atelectasis with V/Q mismatch
   c. Popin: > 70% of 28-30w gest neonates have RDS
   d. Si/Sx: Tachypnea, retractions, nasal flaring, grunting (_FRC), cyanosis
   e. DDx:
      1) TTN
      2) Pneumonia
      3) Aspiration syndromes (mec, blood, amniotic fluid)
      4) BPD
      5) Atelectasis
      6) PTX, pneumonitis, pneumopericardium, p eumomediastinum
      7) TE Fistula
      8) Laryngomalacia
      9) Vascular ring
      10) Tracheomalacia

14. Fetal EtOH Syndrome
   a. Binge drinking in mom
   b. Sx
      1) FTT
      2) Smaller than avg
      3) _ IQ (63), ADD
      4) HEENT: microcephaly, short nose, smooth philtrum, thin-smooth upper lip
      5) Small nails

15. Teratogens
   a. Aminopterin – craniofacial, limb
   b. Phenytoin – facial (small nose, upper lip bowed, strabismus), dysplastic nails
      Phenny-looking cupid c roaming eyes
   c. Warfarin – bony defects, hypoplastic nasal bridge
      Broken bones/bridges in war
   d. Accutane – craniofacial (triangular facies), heart defects
   e. Methyl mercury – microcephaly, deafness, blindness, _ IQ
      “Tommy, the deaf, dumb, blind boy”
   f. Trimethadione – craniofacial, growth retardation

16. Down’s Syndrome
   a. Epid:
      1) 1/700
      2) 2/3 of moms <35 yo; _ risk with moms > 35 yo
   b. Si/Sx:
      1) HEENT: Hypertelorism, brushfield spots, epicantonal folds, protruding tongue, no neck,
         Abd: umbilical hernias,
      3) Ext.: simian crease, wide spacing b/w first and second toes
      4) Congenital hypothyroidism
      5) Atlantoaxial instability
      6) _ risk for URI, obesity, alzheimers!, AML
      7) 1/3 have heart probs:
         a) Endocardial cushion defects!: ASD 1/6, VSD 1/10
         b) PDA 1/50
         c) Tetralogy of Fallot 1/100

17. Turner’s Syndrome
   a. 45 XO
   b. 1/8000
Peds Rotations

Questions from Chris H

www.medfools.com

c. Sx:
1) Short, webbed neck
2) Puffy hands & feet
3) Wide spaced nipples
4) Gonadal dysgenesis
5) Multiple pigmented nevi
6) Spatial, perceptual difficulties → probs with math

d. Assoc sx:
1) Coarct of aorta
2) Horseshoe kidney

18. Marfan’s Syndrome

a. AD
b. Fibrillin gene disorder
c. Dissection of aorta

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RESPIRATORY ILLNESSES

19. LUNG INFECTIONS

a. VIRAL (most are viral) – insidious onset
   1) Pneumonia – RSV, parainfluenza, adeno, influenza
   2) Asthma
   3) Sinusitis
   4) Croup – parainfluenza, RSV (<3 yo)
   5) Otitis media
      a) Often followed in 1-2 w by effusion and no erythema
   6) Pharyngitis

b. BACTERIAL – acute onset
   1) <3 mo: GBS, Chlamydia, S. aureus, G- orgs
   2) 3 mo–5 y: S pneumo, H influenza, M catarrhalis, S aureus, GAS
   3) > 5 y: Mycoplasma pneumo (>12), Chlamydia pneumo

20. PNEUMONIA revisited

a. Terminology
   → Pneumonia: lung inflmm + consolidatn of alveolar spaces
   → Pneumonitis: lung inflmm ± consolidation
   → Lobar: localized to 1+ lobes that are consolidated
   → Bronchopneumonia: lung inflmm centered in bronchioles; mucopurulent exudates, patchy consolidation, multiple lobes
   → Interstitial: inflmm of interstitium (alv walls, sacs, ducts, bronchioles); viral or chronic

b. Bugs
   1) Neonate & 4-16 w
      a) V: RSV, CMV, Herpes virus, entero, flu, parainfluenza
      b) B: GBS, S aureus, H. flu, s pneumo, C trach (afeb)
   2) <5 y
      a) V: RSV, adenov, influ
      b) B: S. pneumo, H. flu, GAS, S aureus
   3) > 5 y
      a) V: influ, VZB
      b) B: M pneumo, C pneumo, Legionella, S pneumo

c. Sx: Tachypnea, cough, malaise, pleuritic chest pain, retractions
   1) Viral – _ fever , streaky infiltrates, WBC normal
   2) Bact – _ FiC, dyspnea, lung consolidation c _ breath sounds; X-R: lobar consolidation, pleural effusion; _ WBC

d. Based on CXR → lobar consolidation & pleural effusion

1) Immunized → S. pneumo (peaks @ 4 yo; tx: E-mycin, PCN, cephalosporin, vanco), S. aureus
2) Not imm → H. flu, type B (Tx: Amox / Augmentin)

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e. Mycoplasma pneumonia

1) Walking atypical pneumonia
2) W/u:
   a) Cold agglutinins
   b) Complement fixation test
   c) Sputum culture (2-3 w) → fried eggs
   d) Mycoplasma DNA probe

3) Tx:
   a) Self-limited
   b) E-mycin, TCN (don’t give if < 7 y)

f. Chlamydia pneumonitis (not a TORCH bug)

1) Afebrile pneumonia usu seen in infants b/w 4-12 w
2) Tachyypnea, cough, apnea + conjunctivitis, rales, wheezing
3) Staccato cough
4) Tx: Erythromycin / azithro

g. RSV

1) Bronchiolitis in < 2 yo
2) S/sx:
   a) Temperature instability
   b) Respiratory distress, Apnea
   c) Nasal discharge
   d) Poor feeding

3) Tx:
   a) Symptomatic relief
   b) O2 prn
   c) Aerosol ribavirin only if severe (controversial cuz of sefx)
   d) β-agonist aerosols
   e) Palivizumab??

21. PERTUSSIS, aka ‘whooping cough’

a. _ risk in < 5 yo; 50% in <6 mo
b. sx:
   1) paroxysmal cough → post-tussive vomiting
   2) facial petechiae, redness, venous engorgement, cyanosis

c. Tx
   1) E-mycin / azithro → admit
   2) warm mist O2
   3) suction
   4) parenteral fluids

22. OTITIS MEDIA

a. Suppurative infxn of middle ear
b. 6 mo – 2 yo
c. Bugs:
   1) S. pneumo
   2) H. flu, non-type
   3) M. catarrhalis
d. Sx:
   1) Fever
   2) Irritable, pulling ear
   3) 4-7 d after nasopharyngitis
   4) N/V
   5) Diarrhea
e. PEx: bulging, immobile, erythematous, loss of landmarks
f. Tx: amoxicillin, or augmentin, or bactrim
g. If 3 wks later → still have effusion
   Tx: decongestant; don’t put back on ABx!!!
h. Complication: **ORBITAL CELLULITIS**

1) **Si/Sx:**
   a) _fever_
   b) orbital pain,
   c) _vision, limited EOM_
   d) proptosis

2) **Periorbital cellulitis sx:**
   a) < 2 yo
   b) fever
   c) lid swelling
   d) toxic

3) **w/u:**
   a) CT of orbit
   b) BCs
   c) ESR
   d) CBC

4) **Tx:**
   a) Broad-spec parenteral abx (oxacillin and/or ceftriaxone) x 3-4 w minimum
   b) Drain infected sinus or orbital abscess if complicated

23. **SINUSITIS**

a. **Bugs**
   1) S. pneumo
   2) H. flu, non-type
   3) M. catarrhalis

b. **Si/Sx:**
   1) Persistent mucopurulent rhinorrhea
   2) BAD BREATH!
   3) Cough @ night
   4) Nasal stuffiness
   5) HA
   6) Facial swelling, TTP

c. **Tx:**
   1) Amox / Augmentin
   2) Drainage pm complicated sinusitis

24. **SORE THROAT**

a. **Group A, _-hemolytic strep**
   1) Scarlet fever: rash 24-48 h after pharyngitis
   2) **Tx:** PCN

b. **EBV**
   1) **Si/sx:**
      a) pharyngitis (enlarged tonsils, exudates),
      b) exanthem (pharyngeal petechiae),
      c) fever
      d) LAD @ posterior cervical
      e) Splenomegaly (50%) 
      f) Eyelid edema, maculopapular rash, urticarial rash 
   2) Don’t treat with AMPICILLIN!!! → 80-100% get rash
   3) **Tx:** bed rest

25. **ALLERGIC RHINITIS / CONJUNCTIVITIS**

a. 5-10% of kids
b. Type I allergic response

a. **Sx:**
   1) sneezing, nasal congestion, rhinorrhea,
   2) itchy nose, eyes, soft palate
   3) “allergic shinies” – lower eyelids dark 2º venous stasis

d. **FHx:** asthma or atopic dermatitis

e. **Tx:** Env’t control

f. **Antihistamines (H1 antags)**
g. **DO NOT use decongestants → rebound edema

26. **ASTHMA**
f. Tx: Give penicillin G IV immediately

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**CV**

32. Murmurs
   a. PDA: continuous, harsh, machine-like
   b. Transposition: NO murmur or SEM (@ ULSB)
   c. VSD: holosystolic murmur
   d. ASD: systolic ejection

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**NEURO**

33. SEIZURES (see sz sheet)

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**MSk**

34. LIMP
   a. DDx
      1) Septic arthritis
         a) Surgical emergency! ➔ or bone/articular surfaces destroyed permanently
         b) Si/sx:
            (i) Pain, involuntary guarding, muscle spasms,
            (ii) visible erythema,
            (iii) toxic, febrile,
            (iv) _ appetite
         c) Bugs
            (i) Gonococcal ➔ ceftriaxone
            (ii) Staph/strep (child) ➔ ox/nafcillin
      2) Toxic synovitis
         a) 3-10 yo, male
         b) Si/sx:
            (i) pain in hip
            (ii) limited ROM
            (iii) _ intensity vs septic arthritis
            (iv) _ fever
         c) tx: bed rest, crutches
         d) IF < 5 yo ➔ pain, limited ROM, usu @ hip jt; no constitutional sx!
      3) SCFE

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**GI**

35. INTUSSUSCEPTION
   a. 6-18 mo old
   b. Lymphoid hyperplasia with telescoping of proximal seg into distal
   c. RF: CF, HSP
   d. DDx: colic, perf, Hirschsprung, necrotic bowel
   e. Si/sx:
      1) ACUTE onset of colicky pain c knees drawn up
      2) Crying, irritability, lethargy
      3) vomiting
      4) fever
      5) currant jelly stool
      6) sausage-shaped mass in upper abd
   f. Tx:

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36. ROTAVIRUS
   a. Winter mos
   b. Sx:
      1) Vomiting 3-4 d
      2) Diarrhea 7-10 d
      3) Dehydration
   c. W/u: rotazyme testing
   d. Tx: supportive fluids/lytes

37. APPY
   a. <16 yo
   b. DDx: ectopic pregnancy, ov cyst, ov torsion, PID
   c. Sx:
      1) Periumbilical dull crampy pain x 1-2 d ➔ moves to McBurney’s pt/RLQ
      2) Fever
      3) Voluntary guarding (invol of perf’d)
   d. Tx: cut the sucker out.

38. SALMONELLA TYPHI
   a. Rose spots on abd
   b. Mimics appy
   c. Tx:
      1) Only for _ risk pts
      2) Cipro (if > 12) or ceftriaxone

39. DIARRHEA
   a. Acute GastroEnteritis: supportive tx
   b. Giardia
      1) Sx: Anorexia, nausea, glatulence, abd dist, wt loss
      2) Tx: quinacrine, metro

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**SKIN**

40. Erythema multiforme
   a. Looks like???
   b. Resolves in 1-3 wks ➔ some hyperpigmentation

41. Atopic dermatitis / Eczema
   a. Tx:
      1) Advice
         a) Avoid soap, detergents, chemicals
         b) Wear loose fitting clothes
         c) Cut nails so can’t scratch
         d) Limited bathing, ewww…
      2) Use lubricants
      3) Topical steroids

42. Impetigo
   a. Looks like
      1) small fluid filled vesicles that rupture easily
      2) Honey colored thick crust
      3) Weeping lesions
   b. Tx:
      1) 1st gen ceph ➔ cephalaxin
      2) erythromycin

43. Cellulitis
   a. Looks like
      1) Painful, erythematosus, indurated infxn
2) Regional LAD
b. Tx: PCN

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**GU / Renal**

44. **STD**
   a. Gonorrhea M sx
      1) 2-14 d incubation
      2) mild discomfort in urethra, dysuria
      3) d/c: purulent, yellow-green
      4) _ freq, _ urgency
   b. Chlamydia M sx
      1) 7-28 d incubation
      2) acute onset
      3) mild dysuria
      4) d/c: clear to mucopurulent
   c. Tx:
      1) Ceftriaxone x 1 shot
      2) Doxycycline x 7 d bid

45. **HEMATURIA / PROTEINURIA** (see Dr. Anand’s lecture)
   a. Post Strep GN
   b. Nephrotic Syndrome
      1) What is it?
         a) Proteinuria
         b) Hypoalbuminemia
         c) Edema
         d) Hyperlipidemia
      2) Si/Sx:
         a) H/o URI
         b) Edema
            i) Puffy eyes
            ii) Ascites
            iii) Pleural effusion
            iv) Scrotal/labial edema
         c) No fever
      3) W/u:
         a) Urine dipstick
         b) Blood chemistry
         c) R/o PSGN → ASO???
         d) R/o SLE → SLE
      4) Tx:
         a) corticosteroids
         b) if no response → renal bx

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**ALLERGY – RHEUMATOLOGY – IMMUNOLOGY – HEMATOLOGY**

46. **KAWASAKI’S DISEASE**
   a. Etiology: unknown
   b. Popln: 5 yo, M>F
   c. Si/sx:
      1) ACUTE (10 d)
         a) Conjunctivitis
         b) Fever > 5 d
         c) Rash
         d) Puffy hands and soles
         e) Change in oral mucosa → puffy, hard, cracked lips
         f) Cervical LAD
         g) Aseptic meningitis
      2) SUBACUTE (11-21 d)
         a) Arthritis
         b) Skin desquamation @ jcn of nail and fingertips
      3) CONVALESCENT (>21d)
         a) Coronary artery aneurysms (20-25%)
         b) Arthritis
         c) Thrombocytosis
         d) MI, CP
   d. DDx: measles, scarlet fever, SSSS, TSS, RMSF
   e. W/u:
      1) CBC → _ WBC, mild anemia
      2) Plt _
      3) ESR _
      4) UA: sterile pyuria, proteinuria
      5) EKG – prolonged PR, QT
      6) Echo: coronary aneurysms
   f. Tx:
      1) _ dose of aspirin
      2) IV _gamma-globulin (_ risk of aneurysm formation)
      3) NOOOOOO corticosteroids!

47. **Henoch-Schonlein purpura (Anaphylactoid purpura)**
   a. Epid:
      1) #1 vasculitis in children
      2) Peaks in winter months
      3) May follow non-specific viral / bacterial URI
      4) 4-10 yo
   b. DDx: thrombocytopenia, vasculitis, ARF, SLE, meningococcemia, acute/chronic GN
   c. Si/Sx:
      1) GI pain: Cramping, intermittent, vomiting, bloody diarrhea
      2) Periarticular pain, tender c mvmt / arthritis (ankle, hand, knee)
      3) Purpura
         a) Palpable non-thrombocytopenic purpura, circular
         b) Appears over buttocks, lower extremities
         c) scrotal, scalp swelling 2º edema
      4) renal:
         a) Glomerulonephritis with asymptomatic hematuria
   d. Tx:
      1) Supportive
      2) PO Corticosteroids

48. **Anemia**
   a. Fe Deficiency
      1) Etiol
         a) _ intake of whole cow’s milk → inadequate Fe Intake
         b) small amts of GI blood loss
         c) menstruating adolescent
      2) Epid: 24 mo most common
      3) W/u
         a) _ serum Fe
         b) _ serum binding protein / TIBC
         c) _ ferritin
         d) _ marrow iron
         e) _ marrow sideroblasts
      4) tx: 4-6 mg/kg/d of Fe div TID
   b. Pb poisoning
      1) Etiol: inhibit heme synth
      2) Smear: hypochromic, microcytic anemia, basophilic stippling
      3) Tx: chelation therapy with DMSA

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**MISC WARD STUFF**

49. FEN
a. Maintenance IV
   1) 100-50-20 mL/kg/d, or 4-2-1 mL/kg/h
   2) electrolytes
      a) Na  4 meq/kg/d
           (i) 0.9 NS $\rightarrow$ 154 meq Na
           (ii) NS $\rightarrow$ 77 meq Na
      b) K  2 meq/kg/d
      c) Cl  50-200 mg/kg/d