03 Pediatric Key Points

Ages

Gestational age (premature): Pregnant 40 weeks +- 1 week

Neonate 1 day – 1 month

1nfant 1 year

Children 1 – 11 years

Adolescents 12 – 16

Drugs (arranged by drug use, age)

Chloramphenicol: bacteriostatic antimicrobial

Age? Neonates

Why? Grey Baby Syndrome *(color grey)*

Sulfonamides: antibiotic

Age? Neonates

Why? Sulfonamides displace bilirubin 🡪 bilirubin in brain (encephalopathy)

Aminoglycosides: antibiotic

Age? Infants

Why? Increase dose b/c infants have less tissue sensitivity *(minimum must increase)*

Fluoroquinolone: antibiotic

Age? Infants

Why? Lesions in cartilage *(floss cartilage)*

Tetracyclines: antibiotic

Age? Pregnant Women

Why? Dental staining (tetra teeth)

Digoxin: atrial fib

Age? Infants

Why? Narrow therapeutic index

Promethazine: allergic reactions

Age? contraindicated in children younger than 2 years old

Why? Respiratory depression

Cold and Cough

Age? Less than 2 years of age

Why? Not enough documentation

SSRI: depression

Age? Children

Why? suicide

Excipients

Propylene Glycol: drug stability

Age? Infants

Why? **HyPERosmolality**

**Benzyl** **Alcohol**: Preservative benzyl goes to brain, alcohol gets oxidized to acid

Age? Premature infants

Why? **Metabolic acidosis,** neurologic deterioration 🡪 seizures, cardiovascular, . respiratory depression

Ethanol and Sorbitol

Age? Infants and children

Why? Just be safe with it

Hepatic Disease

High hepatic extraction ratio depends heavily on hepatic blood flow (Heart pumping blood)

Low hepatic extraction ratio not dependant on hepatic blood flow

Renal Disease

Renal failure = cannot excrete decrease dosage requirements

Schwartz Formula

Flaws: overestimate than actual GFR. Not accurate if GFR changes rapidly (neonate)

Cystic Fibrosis Disease Cyst in Pancrease 🡪 leads to difficulty breathing

Increase clearance must increase dose

Obesity Disease

Statistics: 1/3 of children and adolescents are overweight or obese

Risks: high BP, cholesterol and type 2 diabetes

Antileukemia for chemo

Pediatric Pain Management

Do neonates experience pain? Yes transmission along NONmyelinated C fibers (rather than A fibers)