UWTASP tele-antimicrobial stewardship program | echo

February 14, 2023

Agenda

- Will Simmons: *Pediatric infections*
- Case Discussions
- Open Discussion

Oh no a child!

- Children aren't tiny adults…. But…. A lot of things carry over

- Seattle Children's makes their clinical pathways available online:
  - Appendicitis, cellulitis/abscess, COVID-19, Heme/onc/BMT Fever in community ED, Kawasaki, MSK infections, neonatal fever, pneumonia, septic shock, UTI… etc.
  - https://www.seattlechildrens.org/healthcare-professionals/gateway/clinical-resources/pathways/

Simple SSTI

Infection	Non-purulent	Purulent
Bacteria	Strep all the way down	Staph incl. MRSA
Oral therapy	Cephalexin!*	TMP/SMX OR Clinda
IV therapy	Cefazolin*	TMP/SMX OR Vanco OR Linezolid
Allergy?	TMP/SMX or Clindamycin	

*If risk factors like prior MRSA in patient or family, consider covering based on local MRSA rates (20% at SCH and Sacred Heart Peds in Spokane)

Complicated SSTI: Bones and Joints

- Osteomyelitis/Septic Joint: Often hematogenous MSSA > MRSA > Strep
  - MRSA kids usually sicker (abscesses, systemically ill)
- Cefazolin! (Vancomycin if c/f MRSA)
- Cephalexin: high dose! (100-150mg/kg/day)
  - 3-4 weeks for osteo
  - 2-3 for septic joint

Oral Transition??
Afeb x 48 hrs
CRP downtrending
WBC normal
Symptoms improving
Can take pills/liquids
Immune normal and >1mo old

Neonates with a fever: An adult doctor's greatest fear

- Definition: <28 days + Rectal Temp >38C (or <36C)
- What's going on? UTI, **bacteremia, or meningitis**

Ampicillin +
Ceftazidime
(or Gentamicin) +
Figure out what's going on

HSV work up indications

Perform **complete work up** and begin acyclovir for any of the following:

Historical and clinical features

- severe illness
- hypothermia
- lethargy
- seizures
- hepatosplenomegaly
- postnatal HSV contact
- vesicular rash
- conjunctivitis
- interstitial pneumonitis

Laboratory features

- thrombocytopenia
- CSF pleocytosis >20 WBC/mm3 without clear bacterial infection (e.g., + Gram stain)

https://www.seattlechildrens.org/globalassets/documents/healthcare-professionals/clinical-standard-work/Neonatal-fever-org-pathway.pdf

Some things never change: Bacteria

- Intrabdominal: Ceftriaxone/Metronidazole or Pip-Tazo
  - E. coli, klebs, anaerobes
- Meningitis: Vancomycin and Ceftriaxone
  - S. pneumo, H flu, N mening
- GU infections: Inpt: Ceftriaxone, Outpot: fluoroquinolones, TMP/SMX, Cephalexin (?)
  - E coli, Klebs, etc.
- Pneumonia: Amoxicillin outpatient, Ceftriaxone+Azithromycin inpatient (5 days!)
  - Strep strep strep, moraxella

Stewardship in (scary) children

- Almost never wrong to use same duration as an adult, and usually shorter
- Oral transitions often even more effective in children
- Coverage doesn’t have to be overly broad
- Target what you grow

Resources/References

- Red Book: AAP Infectious Disease Guidelines: https://publications.aap.org/redbook

- https://www.seattlechildrens.org/healthcare-professionals/gateway/clinical-resources/pathways/