HIV & BACTERIA INFECTION

Dr. G. Kinabo
Specific issues

• Asymptomatic carriage of bacteria in the nasopharyngeal
• B-cell dysfunction in association with the primary T-cell dysfunction
• In mature/damaged immunity
Dynamics of nasopharyngeal bacterial colonisation in HIV-exposed young infants in Tanzania

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- Staphylococcus aureus 66%,
- Streptococcus pneumoniae56%,
- Moraxella catarrhalis 50%.
- Haemophilus influenzae. 14%
- Cocolonisation of S. pneumoniae with H. influenzae or M. catarrhalis was mostly noticed in HIV infected infants.
Invasive bacterial and fungal infections among hospitalized HIV-infected and HIV-uninfected children and infants in northern Tanzania

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• HIV disease 10.7%
• Malaria 60.4%.
• Positive blood cultures 5.8%
• 25.9% Salmonella enterica (including 6 Salmonella Typhi)
• 22.2% Streptococcus pneumoniae.
• HIV infection was associated with S. pneumoniae (odds ratio 25.7, 95% CI 2.8, 234.0)
Differences between Adults and Children

• OI in children often reflects primary infection rather than reactivation
• OI occurs at a time when infant’s immune system is immature
• Different disease manifestations
  – e.g. children more likely to have non-pulmonic and disseminated TB
• Classical features of infection may not be present
Difficulty of Diagnosing OI in Children

- Inability to describe symptoms
- Antibody-based tests confounded by maternal transfer of antibody
- Sputum difficult to obtain without invasive procedures
Serious Recurrent Bacterial Infections:

• Most common infection in pre-HAART
• bacterial pneumonia is often a presumptive diagnosis
• Bacteremia more common in HIV-infected children with pneumonia
• Gram-negative bacteremia more common in children with advanced disease
• Clinical presentation dependent on type of bacterial infection (e.g., bacteremia, sepsis, vasculitis, septic arthritis, pneumonia, meningitis, sinusitis)
• Presentation similar to that of HIV-uninfected children
• They lack classical signs, symptoms, and laboratory tests.
• acute pneumonia have recurrent episodes.
Serious Recurrent Bacterial Infections: Prevention

- Trimethoprim sulfamethoxazole (TMP-SMX)
- Up-to-date immunization
Serious Recurrent Bacterial Infections: Treatment

- Empirically and promptly until cultures are available.
- Prevalence of resistance of common drugs
- Azithromycin for hospitalized patients with pneumonia
- Clindamycin or Vancomycin if MRSA is suspected
Serious Recurrent Bacterial Infections: Treatment Failure

• Consider bacterial resistance if treatment failure occurs
• Consider nonbacterial cause such as TB, PCP, meningitis (Cryptococcus or TB)
• Look for catheter-related infections
• Occult abscess
The End

Thank you for being attentive