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

G. D. Kinabo[1], A. van der Ven[2,6], L. J. Msuya[1], A. M. Shayo[1], W. Schimana[1], A. Ndaro[3], H. A. G. H. van Asten[4,6], W. M. V. Dolmans[4,6], A. Warris[5,6] and P. W. M. Hermans[5,6,7]

- 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.

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Invasive bacterial and fungal infections among hospitalized HIV-infected and HIV-uninfected children and infants in northern Tanzania

John A. Crump[1,2,3,4], Habib O. Ramadhani[3,4], Anne B. Morrissey[1], Levina J. Msuya[3,4], Lan-Yan Yang[5,6], Shein-Chung Chow[6], Susan C. Morpeth[1], Hugh Reyburn[7], Boniface N. Njau[3], Andrea V. Shaw[1], Helmut C. Diefenthal[3,4], John A. Bartlett[1,2,3,4], John F. Shao[3,4], Werner Schimana[3], Coleen K. Cunningham[8] and Grace D. Kinabo[3,4]

- HIV disease10.7%
- 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)

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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
  (eg, 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