

# Meloidosis in Cambodia

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# Meloidosis

## ◎ *Burkholderia pseudomallei*

- Soil saprophyte
- Acquired via inoculation, inhalation or ingestion
- Endemic in Southeast Asia and Northern Australia

# Clinical Presentation

## ⊙ Sepsis

- 20% of community-acquired sepsis in Northeast Thailand
- High mortality rate

## ⊙ Pneumonia

- ⊙ Usually in immunocompromised patients

# Outbreaks after Tsunami

- ⊙ Multiple reports of outbreaks among locals and travelers after December 2004 Tsunami
- ⊙ Exposure via aspiration/  
contaminations of wounds

# Prevalence in Southeast Asia



- ⊙ Extremely limited data outside Thailand
- ⊙ Not usually able to be confirmed by culture in most settings in area

# Prevalence in Southeast Asia



- ⊙ Recently identified in Vientiane, Lao PDR after microbiology lab started
- ⊙ Detected in soil in Laos

*Burkholderia pseudomallei*  
Antibodies in Children, Cambodia

- ⊙ Emerging Infectious Diseases,  
February 2008
- ⊙ Study at Angkor Hospital for  
Children, Siem Reap, Cambodia
- ⊙ Prospective, cross-sectional study  
December 2005 - April 2006

# Angkor Hospital for Children



# Study

- ⊙ Collected serum specimens from 968 consecutive children birth - 16 years old at AHC
- ⊙ Environmental sampling in January, 2006 - 10 different paddy fields around Siem Reap
- ⊙ Susceptability testing for ceftazadime, imipenem, doxycycline, bactrim

# Results - children

- ⊙ 16.4% with detectable antibodies
- ⊙ Proportion rose with age
- ⊙ Slightly higher prevalence in females

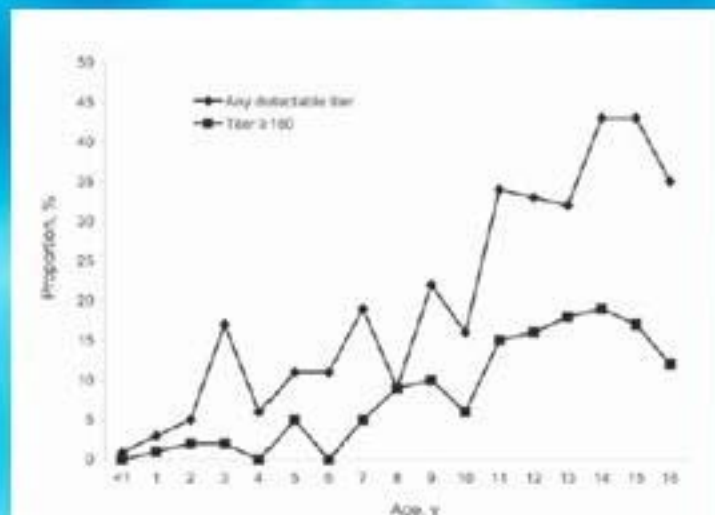


Figure. Indirect hemagglutination assay (IHA) titer for 968 children living in Siem Reap, Cambodia. None of the children was known to have melioidosis. The number of children by age group follows: <1 y, 106 children; 1 y, 98 children; 2 y, 93 children; 3 y, 54 children; 4 y, 50 children; 5 y, 62 children; 6 y, 55 children; 7 y, 57 children; 8 y, 44 children; 9 y, 49 children; 10 y, 50 children; 11 y, 41 children; 12 y, 49 children; 13 y, 66 children; 14 y, 54 children; 15 y, 23 children; 16 y, 17 children.

## Results - environment

- ⊙ *B. pseudomallei* isolated from 12/40 soil samples taken in 6/10 rice fields
- ⊙ 1-5,000 colony forming units/gram soil

# Conclusions

- ⊙ *B. pseudomallei* widespread in environment in Cambodia
- ⊙ Many children have evidence of exposure to *B. Pseudomallei*
- ⊙ Angkor Wat is cool looking
- ⊙ Cambodian children cute
- ⊙ AHC is great organization

