Unique Diseases/Conditions in the Asia-Pacific Region and their Interface with HIV Neurology

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Introduction

- Diseases/conditions that are unique/more common in the Asia Pacific region will interface with HIV

- This is especially true for neurological complications

- It is proposed that these are the equivalent of the “non-AIDS” events that SMART uncovered
Overview

- **Infections:**
  - Arboviruses: Japanese encephalitis, West Nile
  - Nipah virus
  - Polio/post polio syndrome
  - Measles: MIBE, SSPE

- **Vascular disease**
  - Intracranial disease
  - Hypertension
  - Intracranial haemorrhage

- **Metabolic conditions**
  - Renal disease
  - Diabetes

- **Degenerative/toxic conditions**
INFECTIONS

- Japanese encephalitis:
  - Damage is dominantly virally mediated – immunosuppressed monkeys have extensive neural destruction
  - Clinical picture may mimic acute HIV encephalitis especially the extrapyramidal features
INFECTIONS

- Nipah virus:
  - Encephalitic presentation
  - Possibly with pneumonia
INFECTIONS

- Polio/Post polio:
  - ?worse primary infection in context of HIV disease
  - ?worse ± earlier onset of post polio syndrome
    - double damage -> limited reserve
    - true reactivation of polio????
INFECTIONS

- Measles: MIBE and SSPE
  - Countries where measles vaccination is not universal
  - HIV infected children need repeated immunization (JID 2007)
  - Persistent measles virus infection
  - Immune response considered to partly control/slow brain infection
INFECTIONS

- Measles: MIBE and SSPE
  - MIBE:
    - months after initial infection (but difficult b/c no rash)
    - Impaired cognition, dysarthria, seizures
  - SSPE:
    - Years after initial infection
    - Clinical features may mimic HAD
VASCULAR DISEASE

- Remember SMART data (n=2495):
  - 43.3% smoke
  - 8.9% diabetic
  - 23.4% are hypertensive requiring medication
  - 25.1% have hypercholesterolaemia requiring medication
  - 1.7% prior stroke
VASCULAR DISEASE

- Intracranial disease:
  - Increased incidence of intracranial stenosis
  - Interaction with pro-atherogenic effects of HIV/HAART
VASCULAR DISEASE

- Hypertension:
  - Some AP populations have increased rates of hypertension especially Pacific islanders
  - Potential interaction with HIV/HAART
VASCULAR DISEASE

- Intracranial haemorrhage:
  - Rates of intracranial haemorrhage are increased in AP
  - ?mass lesions such as toxo are more likely to be complicated by haemorrhage
METABOLIC CONDITIONS

- Renal disease:
  - Some AP populations have increased rates of renal disease especially Pacific islanders
  - Potential interaction with HIV/HAART (tenofovir)
METABOLIC CONDITIONS

- Diabetes:
  - Some AP populations have increased rates of diabetes
  - Potential interaction with HIV/HAART
TOXIC CONDITIONS

- Botulism:
  - May mimic GBS/CMV

- Arsenic:
  - May mimic HIV neuropathy

- Copper deficiency:
  - May mimic HIV myelopathy