



Dengue Laboratory diagnostics

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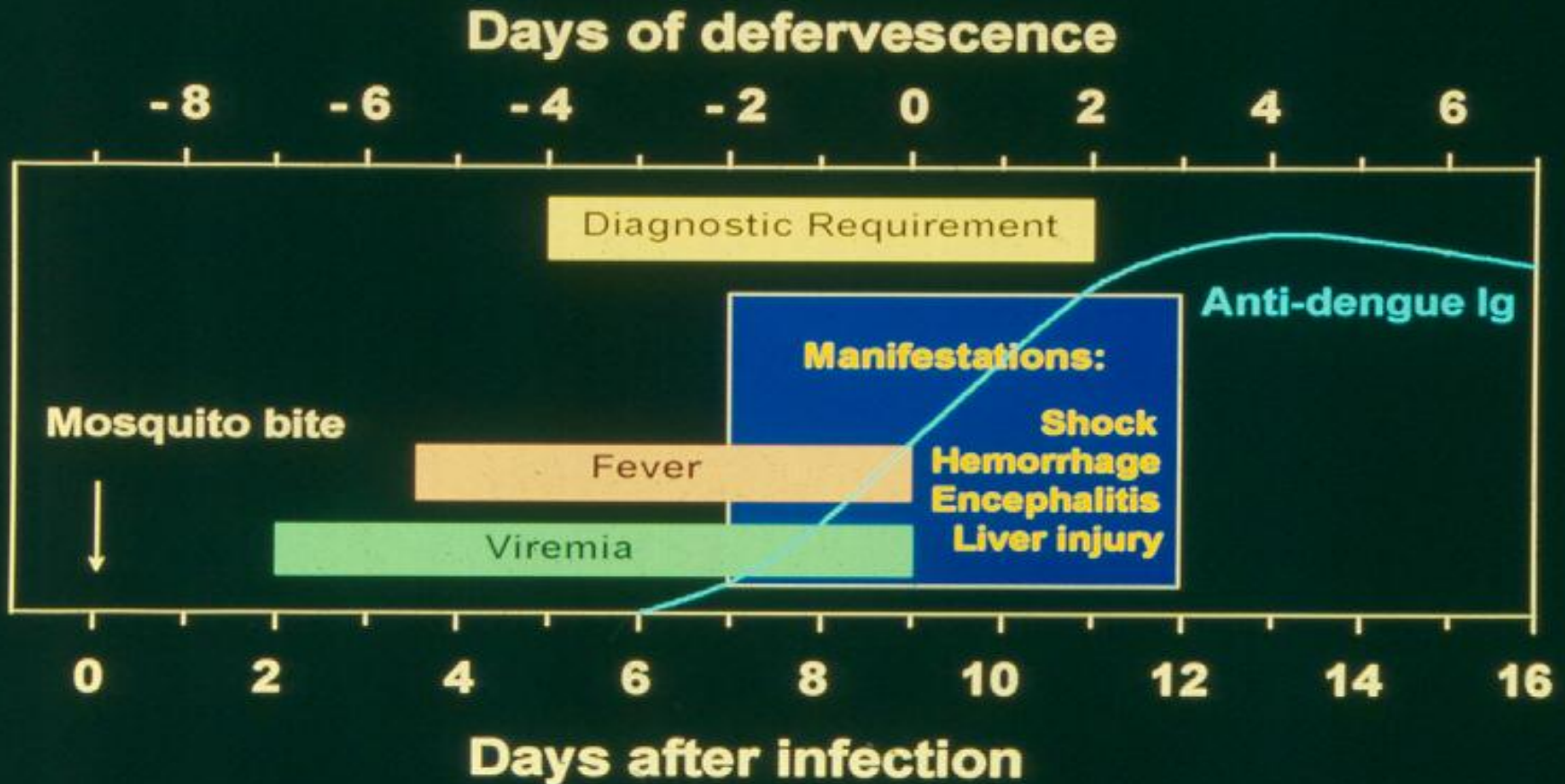


Outline

1. Understanding the immunologic natural history of acute dengue infection
2. Diagnostic goals
3. Assay methods
4. Post vaccination surveillance:
 - Active surveillance
 - Passive surveillance
5. Post vaccinated antibody response vs protection



Acute dengue virus infection





Diagnostic Goals

- During febrile period
 - Diagnosis is based on virus detection (virological)
- Following defervescence
 - Diagnosis is based on antibody detection (serological)



Dengue Diagnosis

Isolation:

Mosquito inoculation (intrathoracic)

Toxorhynchites splendens

Mosquito cell culture

C6/36 (*Aedes albopictus*)

Detection :

Molecular techniques

Polymerase chain reaction(PCR)

NS1 Ag detection

Immuno staining

Hemagglutination Inhibition (HI)
Plaque Reduction Neutralization test
IgM and IgG ELISA
Rapid tests: Dot blot, Immunoblot,
Dipstick, Immunochromatography

Manifestations:

- Shock
- Hemorrhage
- Encephalitis
- Liver injury

Fever

Viremia

Anti-dengue Ig

0

2

4

6

8

10

12

14

16

Days after infection