



Vectorborne Disease: Key Clinical Points

Approach to Diagnosis of Vectorborne Disease:

- Key points in history and physical (eg. travel to endemic areas, history of any bites, history of precautions taken, history of sentinel cases nearby)
- Understand biology of vectors
- Use of risk maps and alerts: know what vectorborne diseases are occurring in your area
- Use of weather data: weather events can increase risk of vector-borne disease
- Sentinel cases – in humans and (when relevant) in animals – are an indicator of risk
- Appropriate diagnostics

Key Points:

- If dengue was diagnosed on admission or at emergency department visits, complications could have been avoided.
- Ibuprofen can complicate hemorrhagic fever.
- Serology is less helpful in an acute care setting; instead molecular diagnostics (eg. Nucleic Acid Amplification Tests/NAATs) and rapid antigen tests are needed.
- It's not just mosquitoes you have to consider. Other vectors, such as ticks, are prevalent in North America. Tick-borne diseases are becoming more noticeable as ticks expand their range and can spread diseases like Lyme disease, babesiosis, and anaplasmosis.

Management & Treatment:

- For viral diseases, supportive care is critical
- Antivirals under development
- Bacterial and parasitic diseases: treat specific cause

Prevention:

Host factors:

- Optimize host immunity status

Environmental factors:

- Be aware of high-risk areas (maps, data, etc.) and educate patients in risk areas to take extra precaution!
- Avoid vector-prone habitat (marshy areas, high grass, etc.)
- Personal protective equipment/clothing: Permethrin-impregnated clothing
- Use of repellents: DEET/ Picaridin, etc.

Photo credit: Erik Karits, Unsplash