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Weekly Epidemiological Monitor

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Current major events

Dengue fever and CCHF in Pakistan

In recent weeks, 2,160 suspected cases of dengue fever including 919 laboratory-confirmed cases have been reported from Pakistan. The number of deaths from dengue fever has risen to 7 so far. Additionally, 22 laboratory-confirmed cases of Crimean-Congo haemorrhagic fever (CCHF) including 3 deaths have also been reported from Pakistan since 16th of September till date.

In one of the hospitals in Pakistan, nosocomial spread of CCHF amongst health care workers has also been reported during this period *(Please see weekly epidemiological monitor, volume-3; issue no 41; 10 October 2010)*

Editorial note

Both dengue fever and CCHF are endemic in Pakistan with seasonal spikes. However, during the current period, dengue transmission has intensified in the country with increased incidence and geographic expansion. Similarly, the geographic distribution of endemic CCHF is expanding into new areas of Pakistan which have not previously reported cases of CCHF. The recent flood in the country might have contributed to this upsurge as a result of changes in the risk factors as well as changes in behavioural practices of the affected communities.

The co-occurrence of both dengue and Crimean-Congo haemorrhagic fever merits special public health attention specially for clinical management of cases with haemorrhagic manifestations in the hospitals. The severe and fatal form of dengue fever often presents with acute haemorrahagic manifestations which might make the clinicians perplexed and difficult to diagnose and differentiate with other types of viral haemorrhagic fevers (VHFs), particularly when other arboviral diseases causing haemorrhagic manifestations are also con-currently present. Since the chance of nosocomial spread of CCHF both in the community as well as in the hospitals remains considerably high, the physicians need to act quickly and decisively when dealing with a suspected case of CCHF in the hospitals. Early diagnosis of CCHF and Dengue haemorrhagic fever (DHF) are critical both for patient survival and for prevention of potential nosocomial infection from CCHF. Therefore, in situations like this, where many arbovirus are con-currently circulating, the physicians should have high index of suspicion for those VHFs that have potentials for person-to-person transmission and adhere to standard precautions for infection control unless the patient's age, occupation, patient's history and other clinical manifestations prove otherwise. The clinicians should also be aware that the clinical symptoms of dengue fever may also resemble other medically important arboviral disease-notably among them is Chikungunya.

Epidemiologically, the CCHF cases are distributed mainly amongst acting working age groups exposed to tick populations. The major at-risk groups are farmers working in the endemic areas and dealing with agricultural works and animal husbandry. The DHF, on the other hand, is primarily a disease of children under the age of 15 years although, it may occur in adults.

Given the current situation, the authorities in Pakistan may consider instituting a clinical algorithm for managing fever cases in all hospitals. In addition, laboratory diagnostic capacities to detect all arboviral diseases needs to be strengthened to guide the clinicians decisions for managing fever cases with appropriate and standardized treatment protocols.

Characteristics of some commonly recognized viral haemorrhagic fevers (VHFs)

Disease	Virus genus	Transmission	Potential for person-to-person transmission	Mortality among untreated persons
Yellow fever	Flavivirus	Mosquito	No	25-50%
Lassa fever	Arenavirus	Rodent	Yes	30%
Ebola/Marburg fever	Filovirus	Primate	Yes	50-90%
CCHF	Bunyavirus	Tick	Yes	10-30%
DHF	Flavivirus	Mosquito	No	40-50%
Hanta fever with renal syndrome	Hantavirus	Rodent	Rare	5-15%
Chikungunya	Alphavirus	Mosquito	No	Fatalities are rare

Update on outbreaks

in the Eastern Mediterranean Region

CCHF and **Dengue fever/Dengue Haemorrhagic Fever** in Pakistan; **Kala-Azar** in southern Sudan;

Current public health events of international concern
[cumulative N° of cases (deaths), **CFR %**]

Avian influenza	
Egypt	[112 (36), **32.1%**]
Indonesia	[168 (139), **82.7 %**]
Viet Nam	[119(59), **49.6%**
China	[39 (26), **66.6%**]
Global total	[505(300), **59.4%**]
Yellow Fever	
Senegal	[2(0), **0%**]
AWD (Cholera)	
Niger	[976 (62), **6.4%**]
Chad	[2508 (111), **4.4%**]
Cameroun	[7869 (515), **6.5%**]
Nigeria	[29115(1191),**4%**]
Kala-Azar (Visceral Leishmaniasis)	
S. Sudan	[6363(303). **4.7%**]
Acute Haemorrhagic Conjunctivitis	
S. Sudan	[428(0), **0.0%**]
Uganda	[6818(0), **0.0%**]

CFR=Case-Fatality Rate