EDITORIAL

CHIKUNGUNYA FEVER

The name 'Chikungunya' comes from a word of kimakonde language meaning "that which bends". Chikungunya virus was isolated in 1952-53 in Tanzania from men and mosquitoes from an epidemic of fever that was considered clinically indistinguishable from Dengue fever.

Few years back, some cases were noticed in Bangladesh by physicians that presented with fever, rashes & arthritis resembling Dengue fever. But Dengue serology was negative & arthritis was prolonged. Such cases were suspected as Chikungunya fever. But no laboratory investigations were available to confirm at that time. As laboratory investigations became available later, many of such cases were confirmed as Chikungunya fever.

Chikungunya is an emerging vector-borne disease caused by the virus 'Chikungunya' of alphavirus genus of the Togavirus family. It is single stranded RNA virus. The disease has been reported from countries of south and east Africa, south Asia and south-east Asia.

Chikungunya virus is primarily transmitted by bites of female mosquitoes of the genus Aedes, the same mosquitoes that transmit Dengue virus. Of the two vectors in Asia, Aedes aegypticus is believed to be the principal vector responsible for transmission. However Aedes albopictus has been increasingly implicated in both urban and rural areas. The Aedes mosquito breed in domestic settings in stagnant water and bites during day time.

The disease occurs in all ages and both sexes. Following a bite by an infected mosquito, the disease manifests itself after an average incubation period of 2-4 days (range: 3-12). This disease has an abrupt onset with high fever, myalgia & intense pain in one or more joints. Fever (100% of cases) & athralgia (98%) are the most significant manifestations & are almost universal at the onset[1].

Fever is bi-phasic, the fever subsides in two to three days than come back again after one day. The second phase may be associated with relative bradycardia. Fever, in general, tends to last only three to four days.

Arthritis is severe & crippling involving the knees, wrists, hands & feets. Athritis has two phases: initial severe eruptive arthritis, followed later by disabling, protracted peripheral rheumatism that can last for several months[2,3]. The acute phase is severe and incapacitating in all cases with severe pain, tenderness, swelling & stiffness.

Skin rashes (40-50% of cases) usually appear between second and fifth day of onset of fever. Rashes are mostly of pruriginous maculo-papular type (sometimes accompanied by petechiae) at the onset, but bullous or other forms are also seen.

Rare manifestations including bleeding (3%), fulminant hepatitis (2%), meningoencephalitis, stomatitis, oral ulcer, photophobia, retro-orbital pain.

Chikungunya fever is usually diagnosed clinically on basis of typical clinical features during an epidemic.

Some diseases those present with fever with or without athralgia can be considered in differential diagnosis- dengue, malaria, leptospirosis, rheumatic fever.

Three main laboratory tests are used for diagnosis of chikungunya fever- viral isolation, serological tests & molecular techniques of polymerase chain reaction (PCR). Specimen is usually blood or serum[4]. In Bangladesh, serology (ELISA, IgM, IgG), PCR and rapid chikungunya (deep stick) tests are done.

Laboratory diagnosis is essential to confirm a case of chikungunya. But clinical management now does not differ between a probable case and a confirmed case.

Treatment in acute stage is entirely symptomatic. There is no role of anti-viral drugs. Paracetamol is the drug of choice with use of other analgesics. If analgesics do not relief joint pain, cold compression may help. Aspirin is preferably avoided. Mild form of exercise & physiotherapy are recommended in recovering patients. All suspected cases should be kept under mosquito nets during the febrile period.

Most patients can be managed at home or primary healthcare facilities. Some cases need special attention & care:- pregnancy, oliguria, anuria, refractory hypotension, bleeding disorder, altered sensorium, meningo-encephalitis, persistent fever for >7 days & extremes of age.

The osteo-articular problems usually subsides in one to two weeks. In less than 10% cases, they persists for months, which can be managed with analgesics.

Chikungunya is usually not a fatal disease, but it can cause significant morbidity. Currently there is no available vaccine or specific medication against chikungunya fever. Elimination of breeding sites of vector or source reduction is an effective control measure which can prevent chikungunya, dengue and other mosquito born diseases. Personal protection like long sleeve cloths, repellents, mosquito nets play useful role. Physicians have an important role to prevent chikungunya. Public awareness should be made by all levels so that people may not be panicked.

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