Update on Chikungunya and Polio in India

In the last two years, Chikungunya has become a household name in India. This mosquito borne illness has derived its name form Makonde language word for 'to bend up' as the severe arthralgia compels the affected patient to acquire a stooped posture for obtaining relief. The Chikungunya fever is caused by Chikungunya virus (CHKV) belonging to Togaviridae family and is spread by *Aedes* mosquito. The recent outbreak started in February 2005 in La Union island of Indian Ocean, where more than 50% of the population was affected(1). In the current and probably the biggest ever outbreak, CHKV has spread to Europe, Asia and Americas, giving it a truly global appearance. The international travel and the globalization of trade, particularly that of used tyres (which carry dried eggs of Aedes, enabling them to survive long journey between countries and continents), has contributed to the spread. For this reason, many countries have banned the trade of used tyres(1,2).

In India, the cases of Chikungunya in current outbreak were first reported at the end of 2005 from the coastal Andhra Pradesh and Karnataka, and subsequently from the whole country; the outbreak was confirmed in March 2006. Official figures in India reported 1.39 million cases in 2006 with the attack rate up to 45%(1).

Chikungunya virus outbreak was last reported from India in 1973(3).The morbidity and mortality rate in the current outbreak is higher than previous outbreaks, and 2 new species of *Aedes* (*Ae. furcifer-taylori* group and *Ae. luteocephalus*) are implicated(1). The outbreak alerted us to a few lacunae identified in public health control measures. The surveillance system could identify the outbreak much later. It was another two months before a national laboratory could confirm the blood samples for Chikungunya, underscoring the insufficient laboratory facilities(3). The public health authorities were caught unaware and timely control measures could not be taken. Luckily, in the year 2007, the spread of the CHKV was slower and officials have reported only 37,683 cases till mid October(1). The ongoing outbreak should be taken as a lesson and calls for enhanced serosurveillance, accessible and efficient laboratory facilities, and development of an effective vaccine for CHKV. The issue of health education to the community should also be given due attention. The current reality is that CHKV is still present in Indian territory and will probably not disappear soon, as is the case with dengue, which has become endemic.

POLIO IN MORADABAD

The polio eradication in India is proving difficult mainly because of some foci of high transmission such as Moradabad in Uttar Pradesh (UP). However, the progress towards eradication should not be judged by the number of cases only. The concern should definitely be the epidemiological pattern. The resistant foci in Moradabad, UP have shown some signs for good. India has reported a total of 411 cases (69 type 1 and; 344 type 3) till November 27, 2007(4). For the first time, the number of types 1 cases is less than type 3; and Moradabad is not spreading the type 1 virus anymore. Quoted below is an excerpt from a recent report in WHO Bulletin(5) "a perhaps inevitable consequence of using the monovalent vaccine against type-1 polio has been a resurgence of type-3 polio in India. Officials regard this situation as 'manageable' and the priority remains the fight against the age-old

enemy, type-1 polio".

The district Moradabad has conducted 10 rounds of OPV vaccination till November 2007. The earlier problem of 'False P' has been minimized(4,5). The booth activities are followed by the house to house coverage by the teams to ensure that every child is vaccinated with OPV. These teams mark a house, where either no child is less than 5 years or all the eligible children have been given OPV as 'P'. The house, where a child is yet to be vaccinated due to any reason, is marked as 'X'. These X marked houses are revisited in the afternoon, evening or following day, till the child is vaccinated and the house is converted to 'P'. Last year, it was reported that in Moradabad, the houses which should be marked as 'X', due to varied reasons, the health workers were marking those houses as 'P' (known as False P), giving the false impression of high coverage. Till last year, there were almost 10% houses which were being left as 'X', another 5% were being marked as 'False P'. Moradabad, "the old bastion of polio"(5) remains a challenge to the experts.

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