

African countries must prepare for Zika

Shima Gyoh updates on the latest serious threat posed by the mosquito fraternity



African countries must take steps to limit a threatening disaster, an epidemic of Zika virus infection. At first it was only a suspicion but reassessment of available scientific evidence has confirmed that when the virus infects a pregnant woman, it attacks and damages growing foetal brain and may be responsible for other subsequent disorders not presently recognised. The most severely affected die in utero or soon after birth, while others live for varying unpredictable periods to suffer varying degrees of disabling neurological deficits and mental sub-normality. Even in adults, it can cause the rare Guillain-Barré Syndrome, a transient auto-immune demyelination of motor neurons, causing paralyses.

Discovered in the Zika forest of Uganda some 70 years ago, its presence was recorded in 22 Caribbean countries apart from Brazil. Its infection usually goes unnoticed in over 80% of cases, but in a few it produces a mild self-limiting condition of malaise, low fever, myalgia, arthralgia, retro-ocular headache, conjunctivitis, generalised pruritis and a maculopapular rash, non-specific symptoms common to other viral infections, and they soon clear up. In pregnant women, the virus crosses the placenta to attack the baby's brain, especially the parts that control thought, vision and locomotion. At birth they have microcephaly, suffer from restlessness, screaming and insomnia. They often have epileptic seizures, dysfunctional motor skills and many other serious maladies. Many would need special education, training and appliances to achieve some measure of independent existence, while others would require special care all their lives, often beyond the ability of individual families to provide. There have been 1500 cases since October 2015. The percentage of infected pregnancies and the factors that promote complications are not yet fully understood.

Did the virus undergo a neurotrophic mutation in Brazil or is it the same strain? Do Africans possess some degree of immunity or were complications missed because of small numbers or lack of suspicion? The very strain causing microcephaly in Brazil has already arrived in West Africa! By 8th May, Cape Verde had recorded 7557 suspected cases and confirmed three of microcephaly.¹

A Zika epidemic can produce a whole generation of disabled, mentally challenged children putting intolerable stress on the affected families and the social services of the country. Representatives of practically every country of the world congregate where Olympic games are held, and experts in viral diseases did raise their concern in holding the fiesta in Brazil at the time there was an ongoing epidemic of Zika. The World Health Organization's decision that the games should

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proceed was probably based more on the undesirable political and economic consequences of postponement. For developing countries with weak health systems, the danger from infected Olympic returnees is real even if the virus is already present, and it is worth enabling selected laboratories to test for Zika and applying the public health measures to contain it.

Aedes species is also vector for yellow fever, dengue and chikungunya. Brazil has had 1.6 million cases of dengue in the last year. Protection from mosquito bite has become exceedingly important. International donor agencies have been boosting the ability of the poor to sleep under insecticide impregnated nets; this will have the maximum effect on the night-feeding anophelids of malaria. *Aedes* of Zika, however, predominantly feeds during the day, and personal protection against bites would involve the use of house spraying, repellent creams and protective clothing. Insect screening and air-conditioning of residential houses is desirable but expensive and limited in scope.

For wider reach, our countries must immediately adopt strategies for preventing mosquito breeding around human habitation. We need efficient environmental sanitation, education and mobilisation of the citizens. Immediate action can be taken through establishment of sanitation task forces which should be adequately equipped to clear neighbourhood areas of mosquitoes by insecticide spraying, covering of pot holes, unblocking of drainages, clearing the environment of broken pots and discarded plastics. Local authorities must realise that regular and efficient garbage disposal in our towns and villages must become an obligatory continuous cultural activity.

It will be about another four years before a safe vaccine is available. Presently, containment depends on disease surveillance to demarcate localities where control measure should be intensified. Pregnant women would be advised against visiting such areas but those already there would take precautions to avoid mosquito bite. Zika can also be transmitted between human beings through sexual activity, and infected individuals are advised to use condoms and refrain from having babies for six months.

At antenatal care, suspicious cases should be repeatedly scanned to estimate the size and growth of the head. Experts in Brazil have noticed calcified patches on the skull and tendency to abnormal intrauterine posture. Special care centres should be set up to cater for the management of the babies and counselling of affected families. Sounds like a tall order, but neglect would have serious consequences.

Reference

1. Zika virus from Brazil found in Africa for the First Time, Tom Miles, Geneva, Reuters. http://www.huffingtonpost.com/entry/zika-virus-from-brazil-found-in-africa-for-the-first-time_us_573f2955e4b0613b512a0839



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