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President's column

Neurologists and Zika

The world is facing another viral epidemic, which is causing major concerns. Zika Flavi virus is transmitted by Aedes mosquitos and is now prevalent in the northern regions of South America and Central America. The WHO on the 1st February 2016 has declared Zika as Public Health Emergency of International Concern PHEIC [1]. The illness itself is mild and by and large does not need major medical intervention. However, the neurological consequences are devastating. This was the reason why the WHO has acted expeditiously [2]. Microcephaly, which has already affected thousands of babies is a major burden and will lead to lifelong major disability. Now that a post mortem case following termination of such an affected fetus has demonstrated Zika virus material in the brain [3] we are probably clearer on the association. Long-term disabilities with convulsions associated with severe psychomotor retardation are the expected consequences. These children will need lifelong neurological care.

The other issue, which has been reported in many countries, is the noticeably increased number of those affected by Guillain–Barre syndrome (GBS). In a way, it is expected that this will happen following a viral illness although the association with a related flavi viruses such as Dengue is not conclusive. We do not know the type or severity of the GBS, but we know that in the absence of supportive treatment the mortality will be more than the generally expected 5% of affected individuals. So far we do not know the real number of those affected. If we presume that the preceding infection with Zika is similar to *Campylobacter jejuni* where 1:1000–5000 maybe affected [4] we are going to be faced by tens of thousands of cases. Moreover, we do not know if some of those infected by Zika without showing symptoms (80%), can go on to develop GBS. We also do not know if antecedent Zika infection will produce different clinical manifestations of GBS similar to the different varieties seen following triggers such as *C. jejuni*, CMV, EBV or others?

It is conceivable that other neurological deficits can result form Zika infection. As the virus is isolated from brain and spinal cord of an unborn fetus [3] it may prove able invade directly other parts of the nervous system in an immediate or latent manner. Neurologists have to be vigilant in affected areas [5].

Neurological expertise is therefore crucial to deal with Zika sequelae, both for babies with seizures and developmental delay and for GBS. In the latter, neurological care is needed at the outset to make a correct diagnosis, if one is going to proceed to use expensive treatments such as intravenous immunoglobulins (IV Ig) or plasma exchange [6,7]. In the UK the Department of Health places the highest priority on the use IV IG in GBS, because of risk to life without treatment [8,9] In many affected areas there is a huge shortage of neurologists, lack of neurophysiological investigations, very scarce intensive care facilities to cope with the 25% of GBS patients with respiratory muscle involvement who may require assisted ventilation [4] In addition to lack of funding for provision of Immunoglobulins or plasma exchange. With all this background, the WHO Zika fact sheet fails to mention the need for neurological expertise to deal with those affected by Zika [10].

The question is what to do in the face of these difficulties many of which are really insurmountable at short notice? The only plausible but maybe a difficult action is for governments, the WHO, UN or other aid agencies to coordinate the provision of Intravenous immunoglobulin to be dispensed to those who have a clear clinical diagnosis of GBS. Neurologists in the affected areas are mainly centered in major cities and if we are going to try to avoid inappropriate and wasteful usage yet keep mortality down, then guidelines for general practitioners/family physicians have to be urgently produced on case ascertainment and dispensing IV Ig appropriately. Otherwise there shall be many unnecessary deaths, which would not happen if those affected were living in a less deprived part of the world. There is no time to waste and the neurological community will need to act now.

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