

Dengue Virus Endemic in Pakistan: Its Vertical Transmission could be an Un-attended Threat to Infants

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Letter to Editor

Dear Editor,

It becomes epidemic in Pakistan from the past few decades. This highly communicable disease is a leading cause of morbidity and mortality in country. Some regions are highly affected with this virus due to spatial distribution and various biological and environmental factors. Dengue infection badly hit densely populated areas and may spread due to climatic variations. Increased number of cases was seen in Punjab followed by Sindh up to 2015. It occurs usually at its peak at the end of monsoon period in Pakistan. It was first reported in 1982 and it has been known to cause significant level of mortality and morbidity in Pakistan since 1994. Dengue was not endemic in the country at that time but since then cases that are detected per year are on the rise. Three major outbreaks hit Pakistan during 2004, 2006 and 2011 makes Pakistan a dengue endemic nation [1,2]. During the first outbreak from Pakistan in 2006, 5400 cases were reported [3,4]. In 2007, dengue infection mainly hit Karachi, Mirpurkhas, Lahore, Hyderabad, Haripur, Islamabad and Rawalpindi with 2700 cases [5,6]. In 2008, 1800 cases were reported from Lahore [7,8]. The mortality rate was relatively low till 2010. In 2010 a total of 5000 cases were reported with dengue infection [9]. In 2011 the condition becomes worse with severe outbreak affecting more than 50,000 patients in Lahore alone [10]. This may be the result of heavy flood in Pakistan during 2010 and climate favors the spread of disease. Officially 300 deaths were reported which according to experts reflect under reporting. Maximum cases were reported from Lahore during this outbreak followed by Faisalabad, Rawalpindi and Sargodha. In 2013, Dengue fever again becomes epidemic but in less endemic areas of KPK, Swat. This reflects that the virus travelled from other provinces to KPK. Total 6376 cases were reported [11]. About 21,580 cases of dengue positive cases were reported in 2014 all over the country but fewer epidemics were observed in the KPK. In 2015 Dengue again spread in Punjab particularly Rawalpindi and in Karachi which is highly populated and urban area. A total of almost 7,173 cases were reported.

Among infected individuals a large number were/are women were/are with pregnancy. A very interesting report from Barthel et al. (August, 2013) enlighten a very sensitive issue of dengue viral vertical transmission through breast milk [12]. Previously possibility of dengue virus vertical transmission through breast milk was unknown. With this advancement of our knowledge about the vertical transmission; it is possible that in previous years and even in current season many infants' morbidity and mortality due to dengue infection went unnoticed. In Pakistan almost all mothers breast feed their kids and dengue viral sero-prevalence testing is not carried out in new born's of infected mothers. Pakistan ranked in the top five countries in the

world with highest infant mortality rate and according to World Bank report 2012 and 2015 the infant mortality rate in Pakistan is 70 and 65.8/1,000 respectively [13]. Keeping in mind the current knowledge, it is the need of the time to start massive campaigns on large scale among clinicians specially and general population as well. This could be done in high risk areas of Lahore, Karachi and Swat valley on priority basis as these are the areas with high number of dengue infections in current season. By educating the health care workers, we can estimate the actual dengue virus infections among new born breast feeding babies and can design the preventive life saving strategies for these infected infants. It is the government responsibility to take steps for implementation of routine clinical viral screening in children's of lactating infected mothers.

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