

Acute flaccid paralysis surveillance in India - A road ahead

India has been certified polio free on March 27th, 2014 when no case of wild poliovirus (WPV) was detected for the past 3 years. Nationwide acute flaccid paralysis (AFP) surveillance is the gold standard to detect the cases of poliomyelitis. The AFP surveillance system has been in place in India since 1997. The AFP is defined as sudden onset weakness and floppiness in any part of the body in a child < 15 years of age or paralysis in a person of any age in which polio is suspected. All AFP cases reported within 6 months of onset of paralysis should be investigated. All reporting units, informers, and other contacts should continue to report AFP cases as per existing case definition [1,2].

In a study published in this issue of Indian Journal of Child Health, Kumar A has described the socio-epidemiology and causes of AFP cases reported from tertiary care hospital in Delhi [3]. As there is always a high-risk of importation of WPV from the endemic countries, we need accurate surveillance for AFP cases to detect wild poliovirus circulation and to maintain our achievement [4,5]. The author studied the case investigation form of 187 cases of AFP from a tertiary care hospital of Delhi over a period of 3-year. There was no case of WPV, and vaccine-derived polio virus in this study which is in synchrony with the WHO report. The most common cause of non-polio AFP was Guillain-Barre syndrome (32.08%) followed by isolated facial palsy (8.56%) and viral myalgia (6.95%).

Although the number of cases in the present study was less, no case of poliovirus was detected. This is supported by a report from the Government of India, according to which all AFP cases investigated in 2012, 2013, and 2014 have tested negative for poliovirus. Polio surveillance in India has been set up as per global WHO guidelines, and more than 50,000 AFP cases are being investigated annually across the India. Between January and June 2015, approximately 18,000 AFP cases have been investigated as a part of the ongoing polio surveillance and all were negative for poliovirus [6].

This study clearly highlights the importance of surveillance of migratory population especially from the endemic area as the majority of cases (62.57%) belong to the migratory family. This study highlights the importance of timely surveillance and diagnosis of polio AFP case or non-polio AFP case; however, the seasonal variation for detecting AFP cases should have been mentioned. The role of inactivated poliovirus vaccine (IPV) vaccine in the present scenario is not mentioned in this study. The challenge in the use of IPV is the vigilance of WPV importation from wild polio-endemic areas. As long as WPV transmission has not been interrupted everywhere, all polio-free countries and areas remain at risk of re-importation of WPV. From 2003 to 2009, WHO has recorded 133 WPV importation events in 29 previously polio-free countries [7].

The recent study by Puliye et al. showed a positive association between the non-AFP rate and a number of oral polio vaccine (OPV) doses delivered to the area [8]. However, the present report did not study the non-AFP rate as well as the effect of number of OPV doses as it was a hospital based study and a large proportion of study population was migratory population. The AFP surveillance is a key strategy for monitoring the progress of polio eradication and is a sensitive instrument for detecting potential poliomyelitis cases and poliovirus infection. The surveillance program also needs to address

the problems of delayed specimen arrival to the laboratory and incomplete documentation of the laboratory findings in the national AFP surveillance database. In the changing scenario of the world, we still have to be very energetic and vigilant in polio surveillance program especially of migratory and slum population to make this world polio free.

Rahul Sinha¹, Amit Agrawal²

From Departments of Pediatrics, ¹Military Hospital, Jodhpur, Rajasthan, ²Gandhi Medical College, Bhopal, Madhya Pradesh, India

Correspondence to: Lt Col (Dr.) Rahul Sinha,
Department of Pediatrics, Military Hospital,
Jodhpur - 342 001, Rajasthan, India.
E-mail: drrahul_2000@yahoo.com

REFERENCES

1. World Health Organization. Department of Vaccines and Biologicals. Who-Recommended Standards for Surveillance of Selected Vaccine Preventable Diseases. Geneva: World Health Organization; 2003.
2. Bandyopadhyay S, Banerjee K, Datta KK, Atwood SJ, Langmire CM, Andrus JK. Evaluation of mass pulse immunization with oral polio vaccine in Delhi: Is pre-registration of children necessary? *Indian J Pediatr.* 1996;63(2):133-7.
3. Kumar A. A study of acute flaccid paralysis cases reported from a tertiary care hospital in Delhi. *Indian J Child Health.* 2015;2(4):164-167.
4. Puliye JM, Gupta MA, Mathew JL. Polio eradication & the future for other programmes: Situation analysis for strategic planning in India. *Indian J Med Res.* 2007;125(1):1-4.
5. Grassly NC, Fraser C, Wenger J, Deshpande JM, Sutter RW, Heymann DL, et al. New strategies for the elimination of polio from India. *Science.* 2006;314(5802):1150-3.
6. Press note on Polio Eradication and Acute Flaccid Paralysis. Press Information Bureau, Government of India, Ministry of Health and Family Welfare Dated 24-July-2015. Available from: <http://www.pib.nic.in/newsite/PrintRelease.aspx?relid=123668>. [Last accessed on 2015 Dec 07].
7. Poliomyelitis prevention in the United States: Introduction of a sequential vaccination schedule of inactivated poliovirus vaccine followed by oral poliovirus vaccine. Recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR Recomm Rep.* 1997 Jan 24;46(RR-3):1-25.
8. Puliye J, Vashisht N, Sreenivas V. Trends in non-polio acute flaccid paralysis incidence in India. *WebmedCentral plus Paediatr.* 1970;39 (1):WMCP50035.

Funding: None; Conflict of Interest: None Stated.

How to cite this article: Sinha R, Agrawal A. Acute flaccid paralysis surveillance in India - A road ahead. *Indian J Child Health.* 2015;2(4):151.