

## Meningitis Outbreak in Nigeria: Public Health Alert

Saurabh Ram Bihari Lal Shrivastava\*, Prateek Saurabh Shrivastava and Jegadeesh Ramasamy

Department of Community Medicine, Shri Sathya Sai Medical College and Research Institute, Kancheepuram, India

Meningococcal meningitis is a life threatening bacterial infection caused by *Neisseria meningitidis* (13 serogroups), which can result in severe damage to the brain, with a case fatality rate of 50%, if left untreated [1]. Although, outbreaks of meningococcal meningitis have been reported across the world, it has been rated as one of the leading public health concerns in sub-Saharan Africa [1]. In-fact, the region has been named as the meningitis belt (extending from Senegal to Ethiopia - comprising of 26 nations), because of the large number of cases being reported in the region [2]. In addition, in the year 2014 alone, close to 12000 cases and 1146 deaths have been reported among the 19 nations of the meningitis belt [1,2].

The epidemiological analysis of the trends of the disease has shown that the disease has a seasonal variation, with maximum number of cases / outbreaks being reported in the dry season (December to June) [1]. This is probably because of the interplay of various factors like dust winds, cold nights, overcrowding, increased risk of upper respiratory tract infections, and significant population displacement because of the large number of pilgrims coming in the region during the season [2,3]. As anticipated according to the prevalent trends, since the beginning of 2015, a new outbreak of the meningococcal meningitis (caused predominantly by the serogroup-C) has been reported in Nigeria, in which 5855 cases, including 406 deaths (case fatality rate - 7%) have been notified till the first half of May month [2,4]. The number of suspects has increased at an alarming rate, with number of cases being tripled in the last couple of weeks, which is a serious concern [4]. Another area of concern is that for the first time a large-scale meningitis outbreak has been reported because of serogroup-C, and hence there is a significant shortage of the appropriate vaccine [2,4,5].

It is really a major public health concern that so many people are losing their lives because of a disease which can be completely prevented through the vaccines, some of which are available since the last 30 years [1,6]. In-fact, documented evidence is available to suggest that since the introduction of a new meningococcal-A conjugate vaccine (MACV) in the targeted age-group of 1-29 years, the number of cases have

declined remarkably in the region [5,6]. Realizing the utility and scope of vaccine in reducing the burden of the disease, it has been advocated to facilitate prompt detection of cases and outbreaks through enhanced surveillance; appropriate management of cases with a complete course of antibiotic; to administer serogroup-specific vaccines in the affected region; prophylactic vaccination of the general population with MACV; and to introduce MACV into national routine immunization schedule [1,2,4]. In addition, there is a crucial need to constitute a national epidemic committee to respond to such outbreaks, and every attempt should be taken to mobilize and actively involve the national and international partners [2,4,5].

To conclude, as a part of preparedness and effectively contain and manage the outbreaks of meningococcal meningitis in the sub-Saharan African region, the need of the hour is to strengthen the existing resources, work in a concerted manner with the stakeholders, and effectively address the issue of vaccine shortage, so that any such future outbreaks can be averted.

### References

1. Meningococcal meningitis - Fact sheet N°141 (2015). World Health Organization, Geneva, Switzerland.
2. Meningococcal disease – Niger (2015). World Health Organization, Geneva, Switzerland.
3. Marc LaForce F, Ravenscroft N, Djingarey M, Viviani S (2009) Epidemic meningitis due to Group A *Neisseria meningitidis* in the African meningitis belt: a persistent problem with an imminent solution. *Vaccine* 27: B13-19.
4. Rapidly growing outbreak of meningococcal disease in Niger - Situation assessment (2015) World Health Organization, Geneva, Switzerland.
5. Reducing mortality from emerging diseases, World Health Organization (2015). *Wkly Epidemiol Rec* 90: 121-123.
6. Ferrari MJ, Fermon F, Nackers F, Llosa A, Magone C, et al. (2014) Time is (still) of the essence: quantifying the impact of emergency meningitis vaccination response in Katsina State, Nigeria. *Int Health* 6: 282-290.

\*Corresponding author: Dr. Saurabh Ram Bihari Lal Shrivastava, 3rd floor, Department of Community Medicine, Shri Sathya Sai Medical College and Research Institute, Ammapettai village, Thiruporur - Guduvancherry Main Road, Sembakkam Post, Kancheepuram - 603108, Tamil Nadu, India, Tel: +919884227224; E-mail: [drshrishri2008@gmail.com](mailto:drshrishri2008@gmail.com)

Received June 25, 2015; Accepted June 27, 2015; Published July 04, 2015

Citation: Shrivastava SR, Shrivastava PS, Ramasamy J (2015) Meningitis Outbreak in Nigeria: Public Health Alert. *Biol Med (Aligarh)* 7: e120. doi: [10.4172/0974-8369.1000e120](http://dx.doi.org/10.4172/0974-8369.1000e120)

Copyright: © 2015 Shrivastava SR, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.