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LETTER TO THE EDITOR

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Typhoid fever in India: A growing concern requiring immediate preventive efforts

To the Editor,

We are writing to draw your attention to a significant health concern in India: the alarming rise in typhoid cases and the urgent need for vaccination in endemic areas. As concerned citizens and advocates for public health, we believe it is crucial to address this issue promptly and effectively.

Typhoid fever, caused by the bacterium Salmonella Typhi, is a severe and potentially life-threatening illness. In recent years, India has been experiencing an increase in typhoid cases. According to one study, India recorded approximately 10 million cases of typhoid fever in 2021, making it the country with the highest burden of typhoid worldwide.[1] The prevalence of typhoid in India is particularly concerning compared to that in neighboring countries. For instance, one study found that the incidence rate of typhoid in India was substantially higher than that in Pakistan, China, and Indonesia emphasizing the urgent need for effective preventive measures in India.[2] Over 24,000 children between the ages of 6 months and 14 years old were monitored weekly for acute febrile illness in prospective research conducted in India between 2017 and 2020 at urban sites and one rural site. Typhoid fever risk was higher in urban locations (576–1173 cases compared to 35 cases per 100,000 child years at the rural site).[1] Greater risk was present in larger households with fewer assets and unhygienic restrooms. Particularly in endemic metropolitan areas, these data are crucial for informing decisions regarding the distribution of typhoid vaccines.

To combat the increase in typhoid cases, we propose a comprehensive strategy that includes widespread vaccination campaigns in endemic areas. Vaccination against typhoid has proven to be a safe and effective preventive measure. The two main types of typhoid vaccines available are the Vi polysaccharide vaccine (ViPS) and Ty21a live-attenuated oral vaccine. Both vaccines have demonstrated efficacy in reducing the incidence of typhoid fever and can play a crucial role in controlling its spread.[3] India has its own indigenous Vi-TT conjugate vaccine approved by the World Health Organisation (WHO) and was equally efficacious to ViPS, It has a higher seroconversion rate and is “cost saving” and should be introduced into the National Immunisation program at the latest.[4]

Numerous studies have demonstrated the effectiveness of typhoid vaccinations in endemic areas. For instance, a study conducted in Kolkata, India, demonstrated a 61% reduction in typhoid cases among vaccinated individuals compared with unvaccinated individuals.[5] Another study in Pakistan reported a 57% reduction in typhoid incidence in a population that received the ViPS vaccine,[6] However when talking about cost-effectiveness a study showed that routine immunization with TCV was cost-saving in urban India from a societal standpoint.[7]

Implementing a vaccination program in India's endemic areas would require a collaborative effort involving the Indian government, healthcare organizations, and NGOs.

However, it is crucial to further strengthen these efforts and expand vaccination coverage to effectively combat the increase in typhoid cases. This can be achieved by:

1. Increasing public awareness about typhoid, its transmission, and the importance of vaccination.
2. Expanding the reach of vaccination programs to cover all vulnerable populations, especially in areas with high typhoid prevalence.
3. Collaboration with healthcare providers and local communities to ensure the efficient delivery and administration of vaccines.
4. Strengthening surveillance systems to accurately monitor the burden of typhoid and identifying areas requiring targeted interventions.

The government must allocate sufficient resources and prioritize starting a typhoid prevention and control program. By implementing comprehensive vaccination strategies and adopting a multi-modal approach like water, sanitation, and hygiene (WASH) strategies,[8] we can effectively curb the spread of typhoid and protect the health and well-being of the population. By working together, we can make a significant difference in protecting the health and well-being of the population.

AUTHOR CONTRIBUTIONS

Kahan Mehta: Conceptualization; data curation; formal analysis; visualization; writing—original draft; writing—review and editing. **Maruya Joshi**: Data curation; formal analysis; visualization; writing—original draft; writing—review and editing. **Mohamed A. Omar**: Supervision; validation.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

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