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## Letter to the Editor

# A call to action: Addressing the mumps surge in Itanagar with urgency and unity

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**To the Editor**

Recently, Itanagar the capital city of Arunachal Pradesh in India has been grappling with a significant outbreak of mumps, a contagious viral infection caused by the mumps virus, a member of the Paramyxovirus family. Around 88 cases of this disease have been reported in March 2024 [1]. This infectious disease mostly affects children and adolescents, characterized by fever and painful swelling of the salivary glands (parotid glands) on both sides of the face. It may lead to complications, mainly deafness, orchitis, oophoritis, pancreatitis and meningoencephalitis. Approximately half of the infected individuals develop classical disease. About 15-20% of mumps infections may be asymptomatic, while the remaining subjects develop non-specific respiratory symptoms. Acute meningoencephalitis, the commonest serious complication seen in children and adolescents, occurs in 1-10% of patients with mumps parotitis. But only 40-50% of patients with mumps meningoencephalitis, confirmed by serology or virus isolation, have parotitis [2].

Historically, mumps has been considered a disease of children. Still, over the past two decades, it has been observed in adolescents and adults in countries where childhood mumps immunization has been in routine. Mumps re-infection can occur after immunization or sometimes after natural infection [3].

Globally, the rate of incidence has been reduced in many countries after employing the mumps vaccination in their regular immunization schedule. Like Finland completely eliminated natural transmission of mumps in 1996. However, in contrast to rubella and measles, secondary vaccine failure occurs frequently in the case of mumps and circulation of MV within highly vaccinated populations has been frequently reported [4]. Furthermore, over time, immunity may wane, even after receipt of two doses. This perhaps explains why today's outbreaks occur primarily among young adults.

Mumps, despite being a widely prevalent disease all over India, is considered an insignificant public health problem in India [4]. Mainly because of poor documentation of clinical cases, its complications and patients' follow-up data, as well as lack of published studies. Additionally, there is no nationally representative data on the incidence of the

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disease. The magnitude and epidemiology of mumps infection in India are poorly understood. Since limited information is available about the seasonality of mumps cases in the country. The circulation of two mumps viruses (i.e. genotypes C and G) was reported from India; more genotyping studies are necessary to understand the circulation of other indigenous mumps virus, if any [4,5]. Furthermore, to prevent and control future outbreaks, the government must increase funding for mumps research to understand the disease better and develop more effective treatments.

Furthermore, the inclusion of mumps antigen as MMR (measles, mumps, and rubella) vaccine in place of the MR vaccine in the Universal Immunization Program (UIP) would have added advantages; the economic burden imposed by the cost of the vaccine is likely to be offset by a reduction in disease burden and related complications. Further, there is an urgent need to initiate surveillance of clinical cases of mumps all over the country, and it should be declared as a 'notifiable' disease in India.

In addition to this, mumps is a threat to global safety. Because no specific therapeutic intervention exists for infected individuals, only supportive treatment is available (e.g., pain control, bed rest, fluids, and fever reduction). Moreover, provision for ventilation administration should be made available in areas where an outbreak is possible. Furthermore, paramyxoviruses are also listed among the emerging and re-emerging infectious agents that have the potential to cause epidemics, and they need to be dealt with seriously by ensuring sustainable surveillance systems.

Finally, the recent mumps outbreak in Itanagar underscores the critical need for reinforcing public health systems and effective disease prevention measures in controlling infectious diseases in India. The government and health authorities must act immediately to address this issue and prevent future occurrences.

By promoting vaccination coverage, good hygiene habits, implementing public health interventions, and educating the public about the symptoms and risks associated with mumps, healthcare authorities can mitigate the impact of outbreaks and safeguard the health of communities. Timely diagnosis, isolation of cases, and contact tracing are fundamental strategies in outbreak response, alongside proactive communication to dispel misinformation and encourage compliance with preventive measures.

**Keywords**:

Mumps, Paramyxovirus, Public health, India.

**Conflict of interest:**

Authors declares no conflict of interest.

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