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Influenza Vaccine Paradox

Influenza vaccination is aimed at reducing influenza-related morbidity and mortality, especially in vulnerable groups. Indian Academy of Pediatrics, Advisory Committee on Vaccines and Immunization Practices (ACVIP) recommends inactivated influenza vaccine (IIV) or live attenuated influenza vaccine (LAIV) for certain high-risk children [1]. It recommends the best time to vaccinate is as soon as the new vaccine is released and available in the market just before the onset of rainy season.

Preventing influenza disease is challenging, as influenza virus is characterized by frequent mutations due to antigenic drifts and antigenic shifts. To ensure optimal vaccine efficacy against prevailing strains, the antigenic composition of the vaccine is revised twice annually in both the northern hemisphere (NH) and southern hemisphere (SH), and adjusted to the antigenic characteristics of the circulating viruses obtained within the WHO Global Influenza Surveillance and Response System (GISRS). This allows the vaccine manufacturers 4-6 months to manufacture the vaccine for the specific hemisphere [2].

As per WHO, India is categorized in SH tropical Asia vaccination zone. The vaccine strains may be similar for both hemisphere formulations or different depending on the circulating strains. If the composition of both the hemisphere formulations is same, as happened in 2017, one can use any of the latest available vaccine from either hemisphere. In India, both NH and SH influenza vaccines are available.

For this season, WHO has recommend influenza vaccine with different strains for the NH and SH. At present, influenza vaccine meant for those living in northern hemisphere, is available and being used in India. WHO recommendations on vaccine formulation for India strongly favor the Southern hemisphere vaccine rather than the one for Northern hemisphere. Not many pediatricians are aware of these facts and continue to prescribe the available vaccine without going through the details. Prescribing the currently available NH vaccine in India is not scientifically correct and will not serve the purpose of vaccination. There is a need to educate not only the parents but also the pediatricians about using the appropriate influenza vaccine, and prescribe it after verifying the scientific facts rather than use whatever is available.

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