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Vaccine: The beacon of success

04 February 2022 | Views

Sputnik V, developed by Gamaleya Institute Moscow, Russia, is a pioneer in the mix and match approach of covid vaccines. Dr Sanjay Mukundan, Joint Secretary of Association of Foreign Graduated Physicians (AFGP), Kerala, gives an insight



covidThe entire world is in the grip of the Covid 19 pandemic which has been exhibiting its devastating nature through relentless wave after wave strikes. The whole world has been united in finding a panacea for this menace and our health professionals and organisations have put forward various treatment options and preventive measures. A vaccine is the most effective way to control this pandemic situation. We have plenty of studies to prove that irrespective of the COVID-19 variants, hospitalisation rate, and the case fatality rate is much less among the vaccinated population.

The vaccination programme has added great strength to the fight against COVID-19. It has led to saving lives and thus protecting livelihoods. Opponents of the vaccination programme, ignore these authentic truths and undermine the efforts of health authorities.

If you look at the status (25/01/22) of the vaccination programme in India, the world's second-most populous country, you can see that 67.6 per cent are single-dose vaccinated, 49.9 per cent are double-dose vaccinated, and 0.6 per cent have received the booster dose. This achievement was made possible with the help of Covishield (Astra Zeneca), Covaxin, and Sputnik V the covid vaccines registered in India.

The effectiveness of these vaccines has helped us to keep covid under control. Speaking of the world's first registered covid vaccine - Sputnik V - this is a heterologous vaccine developed by Gamaleya Institute Moscow, Russia.

It uses two different human adenoviruses - Ad26 and Ad5 vectors for its two vaccine doses. This heterologous vaccine with different vectors for zero and booster vaccinations is less likely to have the zero-dose generating an immune response against the viral vector that then interferes with the efficacy of the second dose. The vaccine is, therefore, less likely to have reduced efficacy. The Sputnik V's recorded efficacy in clinical trials was 91.6 per cent which has been published in peer journals like *The Lancet*.

Sputnik V is a pioneer in the mix and match approach of covid vaccines. For this purpose, the Sputnik team developed 'Sputnik light'.

One shot of the Sputnik light vaccine (first component of Sputnik V -Ad26) is a high efficacy vaccine that can also be used as a booster in combination with other vaccines. Sputnik light appears to be more effective and provides a higher antibody titer than two jabs with the same vaccine. This optimal configuration makes Sputnik light a universal booster.

Recent comparative studies held at the National Institute of Infectious Diseases Lazzaro Spallanzani in Italy show that Sputnik V's virus-neutralizing activity (VNA) to Omicron (B.1.1.529) variant is twice that of the Pfizer mRNA Covid vaccine. This higher titre of virus-neutralising antibodies to Omicron enables the Sputnik vaccine to create strong protection against new Covid variants. A one-shot booster vaccine-like Sputnik light can provide stronger vaccine efficacy and longer protection against Omicron-like new variant.

Vaccines will remain to be a major tool in the fight against COVID-19 and ultimately in saving the lives of many people around the globe.