**The FLiRT variants**

The COVID-19 cycle is active again with new variants in circulation. KP.2 and KP1.1, are dubbed ‘FLiRT’ variants, and are descendants of the Omicron JN.1 which spread globally over the winter last year.

The downstream variants are linked to new cases and a small surge in hospitalisation in the U.S., according to the Infectious Disease Society of America (IDSA). FLiRT cases have also soared in the U.K., South Korea and New Zealand, renewing fears of a fresh COVID-19 wave.

The Indian SARS-CoV-2 Genomics Consortium (INSACOG) has detected 238 cases of KP.2 and 30 cases of KP1.1 circulating in India, as of May 6.The new variants appear to outstrip their ancestor and other Omicron variants. KP.2, the more dominant strain of the two, in particular, is believed to leap past immunity built up from vaccines and previous infections.

However, the periodic COVID-19 spikes are routine and to be expected as “COVID-19 will continue to morph into, not an endemic, but a cyclical disease”, says Rajeev Jayadevan, co-chairman of the National Indian Medical Association (IMA) Covid Task Force in Kerala.The FLiRT variants reframe COVID-19 management as a longer affair, one that demands sustained surveillance, customising precautions and ensuring universal protection for the vulnerable.

**The FLiRT variants**

KP.2 and KP1.1 sublineages are descendants of the JN.1 variant of the SARS-CoV-2 virus with two new added spike mutations. They are nicknamed the FLiRT group of variants; the acronym indicates two specific mutations, which when they occur together, end up conferring greater invasive properties to the virus. The U.S. Centre for Disease Control and Protection says KP.2 accounts for approximately 25% of new cases as of April 27.

In India, “we can confirm that COVID-19 cases are rising , and KP.2 is a commonly found variant,” says Dr. Jayadevan. According to INSACOG, KP.2 has been detected predominantly in Maharashtra, Odisha, Goa and West Bengal; KP1.1 in West Bengal, Maharashtra and Gujarat; KP.3 in Uttarakhand. This is not to say that the variants are not circulating in other regions, but the proactive tracking in these states have identified JN.1’s descendants.The symptoms of the new variant are similar to those of other Omicron subvariants: sore throat, cough, nausea, congestion, fatigue, headache, muscle or body ache, loss of taste or smell.

Immune evasive

Researchers at the Kei Sato lab in Japan showed the KP.2 variant had an “increased immune resistance ability... more than previous variants including JN.1”. Their preliminary evidence found that KP.2 was able to escape the immune protection derived not only from the most updated vaccine (the monovalent XBB.1.5 vaccine) but also from the breakthrough infection with JN.1 afterwards. KP.2 has “profound immune evasive properties”, notes Dr. Jayadevan. The research, published on the pre-print server bioRxiv, showed the variant is thus able to leap over the most recently built immunity fence. More research is needed to understand how deeply and permanently the new mutations evade the immune system, researchers note.

Although immunisation with up-to-date SARS-CoV-2 vaccine produces antibodies recognising JN.1, experience indicates vaccination done earlier is still effective in preventing severe COVID-19 from newer variants. The European Medicine Agency recently recommended “updating COVID-19 vaccines to target the new variant JN.1” before another round of vaccinations is undertaken. Meanwhile, AstraZeneca on May 7 said it has initiated the worldwide withdrawal of its COVID-19 vaccine due to a “surplus of available updated vaccines” since the pandemic.

In India, experts have also detected a new surge of cases since early April, with approximately one in six tests turning positive, compared to zero in March. With limited testing, however, the exact prevalence and geographic spread are unknown. It is too early to say if all the new COVID-19 cases or hospitalisations are due to KP.2 or KP1.1 in India, explains Dr. Jayadevan.Moreover, increased transmissibility does not necessarily mean the new variants will cause more severe COVID-19 illnesses.Precautions and prescriptions remain similar: maintain hygiene, wear masks in crowded places, stay home if unwell, and vaccinate.