

D614G mutation in coronavirus

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In News

Recently a study reveals that D614G mutation of corona virus has become the dominant variant in the global COVID-19 pandemic

More Information

What is Mutation?

When the virus enters an individual's body, it aims at creating copies of itself. When it makes an error in this copying process, we get a mutation

A mutation is an alteration in the nucleotide sequence of the genome of an organism, virus, or extrachromosomal DNA.

What is D614G Mutation?

In this case, the virus replaced the aspartic acid (D) in the 614th position of the amino acid with glycine (G). Hence the mutation is called the D614G

Threats

- This particular mutation aids the virus in attaching more efficiently with the ACE2 receptor in the human host, thereby making it more successful in entering a human body than its predecessors.
- D614G show increased infectivity but it also displayed greater ability at attaching itself to the cell walls inside an individual's nose and throat, increasing the viral load.

How prevalent is it in India?

- A study reveals that the D614G was one of the most

prevalent spike mutations even during the initial phase of the pandemic.

- Since then, D614G mutation's 'relative abundance' has increased over time to 70% and above, in most states except Delhi.

The Criminal Law(Amendment) Act, 2018:

- The Criminal Law (Amendment) Act, 2018, provides for stringent punishment, including death penalty for those convicted of raping girls below the age of 12 years.
- It **came into force on 21st April, 2018.**
- The Act will further amend the Indian Penal Code, Indian Evidence Act, 1872, the Code of Criminal Procedure, 1973 and the POSCO Act, 2012.
- **Death sentences have been provided for rapists of girls under 12 years.**
- The minimum punishment in case of rape of women has been increased from rigorous imprisonment of seven years to 10 years, extendable to life imprisonment.
- In case of rape of a girl under 16 years, the minimum punishment has been increased from 10 years to 20 years, extendable to imprisonment for rest of life.
- The punishment for gang rape of a girl below 16 years will invariably be imprisonment for the rest of life of the convict.
- Gang rape of a girl under 12 years of age will invite punishment of jail term for the rest of life or death.
- The **deadline for the completion of trial in all rape cases will be two months.**
- A six-month time limit for the disposal of appeals in rape cases has also been prescribed.
- There will also be **no provision for anticipatory bail for a person accused of rape or gang rape of a girl under 16 years.**