# Is 614G mutant of SARS-CoV-2 is an agent of the third wave of COVID-19 in Iran?

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**Abstract**

In late 2019, an outbreak of respiratory disease named COVID-19 started in China and rapidly spread to other parts of the world. To date, millions of cases of infection are reported worldwide. Most researches performed on epidemiology and clinical features of COVID-19 and a small part of studies have focused on the genetic characteristics of this virus. Here we performed six months study on D614G mutation in SARS-CoV-2 isolates. Regarding the high price and low availability of sequencing techniques in Iran, we designed the PCR-RFLP method for D614G mutation detection and then evaluated 1440 SARS-CoV-2 positive samples isolated in six months in Northeastern Iran. The first S-G type was detected on 2020 June 10; after that, the number of S-G types increased in our samples, as in the last three weeks, from 2020 September 07 to 2020 September 26, all samples belonged to this type.

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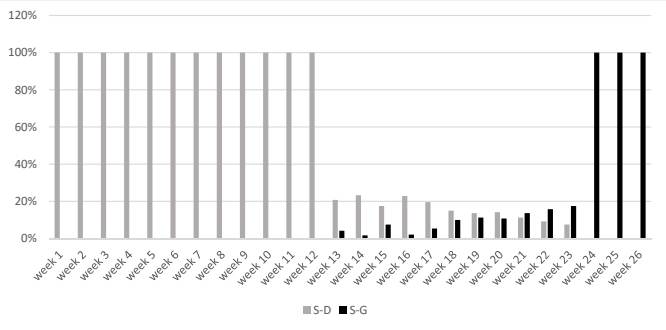


Fig 1. Prevalence of mutations in weekly intervals from the beginning of the pandemic to the present.