mRNA vaccine more effective booster to ChAdOx1 nCoV-19

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(HealthDay)—Use of heterologous ChAdOx1 nCoV-19 and mRNA prime-boost vaccination is more effective than homologous ChAdOx1 nCoV-19/ChAdOx1 nCoV-19 prime-boost vaccination, according to a study published online Oct. 17 in *The Lancet Regional Health: Europe*.

Peter Nordström, M.D., Ph.D., from Umeå University in Sweden, and colleagues examined the effectiveness of heterologous prime-boost COVID-19 vaccination among individuals in Sweden who had received two doses of COVID-19 vaccine by July 5, 2021. The study cohort included 94,569 individuals who received heterologous ChAdOx1 nCoV-19/BNT162b2 prime-boost vaccination, 16,402 individuals who received ChAdOx1 nCoV-19/mRNA-1273 prime-boost vaccination, and 430,100 individuals who received homologous ChAdOx1 nCoV-19/ChAdOx1 nCoV-19 prime-boost vaccination. Furthermore, 180,716 individuals were selected who were unvaccinated at the vaccination date of the corresponding case.

The researchers confirmed symptomatic COVID-19 infection in 187 individuals with heterologous vaccine schedules (incidence rate, 2.0/100,000 person-days) and in 306 individuals from the unvaccinated control group (incidence rate, 7.1 per 100,000 person-days) during a mean follow-up of 76 days. The adjusted vaccine effectiveness was 67 and 79 percent for heterologous ChAdOx1 nCoV-19/BNT162b2 prime-boost vaccination and heterologous ChAdOx1 nCoV-19/mRNA-1273 prime-boost vaccination, respectively. When combined and analyzed together, the vaccine effectiveness was 68 percent for the heterologous schedules, which was significantly higher than the 50 percent effectiveness seen for homologous ChAdOx1 nCoV-19 vaccination.

"Our study shows a greater risk reduction for people who received an mRNA vaccine after having received a first dose of a vector-based, as compared to people having received the vector-based vaccine for both doses," Nordström said in a statement.

More information: Abstract/Full Text