Vaccine regimen fails to prevent HIV-1 infection in South Africa

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(HealthDay)—A canarypox-protein HIV vaccine regimen (ALVAC-HIV) plus bivalent subtype C gp120-MF59 adjuvant does not prevent HIV-1 infection among adults in South Africa, according to a study published in the March 25 issue of the *New England Journal of Medicine*.

Glenda E. Gray, M.B., B.Ch., from the Fred Hutchinson Cancer Research Center in Seattle, and colleagues randomly assigned 5,404 adults (median age, 24 years; 70 percent women) without HIV-1 infection to receive canarypox-protein HIV vaccine or placebo (2,704 and 2,700 participants, respectively) in a phase 2b-3 trial in South Africa. The vaccine regimen included injections of ALVAC-HIV at months 0 and 1 followed by ALVAC-HIV plus bivalent subtype C gp120-MF59 adjuvant booster injections at months 3, 6, 12, and 18.

The researchers found that at an interim analysis in January 2020, prespecified criteria for nonefficacy were met, and further vaccinations were subsequently halted. There was a similar incidence of adverse events in the vaccine and placebo groups. HIV-1 infection was diagnosed in 138 and 133 participants in the vaccine and placebo groups, respectively, during the 24-month follow-up (hazard ratio, 1.02; 95 percent confidence interval, 0.81 to 1.30; P = 0.84).

"Despite promising immunogenicity, this canarypox-protein HIV vaccine regimen was not efficacious in preventing the acquisition of HIV-1 infection in our trial population in South Africa," the authors write. "The high HIV-1 incidence that we observed in our trial illustrates the unrelenting aspect of the epidemic, especially among young women."

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