Animal Tests Indicate Vaginal Implant May Protect Women Against HIV

The implant is infused with a drug meant to keep the immune cells that the virus targets in a resting state.

April 23, 2018 By Benjamin Ryan

Researchers have designed a vaginal implant that has shown promise in animals as a potential new form of protection against HIV among women, Medical News Today reports.

This study was based on previous findings that showed that many female sex workers in Kenya did not contract HIV despite engaging in sex with HIV-positive clients. Such natural resistance appeared to be the result of lower activation levels of immune cells in the vaginal tract of these women. For this new study, scientists sought to prompt immune cells to fall into a resting, or quiescent, state, rendering such cells ill suited to help establish an HIV infection. Such quiescence would not apparently reduce the body's ability to ward off infections.

Publishing their findings in the Journal of Controlled Release, the investigators designed a vaginal implant that was a porous, hollow tube and infused it with hydroxychloroquine. The implant was engineered to emit the drug slowly over time so that the walls of the female genital tract could absorb it.

Testing the implant in rabbits, the scientists found that it did indeed lead to a significant reduction in the population of activated immune cells.

"Our results suggest," the study authors concluded, "that microbicides designed to maintain a low level of immune activation at the [female genital tract] may offer a promising new strategy for reducing HIV infection."

To read the Medical News Today article, click here.

To read the study abstract, click here.

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