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Common vaginal infection may increase risk of HIV infection

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A common vaginal infection may make women more susceptible to contracting HIV, the virus that causes AIDS, University of North Carolina at Chapel Hill School of Public Health researchers have found.

An analysis of 23 published studies, including data from more than 30,700 women from around the world, showed that women with bacterial vaginosis – the most common type of vaginosis in women of reproductive age – were more likely than others to be infected with HIV. The association between bacterial vaginosis (BV) and HIV was stronger for women without high-risk sexual behavior.

The results of this meta-analysis have been published in the peer-reviewed journal, *AIDS*.

"Given that bacterial vaginosis and HIV infection are both transmitted sexually, it is difficult to determine whether associations found are causal, or if there is some other reason why women with BV are more likely that others to become infected with HIV," said Jennifer S. Smith, epidemiology research assistant professor in the UNC School of Public Health. "If additional follow-up studies show that there was a relationship between BV and the risk of incident HIV infection, though, then increasing the treatment of BV could be considered for the future prevention of HIV infection."

Bacterial vaginosis is an imbalance in the type of bacteria normally found in the vagina. BV has been shown to cause gynecological and

obstetrical problems including preterm delivery, pelvic inflammatory disease and upper genital tract infections.

Other research has shown that BV results in several changes in the vagina that could explain why it increases the risk of HIV, such as a depletion in a type of bacteria that are believed to play a role in defending the vagina against microorganisms including HIV, and higher pH levels that may increase the adherence and survival of the virus.

The studies analyzed by Smith and colleagues included women from the U.S., Malawi, Kenya, South Africa, Thailand, Uganda, Zimbabwe, Tanzania, South Africa, Nigeria, Burkina Faso and Gambia. Prevalence of BV in women in these countries ranged from about 11 percent to as high as 70 percent.

The analysis of data indicates that BV increases the risk of acquiring HIV by about 60 percent. The association between BV and HIV infection was weaker in high HIV-risk groups, Smith said. "That may be because women in high-risk groups have a greater risk of acquiring HIV from causes other than BV. This could be helpful information in identifying which populations would be helped most through targeted bacterial vaginosis control measures."

Source: University of North Carolina at Chapel Hill

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