

THE ART OF RESEARCH



Metronidazole: The good guy or the bad guy?

Metronidazole is widely used for sexually transmitted infections and bacterial vaginosis, but it is not known whether using it negatively affects the vaginal microbiota.

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Examining the effectiveness of antimicrobials using antimicrobial susceptibility testing on a petri dish.

Presented in association with the Institute of Infectious Disease and Molecular Medicine, this programme forms part of #theArtOfResearch, an initiative of research communication specialists Jive Media Africa.



Bacterial vaginosis (BV) is the most common genital disorder affecting sexually active women. Sub-Saharan African women are disproportionately affected by BV, yet they are rarely included in the global discussion about vaginal and sexual health. BV is caused by a shift in the vaginal bacterial community from an optimal to a non-optimal state. BV increases the risk of acquiring sexually transmitted infections, such as HIV, and has been linked to premature birth. However, it often flies under the radar, as it is not often spoken about or even known, despite its effects on vaginal health.

Metronidazole, a broad-spectrum antibiotic, has been used to treat BV for more than 25 years. However, treatment is often ineffective, as many women experience BV reoccurrence shortly after using it. Metronidazole is also used to treat common sexually transmitted infections such as trichomoniasis. Treating sexually transmitted infections with Metronidazole may negatively affect the vaginal microbiota. It is not known how treating sexually transmitted infections with Metronidazole affects the vaginal microbiota or, worse, whether it

selects for antimicrobial-resistant bacteria.

Under the supervision of Dr Brian Kullin and Dr Shantelle Claassen-Weitz at the Mucosal Infections Group, we are working towards understanding how using Metronidazole to treat sexually transmitted infections affects the vaginal microbial community and how it may alter the community to select for antibiotic-resistant bacteria. This work may help guide the development of therapeutics for sub-Saharan African women to reduce the prevalence of BV and improve vaginal health.

