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An effective treatment for recurrent bacterial vaginosis

Women with recurrent vaginal infections often take regular, repeated doses of antimicrobials to prevent further episodes. Unfortunately, metronidazole treatment of bacterial vaginosis (BV) may lead to vulvovaginal candidiasis (VVC). In a randomised placebo-controlled trial in Kenya and the United States (US), HIV-negative women with either of these infections or trichomoniasis were enrolled in a study of a combined miconazole/metronidazole vaginal suppository, given for 5 consecutive days every month for a year.[1] The intervention reduced the risk of laboratory-proven BV, the most common vaginal infection in the study, by 35%. Unfortunately there was no effect on subsequent rates of either VVC or trichomoniasis, but it is reassuring that the treatment did not lead to an increase in VVC rates. The report does not provide a breakdown of the results according to which of the three infections was present at baseline, which would have been useful additional clinical information.

Expect the unexpected: some immunological effects of HIV

The Beijing PRIMO Cohort is a large prospective study of HIV-negative men who have sex with men with the aim of identifying and studying primary HIV infection (PHI). A recent paper by Jiao *et al* focusses on the 25 men, out of 410 HIV seroconversions, who were also chronically infected with hepatitis B virus (HBV) prior to HIV infection.[2] None of the patients were being treated at the time with tenofovir, lamivudine or any other anti-HBV agent. The surprising finding was that PHI appeared to have a beneficial effect on chronic HBV infection. Of the 25, three converted to being surface antigen negative, essentially being cleared of HBV, ten experienced conversion from "e" antigen positive to negative, and five had more than a 3 $\log_{10}$ drop in HBV DNA level. None of the remaining seven had any apparent adverse effect on their HBV markers. There was a slight elevation in hepatic transaminases during PHI, which could be attributable to either viral infection. These findings build on those of a study reported in 2006 in which 9 chronic HBV carriers seroconverted to HIV during follow-up, of whom 5 had a decrease in HBV DNA levels.[3] The authors offer only brief discussion of the possible mechanism, attributing the phenomenon to the immune activation and cytokine storm (including interferon alpha) that occur in early HIV. They propose studying HBV-specific immune responses in chronic HBV carriers who experience PHI.

Immune reconstitution inflammatory syndrome (IRIS) is potentially serious complication of starting antiretroviral therapy (ART) at later stages of HIV. Perhaps the best-studied IRIS-associated conditions are tuberculosis and cryptococcosis. Further down the list, but still important, are AIDS-related malignancies such as lymphoma and Kaposi's sarcoma. In a large network of specialist centres in the US, 482 patients with Hodgkin's or non-Hodgkin's lymphoma were studied retrospectively to understand "unmasking lymphoma IRIS".[4] The results show that 12% of lymphomas presented as unmasking IRIS, defined as a new

presentation within the first 6 months of virally-suppressive ART. The network includes over 27,000 patients, so these 56 cases represent a relatively rare complication of treatment initiation, but seen through an oncological lens this is not an uncommon way for new lymphoma to present. Examining the CD4 and viral load (VL) trajectories of lymphoma patients who presented *without* IRIS while receiving ART, it is obvious that those patients had low CD4 counts (around 150 cells/μL on average) and many, but not all, were also virally suppressed (average log VL was 2.0 to 2.5 $\log_{10}$ copies/mL). Lymphoma presenting through IRIS was not associated with any difference in 5-year survival compared to other HIV-associated lymphoma, but mortality in the first year did appear to be higher. This could have been due to a more aggressive presentation, or uncertainties or delays around diagnosis of lymphoma. As with all IRIS, it is difficult to say whether "unmasking" simply means "undiagnosed prior to treatment", and it may be helpful to think of IRIS as a means by which other conditions present themselves, rather than as a distinct condition in its own right.

The rise and rise of the resistant gonococcus

In a recent Clinical Round Up, we discussed extensive antimicrobial resistance in some strains of gonorrhoea.[5] Experience of this problem is not limited to those working in the sexual health field; a short review article for ophthalmologists responds to the development of resistance with a discussion of gonococcal infection of the eye in adults and neonates.[6] The article romps through historical references to the disease, from Leviticus to the writings of Galen, "Egyptian ophthalmia" during the Napoleonic wars and the early antibiotic era. Historically, *Neisseria gonorrhoeae* was an important cause of blindness, a fact not forgotten in sexual health and ophthalmology clinics. The article is a fascinating description of the rise

and fall of different treatments for the condition and provides a background to current doomsday scenarios of untreatable gonorrhoea.[7]

References

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