AIDS Treatments Found in Unexpected Places

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Cholesterol-lowering drugs, circumcision, and growth hormones seem like unlikely heroes in the fight against HIV/AIDS, but three new studies (1) suggest that they may be just that.

Statins, a popular class of cholesterol-lowering drugs, have recently been associated with lower viral loads in HIV patients when taken in conjunction with other HIV drugs. Protease inhibitors, used by a large number of HIV patients, are very effective but can have the unintended effect of causing cholesterol and triglyceride levels to shoot up dramatically. It is for this reason that physicians started prescribing statins for some of their HIV patients and began to notice the effect.

It is not uncommon for a drug to have uses outside of its original indication: the Cox-2 inhibitor class of drugs (Vioxx, Bextra, and Celebrex) showed promise as treatments for conditions as diverse as colon polyps and Alzheimer’s disease (Vioxx and Bextra have since been removed from the market because of a cardiovascular side effect). The statin development is doubly encouraging, since using drugs that have already been developed, tested, and determined to be safe means that potential treatments will be available relatively quickly and without much added expense.

A second study has determined that growth hormone injections stimulate the production of CD4 T-cells. These are the very immune system cells that are destroyed by HIV, robbing patients of their ability to stave off the development of AIDS. The finding is exciting because while antiviral treatments can help control the amount of the virus in the blood, patients are still vulnerable if their CD4 counts remain low. In other words, we already have good treatments that help the body to reduce the number of invading enemy soldiers, but the growth hormones may help the body increase the ranks of its defending soldiers at the same time -- a very promising strategy.

A third study of over 3,000 young men in South Africa found that circumcision prevented 65% of potential HIV infections from heterosexual contact. In fact, circumcision was so effective that the study was halted early because the researchers wanted to offer all men in the study the opportunity to benefit from the procedure. It has not yet been determined whether circumcision is effective in preventing male-to-male transmission. Unfortunately, these results have the potential to create a deadly false sense of security among circumcised men. It is important to remember that the findings are still preliminary and that circumcision is not nearly as effective at preventing transmission as abstinence or the use of condoms.

These three studies, however unusual, present some unexpected good news about HIV/AIDS treatments. This kind of thinking outside the (pill)box deserves applause.

Mara Burney is a research associate at the American Council on Science and Health (ACSH.org [1], HealthFactsAndFears.com [2]).