

Does Chlamydia infection result in increased HIV susceptibility?



Chlamydia trachomatis is one of the most common sexually transmitted infections (STI) worldwide. In areas of high HIV transmission rates, especially in young females, the most pressing question is whether such a ubiquitous STI can facilitate the epidemic.

It is known that endocervical epithelial cells in women are a major “niche” for Chlamydia and infection causes inflammation. In the most recent edition of PLoS One, Buckner and colleagues explore how Chlamydia induces inflammatory events in endocervical epithelial cells, which enhances CCR5-tropic strains of HIV to cross these cells. These in vitro experiments prompt the authors to conclude that genital infection is thus associated with an increased risk for HIV acquisition.

The authors describe that Chlamydia infection enhances the apical-to-basolateral migration of cell-associated, but not cell-free HIV, across the endocervical epithelial barrier. They propose that Chlamydia infection facilitates “HIV crossing the mucosal barrier and subsequent infection or replication in underlying target cells.” Whether this study can be backed up with epidemiological data showing a link between Chlamydia and HIV acquisition would provide a compelling argument for a possible “driver” of the HIV

epidemic.

[Buckner, L. et al, 2016. Chlamydia trachomatis Infection of Endocervical Epithelial Cells Enhances Early HIV Transmission Events. *PLOS*.](#)