

Abstract

Problem

The expression of inhibitory markers such as LAG-3 and PD-1 on T lymphocytes regulates immune function. Their expression at the genital mucosa is poorly understood, but regulation of immune activation at the female genital tract likely controls susceptibility to sexually transmitted infections.

Method of study

Cervical mononuclear cells were phenotyped by flow cytometry. Concentrations of cytokines were determined in cervical-vaginal lavage samples by bead array.

Results

LAG-3 expression was significantly elevated at the genital mucosa and was associated with expression of CCR5 and CD69. Double negative (DN) T cells expressed the highest levels of LAG-3, but not PD-1, and were more activated than other T lymphocytes.

Conclusion

The elevated expression of LAG-3 at the genital tract suggests it may regulate T-cell activation, and identify cells susceptible to HIV infection. The enrichment of LAG-3 on DN T cells suggests LAG-3 may contribute to the immunoregulatory activity of these cells.