CALCITONIN EXPRESSION OF HIGH ENDOTHELIAL VENULES DURING LYMPHOCYTE MIGRATION IN HUMAN PHARYNGEAL TONSIL

M.K. Ozbilgin, C. Kirmaz, H. Yüksel, C. Kurtman, M. Kaya

Celal Bayar University, School of Medicine, Departments of Histology & Embryology (MKO), Immunology (CK), Pediatrics (HY), Manisa, Turkey; Ankara University, School of Medicine, Department of Radiation Oncology (CK), Ankara, Turkey; and Cukurova University, School of Medicine, Department of Histology & Embryology (MK), Adana, Turkey

ABSTRACT

The migration routes of lymphocytes through high endothelial venules (HEVs) of control and hypertrophic pharyngeal tonsil (HPT) tissue sections were investigated by immunohistochemistry using the expression of a hormone [calcitonin (CT)] and two calcium-dependent endothelial adhesion molecules (E-selectin and P-selectin), as well as electron microscopy. A marked increase in CT-specific staining was observed in the endothelial cells of HEV in the HPT group compared to the control group. Expressions of E-selectin and P-selectin on HEVs of control group were faint, when compared to the strong expression of these selectins on HEVs of HPT. Electron microscopically, we demonstrated that lymphocytes transmigrated through HEV and observed the close membranous contact between endothelial cells and lymphocytes during this process. We speculate that increasing CT during inflammation may be important for lymphocyte migration through the HEVs via controlling the expression of E-selectin and P-selectin.