Human Herpesvirus Type 8 in Tuberculosis Patients with Effusion

Cheng-Chuan Su[1*], Shih-Ming Tsao[2], Chun-Liang Lai[1], Ming-Nan Lin[1], Jen-Pi Tsa[1]

[1.] Buddhist Dalin Tzu Chi Hospital, [2.] Chung Shan Medical University

Background/Objective
Tuberculosis (TB) patients has a high seroprevalence of human herpesvirus type 8 (HHV-8) infections. HHV-8 DNA levels are high in effusions from patients with primary effusion lymphoma. Those in tuberculous effusion remain unclear.

Method
Blood samples collected from 129 patients with pulmonary TB and 129 age- and sex-matched healthy controls, as well as effusion samples from 38 patients with pulmonary TB and effusion, were analyzed for hemogram and/or HHV-8 antibodies and DNA.

Result
The seropositivity and titers of HHV-8 antibodies were higher in TB patients with or without effusion than in healthy controls ($P = 0.009$ and 0.005, respectively). The positivity and titers of HHV-8 antibodies were not different in plasma between TB patients with and without effusion or between the plasma and effusion from TB patients with effusion. Plasma samples from six TB patients and no healthy controls were positive for HHV-8 DNA ($P = 0.03$). TB patients with or without effusion had lower lymphocyte and higher monocyte counts than healthy controls (both $P < 0.0001$). TB patients with effusion had significantly lower lymphocyte counts than those without effusion ($P = 0.035$).

Conclusion
The role HHV-8 plays appears to be different between patients with TB and effusion and those with primary effusion lymphoma.