Abstract

Osteonecrosis (ON) is a rare disabling complication occurring in patients with human immunodeficiency virus (HIV) infection at a higher frequency than in the general population despite effective combination antiretroviral therapy being made available, as recently documented by several retrospective studies. We designed a multicentric case–control study among HIV-infected patients cared for at institutions in the Italian CISAI group (Italian Study Group for Adverse Events in HIV Infection) to search for additional predictors of ON in this special population. All centers which observed at least one case of ON were requested to report data for central re-evaluation. Parallel HIV-positive, ON-free controls were randomly selected and matched with confirmed cases of ON for sex, age and CD4 T-cell counts at the time of HIV diagnosis. Fifteen cases and controls were included in the final sample. Univariate statistical analyses revealed a significant association between ON and exposure to steroids (P = 0.001), exposure to one or more drugs in addition to HAART (Highly Active Anti-Retroviral Therapy) (P = 0.03), high titers of total serum IgE (P = 0.02), loss of working ability (P = 0.03), triglycerides levels over 200 mg/dL before antiretrovirals (P = 0.03) and cholesterol levels over 200 mg/dL before and after antiretrovirals (P = 0.03 and 0.05, respectively). High serum IgE levels and loss of working ability in advance of ON appeared for the first time as possible predictors of ON in HIV patients, while longterm exposure to steroids, combined hyperlipemia and chronic treatment with other drugs in addition to antiretrovirals were confirmed. Predicting and preventing ON in the individual HIV-infected patient is therefore a clinically challenging opportunity.