Prevalence of deep venous thrombosis in the lower limbs and the pelvis and pulmonary embolism in patients with positive antiphospholipid antibodies

Keiko Kinuya,* Kiyoshi Kakuda,* Sadaya Matano,** Shigehiko Sato,**
Tatsuho Sugimoto,** Hidesaku Asakura,*** Seigo Kinuya,****
Takatoshi Michigishi**** and Norihisa Tonami****

*Department of Radiology, Tonami General Hospital

**Department of Internal Medicine, Tonami General Hospital

***Third Department of Internal Medicine, Kanazawa University Graduate School of Medical Sciences

***Department of Biotracer Medicine, Kanazawa University Graduate School of Medical Sciences

Background: Antiphospholipid antibodies (AA) are immunoglobulins that cross-react with phospholipid on cell membrane, and are therefore associated with a hypercoagulable state manifested by arterial/venous thromboses. We aimed to determine the prevalence of deep venous thrombosis in the lower limbs and the pelvic region (DVT) and pulmonary embolism (PE) in patients with positive AA. Methods: Sixty-six patients (48 female, 18 male) with positive lupus anticoagulant (LA) and/or positive anticardiolipin antibody (aCL) underwent radionuclide (RN) venography with 370 MBq of ^{99m}Tc-MAA. Pulmonary perfusion scintigraphy was performed in 58 patients. Fifteen patients had positive LA and positive aCL (LA+/aCL+), 33 patients had positive LA only (LA+/ aCL-) and 18 patients had positive aCL only (LA-/aCL+). 43 patients were diagnosed with primary antiphospholipid syndrome (APS) and 19 were diagnosed with APS associated with SLE. Results: DVT was detected in 21 of 66 patients (32%). Patients with LA+/aCL+ showed higher prevalence of DVT (53%) as compared to LA+/aCL- (27%) and LA-/aCL+ (22%). PE was found in 13 of 58 patients (22%). The prevalence of PE was higher in patients with positive aCL (33% in LA+/aCL+; 36% in LA-/aCL+) than in patients with negative aCL (10%). Conclusion: Because of the high prevalence of DVT and PE in patients with AA, RN scintigraphy must be recommended in screening for these clinical troubles. These results indicate that the prevalence of DVT and PE may vary in subgroups of AA.

Key words: antiphospholipid antibody, deep venous thrombosis, pulmonary embolism, RN venography, ^{99m}Tc-MAA