

Pulmonary arterial lesions in Takayasu arteritis: Relationship of inflammatory activity to scintigraphic findings and sequential changes

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In order to investigate the relationship between inflammatory activity and pulmonary arterial changes in Takayasu arteritis and the progression of the disease, we retrospectively reviewed 110 perfusion lung scans obtained by using ^{99m}Tc -macroaggregated albumin in a total of 57 patients. The scintigraphic findings were compared with the inflammatory activity and clinical course. Inflammatory activity was determined on the basis of the physical findings and laboratory data, i.e., the erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) value. Scintigraphic abnormality was seen in 32 (56%) of the patients. The incidence of scintigraphic abnormality in the patients with active inflammation (7 of 21 patients, 33%) was lower than that in the patients in the chronic stage (22 of 32, 69%) ($p < 0.02$). Six of 22 patients who had undergone more than one scintigraphic examination showed progression in the scintigraphic findings. Four of the 6 patients showed relapse clinically, and corticosteroid medication could not be withdrawn from them. The lower incidence of scintigraphic abnormality in the patients with active inflammation suggests that in the acute phase no stenotic or occlusive changes in the pulmonary artery have yet been produced. Pulmonary arterial lesions can progress. The incidence of progression may be slightly higher in the patients who have had a relapse after corticosteroid therapy than in those who remained in remission after therapy or who were in the chronic stage, although neither difference was significant.

Key words: Takayasu arteritis, pulmonary artery, pulmonary perfusion scintigraphy, pulmonary angiography