

Ventilation-perfusion scintigram in diabetics

Kou UCHIDA, Ken TAKAHASHI, Reiko AOKI and Tsuyoshi ASHITAKA

Second Department of Internal Medicine, Toho University School of Medicine

We carried out ventilation and perfusion scintigraphies and pulmonary function tests in 20 diabetics under 50 years of age. ^{99m}Tc -MAA perfusion scintigrams showed evidence of minimal nonuniformity (MNU) in four cases (20%) and nonsegmental defect (NSD) in eight cases (40%). There was a ventilation defect in the single-breath image in one case (5%) and a delayed washout in three cases (15%) upon ^{133}Xe ventilation scintigram. In the NSD group, the mean diffusing capacity value was abnormally low and the mean duration of the diabetes was long compared with other groups. The frequency of perfusion defects was higher than that of ventilation abnormalities; moreover, abnormal findings on ventilation scintigrams were very mild compared with those of perfusion defects. Perfusion defects correlated significantly with a decrease in diffusing capacity. These findings suggest that the disturbance in pulmonary arterial perfusion caused a decrease in diffusing capacity in diabetics.

Key words: diabetes mellitus, perfusion defect, delayed washout, pulmonary function, decrease in diffusing capacity