Intraarterial chemotherapy for head and neck cancer has been tried for several years. The distribution of agents has been determined so far by infusing various dyes through a catheter and observing the stained part macroscopically. However, it is difficult to obtain information on the part that cannot be macroscopically observed and to determine the difference in the distribution when the rate of infusion changes.

In the present study, $^{99m}$Tc-macro-aggregated-albumin (MAA) was injected by using a catheter for intraarterial infusion, and the distribution of the antineoplastic agent was studied.

Two to five mCi of MAA was injected into patients with laryngeal cancer, cancer of the tongue, cancer of the tonsil, and cancer of the tonsil. Changes in the distribution due to different rates of infusion and information on the part which could not be observed with any dye could be observed or obtained.

These results suggest that it would be useful to inject $^{99m}$Tc-MAA through a catheter for intraarterial infusion and to obtain information on the distribution of the intraarterial chemotherapy.


To investigate the clinical significance of the aortic elasticity in relation with the aging process and pulse wave velocity (PWV), we utilized the multiparameter equilibrium radionuclide angiography (RA) using Tc-99m-REC in 108 patients with arteriosclerotic diseases, ages 19–86 years old. The ratio of aortic volume change ($\Delta V/\Delta V_0$) was calculated by the maximum ($A_o$ max) and minimum counts (Ao min) in the regions of interest of the aortic arch: $\Delta V/\Delta V_0=A_o - A_o\text{ min}/A_o\text{ max}$. The volume elasticity (Ve) and distensibility (Vd) were calculated to evaluate the aortic elasticity: Ve=pulse pressure ($\Delta P$)/$\Delta V/\Delta V_0$, Vd=$\Delta V/\Delta V_0/\Delta P$. $\Delta V/\Delta V_0$, Ve and Vd showed significant correlations with PWV. $\Delta V/\Delta V_0$ and Vd decreased with aging and Ve increased with aging significantly. After the provocation of Nifedipine, the $\Delta V/\Delta V_0$ increased in most cases but the change was small in the group over 70 years of age. In the group over 70, systolic pressure was higher than in younger groups. These result indicate that a decrease in aortic elasticity with aging is one of the factors which cause the elevation of systolic pressure in the aged. We conclude that the $\Delta V/\Delta V_0$, Vd and Ve are useful noninvasive indices to investigate the aortic elasticity and compliance.