Annals of Nuclear Medicine Vol. 3, No. 2, 89–98, 1989

Scintigraphic imaging of a case of congenitally corrected transposition of the great vessels and an adult case of single atrium and single ventricle

Hitoko OGATA,* Tomoaki NAKATA,* Akita ENDOH,* Kazufumi TSUCHIHASHI,
Shuji YONEKURA,* Shigemichi TANAKA,* Takatoshi TSUDA,**
Masahiro KUBOTA,** and Osamu IIMURA

**The Second Department of Internal Medicine, and*
***Department of Radiology, Sapporo Medical College*

We report on the clinical utility of radionuclide angiography and gated blood pool single emission computed tomography (gated blood pool SPECT) in two patients having congenital heart disease. Both conventional equilibrium radionuclide angiography and gated blood pool SPECT demonstrated the connection of the great vessels with both ventricles in a 15-year-old male patient with a congenitally corrected transposition of the great vessels. In particular, the latter procedure could provide very useful information about the ventricular morphology and inversion which is important for diagnosing this disorder. The second case is an extremely rare 42-year-old female patient with a single atrium and single ventricle. She underwent first-pass and multiple gated blood pool angiography from the anterior, right and left oblique views. The combination of these scintigraphic techniques revealed an insufficiency in anatomical correlations among the single atrium, atrioventricular valve, single ventricle and the great vessels in addition to the connection of superior vena cava with the single atrium, and the atrioventricular valve. Thus, conventional equilibrated angiography from multiple views and gated blood pool SPECT seems to be very reliable not only for anatomical evaluation but also for clinical course observation in patients with complicated congenital heart disease.

Key words: Congenitally corrected transposition of great vessels, Single atrium and single ventricle, Radionuclide angiography, Gated blood pool tomography