

**187****DIAGNOSIS OF ABDOMINAL AORTIC ANEURYSM BY RI ANGIOGRAPHY AND ULTRASOUND.**

K.Yamamoto, Y. Ishii, K.Torizuka, I.Kashu, K.Kumada, Y.Higasa. Kyoto University, Department of Radiology and Nuclear Medicine, and Department of Surgery. Kyoto

It is important to diagnose correctly the presentation of abdominal aortic aneurysm prior to rupture or other complications. We studied 24 cases with pulsatile abdominal mass by RI angiography and ultrasonography. Ultrasonographically abdominal aneurysm could be discriminated from normal aorta or overlying tumor easily. By RI angiography, abdominal aorta and iliac artery were visualized clearly, so dilatation or stenosis of aorta detected apparently. Also dynamic information concerning aortic and renal blood flow could be evaluated. The diameter of abdominal aortic aneurysm with thrombus could be measured more accurately by ultrasonography. In conclusion, by the complementary use of these noninvasive methods, reliable informations of abdominal aneurysm are provided, so necessity of contrast aortography, which is highly invasive, is thought to be diminished very much.

**188****RADIONUCLIDE ANGIOGRAPHY OF AORTIC ANEURYSM.** N. Watanabe, Y. Ishihara, S. Nara, M. Maki, K. Kusakabe, T. Yamasaki, R. Saito and A. Shigeta. Department of Radiology, Tokyo Women's Medical College, Tokyo

The diagnostic ability of radionuclide angiography to determine the site, extension, and the presence of dissection was assessed in twenty-eight patients with aortic aneurysm proved by contrast angiography or surgery.

Each patient received a bolus injection of 10 to 20 mCi of Tc-99m HSA at the antecubital vein. Immediate dynamic studies were performed using Pho/Gamma IV A and Toshiba GCA 401 in left anterior oblique projection on the studies of the thoracic aorta and in anterior projection on the studies of the abdominal aorta and the study was recorded on a minicomputer. Subsequently static image was obtained in various positions.

The caliber of the aorta is increased except for 5 dissecting aneurysms. In the cases of abdominal aortic aneurysm, tortuosity and irregularity of the wall were observed. Twelve out of seventeen dissecting aneurysms showed delayed infusion and/or partial stasis of radionuclide indicative of a false lumen.

**189****THE EVALUATION OF VENTRICULAR FUNCTION FROM ANALYSIS OF ECG GATED RADIOISOTOPE ANGIOGRAPHY.** M.Fukumoto, Y.Kawamura, J.Yamazaki, S.Suzuki, S.Iida, T.Shindo and T.Morishita. 1st Internal Medicine, Toho University School of Medicine. Tokyo.

In this study, the left ventricular performance were evaluated with the systolic and diastolic time, EF, CO and the left ventricular systolic velocity which were calculated by RI angiography synchronized with ECG. Indicators of left ventricular function obtained by RI angiography were compared with that of cineangiography performed almost simultaneously in the same subject. The coefficient of correlation between the values of EF, CO and LVEDV calculated by RI angiography and cineangiography were  $r=0.89$ ,  $r=0.728$  and  $r=0.825$ . The coefficient of correlation between the values for EF/LVET calculated from left ventricular time activity curve, and mean Vcf by cineangiography, was good. The correlation between the values of EF/LVFT calculated by LVTAC, and LVEDP by cineangiography, was good. In case of scarectomy, EF was increased from 38% to 70% by surgery, and other left ventricular functions, including systolic and diastolic time was improved remarkably, too. The RI angiography is simple, noninvasive for patients, and repeatable, therefore, it is useful clinically to determine the prognosis and the evaluation of the effect of therapy.

**190****EVALUATION OF RI CARDIAC FUNCTION TEST AS CLINICAL CARDIAC EXAMINATION.** Y.Kawamura, M.Fukumoto, J.Yamazaki, S.Suzuki, S.Iida, T.Shindo and T.Morishita. 1st internal Medicine, Toho University School of Medicine. Tokyo.

RI angiocardiology is useful clinically to determine the prognosis and the evaluation of the effect of therapy.

In our study, the changes of left ventricular functions were evaluated in cases of essential hypertension, hyperthyroidism and hypothyroidism, according to treatment. The function of the left ventricle was evaluated with the systolic and diastolic time, ejection fraction, cardiac output and left ventricular systolic velocity, which were calculated by RI angiography synchronized with ECG.

After administration of 30 to 60mg of propranolol per day, no change was measured in blood pressure levels. EF and CO did not change. But after treatment by hydralazine, FF and CO were improved slightly, at the same time, BP lowered to normal levels.

In the hyperthyroidism cases, according to treatment, EF and CO gradually decreased. Opposite phenomenon was recognized in the hypothyroidism through treatment, EF and CO were gradually increased and pre ejection period was shortened.

In this study, we confirmed that RI cardiac function test is useful clinically to determine the prognosis and the evaluation of the effect of therapy.