

## **Evaluation of Peripheral Circulation by Intraarterial Injection of <sup>131</sup>I-MAA, <sup>131</sup>I Microsphere and <sup>198</sup>Au colloid**

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Intraarterial injection of radioactive substances was carried out to study the peripheral circulation. Two collimeters were placed on the leg and foot, which were connected to rate meter and the radioactivity curve was recorded. <sup>131</sup>I-MAA, <sup>131</sup>I microsphere & <sup>198</sup>Au colloid, 100–250 Ci were used.

The radioactivity by <sup>131</sup>I-MAA showed a transient peak following injection and remained at a stabilized level at the leg and foot. Scintigram of the leg and foot was taken. In those with disturbed peripheral circulation, 90% of 20 cases of the leg and all 22 cases of the foot showed uneven distribution of the scintigram, while in those

with normal circulation, the percentage of uneven distribution was high.

As for <sup>198</sup>Au colloid, and <sup>131</sup>I microsphere, initial peak of the leg was followed with gradual decline. The peak of foot was very low in those with normal circulation. When the leg arteries were all occluded, a characteristic curve was obtained in 80% of the cases.

From these results, curve and scintigram obtained by intraarterial injection of radioactive substance may be used to tell difference of abnormal peripheral circulation from those with normal circulation.

## **The Scintiphotos of Left Ventricular Cavity of Human Heart at End-Diastole and End-Systole**

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Zaret and his co-workers have reported a method of depicting the left ventricular cavity of human heart in end-diastole and end-systole, using a scintillation camera and an electronic gate triggered by ECG. Below the detector the patient has to remain in the same position long time (15–20 minutes), while counts at a certain cardiac phase are summed up after the radio-

nuclide has equilibrated the the intravascular space.

In our modified method, scintiphoto images are stored on videotape and at the same time ECG is recorded into the audiotrack of the tape through the "FM-modulator" made earlier by H. Kudo, one of our colleagues. In replay of this tape, scintiphotos of the image of the left ven-