STUDIES ON RENAL SCANNING AGENTS, PART 9

CLINICAL EVALUATION OF NEW RENAL SCANNING AGENT. ---Tc-99m DMP,---. H.Kurauchi, T. Machida, M. Miki, A. Tanaka, Y. Ohishi, M. Ueda, A. Kido, M. Yanagisawa and S. Shimada. The Jikei University School of Medicine, Tokyo.

New renal scanning agent, Tc-99m D-mercaptopropionic acid (DMP) was developed at our institution. We tried to evaluate the renal concentration of Tc-99m-DMP in clinical cases. For this study, 4 volunteers and 30 patients with renal diseases were selected. A dose of 2.8mCi was injected intravenously per person. Serial renal scanning were performed at 30min, 1h, 2h and 3h after administration and preliminary kinetic data was estimated.

Excellent static renal images were obtained and the best was imaged at 2 hours after administration. Blood clearance and urinary excretion were very rapid and any side effect was observed.

APPLICATION AND EVALUATION OF A QUANTITATIVE UPTAKE OF I-131-ADOSTEROL IN ADRENAL GLANDS WITH SPECT TECHNIQUE. J.Ishimura, K. Tachibana, K. Onoue, H. Kitani, M. Suehiro, M. Fukushima and K. Nagai. Division of Nuclear Medicine, Hyogo College of Medicine, Nishinomiya.

The usefulness of adrenal imaging could be enhanced if a reliable quantitative uptake measurement was available. In this study reported here we developed a method for determining the percent uptake of I-131-Adosterol in the adrenal gland using single photon emission computed tomography (SPECT) technique, and clinical application was performed for evaluating adrenal function.

Instrument used was a autotune 25 gamma camera (Maxi Camera 400A/T) with a computer (Maxistar) on-line system. Eight hundred μCi of I-131-Adosterol was given intravenously, and the total count of I-131-adosterol in adrenal gland was calculated by the sum of each sagital slice's counts which obtained by SPECT technique at 9 days after administration. Then after, adrenal uptake of I-131-adosterol (μCi) was determined using data of our fundamental investigations with body phantom by same technique.

The data obtained in this series suggest that a quantitative uptake of I-131-adosterol with SPECT technique is valuable in evaluating adrenal function of clinical cases.