

**Diagnosis for Preoperative Localization of Adrenal Adenoma  
of Primary Aldosteronism with  $^{131}\text{I}$ -19-Iodocholesterol**

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For preoperative localization of adrenal tumor of primary aldosteronism, various methods had been established. Though these techniques have provided a great deal of useful information, the methods are complex and troublesome to patients. This study was on radioisotopic visualization of adrenal glands of eleven patients with primary aldosteronism by the use of  $^{131}\text{I}$ -19-iodocholesterol.

Dose of about 1.0 mCi per 50 kg body weight of  $^{131}\text{I}$ -19-iodocholesterol was injected intravenously. The thyroid gland was protected by oral administration of Lugol's solution daily for six days from a day before the administration. Eight days after the administration, the patient's adrenal glands were imaged with scintiscanner. Scintillation scanning gave clear visual evidence of concentration of radioactivity at the site of adrenal adenoma of 7 of 11 patients with primary aldosteronism. The other 4 patients exhibited diffuse adrenal uptake of radioactivity without an area of concentration, and at surgery was dis-

closed small adrenal adenomas measured below 10 mm in diameter. There was no relationship between plasma aldosterone content and radioisotopic visualization of adrenal adenoma by scintillation scanning. On comparison of this method with the other methods, retroperitoneal pneumography was valuable for the diagnosis of adrenal adenoma in 5 of 11 patients, but one of 5 patients was misdiagnosed. Adrenal venography was valuable in 3 of 9 patients, but resulted in ruptures of tiny medullary vessels in the course of the procedure in 5 of 8 patients. Determination of aldosterone concentration in adrenal venous blood obtained by catheterization into the adrenal veins, could be determined the side of the lesion in 6 of 9 patients. However, these methods require the high techniques. Otherwise, adrenal scintiscan is able to be performed easily by intravenous injection of  $^{131}\text{I}$ -19-iodocholesterol.

It is concluded that adrenal scintiscan is a useful method for preoperative localization of adrenal tumor of primary aldosteronism.