

## On Adrenal Scintiscanning Using $^{131}\text{I}$ -19-Iodocholesterol

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Since last year, there has been several reports on adrenal scintiscanning using  $^{131}\text{I}$ -19-iodocholesterol. We tried to make adrenal images by this agent and obtained satisfactory results.

1–2 mCi of  $^{131}\text{I}$ -19-iodocholesterol was injected into antecubital vein and after 5–8 days scintiscanning was performed by rectilinear scanner which had dual 5 inch NaI crystals. No significant side reaction was found in these series. Of 17 patients, 9 had adrenal diseases; 4 Cushing syndroms, 3 primary aldosteronisms and 2 adrenal calcifications. 8 were normal.

On 8 normal cases, bilateral moderately positive images were seen in 6 cases, but 2 cases were negative. According to other reports, normal adrenals usually made positive images. Perhaps our 2 cases were studied in the poor condition of imaging devices and scanning agent.

On the cases of adrenal adenoma, whether it was Cushing syndrom or primary aldosteronism, images were markedly delineated on the site of the adenoma and negative or slightly

positive on the other side. It was so characteristic that this studies were most valuable for diagnosing adrenal adenoma.

On the cases of adrenal hyperplasia, images were positive bilaterally which could not differentiate from normal. Each cases in our laboratory confirmed the diagnosis by adrenal arteriography and venography, with hormonal and operative findings.

In conclusion, adrenal scan is a safety, rapid and accuracy test for adrenal diseases especially adenoma.

To this clinical evaluation, some of a basic study on adrenal scanning.  $^{131}\text{I}$ -19-iodocholesterol was injected into tail vein of mouse. After 2–8 days half of the mouse were sacrificed to examine tissue distribution, and the other half froze to make macroautoradiogram. 7 days after injection, both tissue distribution and whole body macroautoradiogram revealed that this cholesterol was good accumulation to the adrenal cortex.