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ADRENAL SCINTIGRAPHY WITH I-123-LABELED-
IOMETHYL-19-NORCHOLESTEROL (ADOSTEROL).
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I-123-labeled-6-iodomethyl-19-norchol-
esterol (I-123-adosterol), which was
synthesized after Kojima et al, was used
for adrenal scintigraphy. Six patients were
given 2.6 mCi - 6.7 mCi of it intravenously.
Imaging was performed 1, 2 and 3 days after
the injection using MaxiCamera II (GE)
attached low energy parallel and conversing
collimator.

It was found that the dose of 5 mCi was
sufficient for imaging and the adrenals
were visualized 1 day after the adminis-
tration. But in most cases the optimal scans
were obtained at 2 days after the injection
and the image qualities were superior to
that of I-131-adosterol. The estimate
absorbed dose of I-123-adosterol was less
I-131-adosterol.

These results suggested I-123-adosterol
was an excellent adrenal imaging agent and
it will be used for clinical purposes in
future instead of I-131-adosterol.

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A Quantitative Evaluation of Adrenal
Scintigraphy Toru Suematsu Hyogo Cancer Hospital
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We presented a new method of quantitative evalua-
tion of adrenal scintigraphy. Six days after the
injection of 400 Ci of ¹³¹I Adosterol, scintigrams
were recorded using a scintillation camera-mini-
computer-on line system in a present time of 999.9
second. Count in all the matrices (64x64) were
printed out and following indices were calculated in
transverse slices across the adrenal glands of both
sides.
Total counts:total of counts recorded in all matrices
in slices across the adrenal glands.
Point number:the number of matrices with counts
exceeded "back ground counts" in adrenal region.
Mean counts:Total counts/Point number
Peak counts:Maximum counts obtained in adrenal re-
gion In a clinical application in 11 cases including
2 cases with hyperfunction, 3 cases with unilateral
hyperfunction and 6 cases of control group, very
useful results were obtained.

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PATTERN ANALYSIS OF PIN-HOLE ADRENAL IMAGES
WITH I-131-ADOSTEROL. M.Nakajo,H.Sakata,K.
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Pin-hole adrenal images of 70 individu-
als with no evidence of adrenal diseases,11
patients with primary aldosteronism,7 with
Cushing's syndrome,1 with adrenogenital syn-
drome and 3 with pheochromocytoma were re-
viewed and analyzed to establish the adrenal
imaging patterns. Normal left adrenal glands
were imaged as oval(56%),triangular(29%)
and round(15%) and right ones as triangular
(63%),oval(26%) and round or sickle-shaped
(11%). The activity inside the gland was
higher at superior and medial portions of
the left gland in 71% of the cases and at
the mid portion of the right in 77%. Aldo-
steronomas were shown as round high active
areas with imaging of the normal adjacent
and contralateral tissue and only in one
patient,an adenoma was not demonstrated cle-
arly by basal imaging. In Cushing's and ad-
renogenital syndromes due to hyperplasia,
the gland(s) showed normal or enlarged ap-
pearances. Cortisol secreting adenomas were
imaged as high active areas with lack of
images of ipsi-,contralateral adrenal tiss-
ue and a cortisol secreting carcinoma show-
ed an image consisting of hot and cold are-
as according to the degree of its histolog-
ical differentiation,lacking of images of
normal ipsi-,contralateral adrenal tissue.
Pheochromocytomas were revealed as cold
areas corresponding to the tumor size.

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ADRENAL SCINTIGRAPHY USING MULTIPLANE
TOMOGRAPHIC SCANNER(PHO/CON). N.Katsuyama,
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S.Mochizuki. Department of Radiology, Jikei
University School of Medicine. Tokyo.

Duplicate adrenal examinations by PHO/CON
and the conventional scanner were performed
on 18 patients including 5 patients with
adrenal disease. Three doctors scored these
images about degree of adrenal visualization.
The tomoscan detected more clearly adrenal
glands than the scanner. The tomoscan was
superior in 15 of 18 patients(83 %) about
right adrenal, and in 11 of 18(61 %) about
left one. Another usefulness of PHO/CON was
to obtained three dimensional information of
adrenal position.