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ADRENAL SCINTIGRAPHY WITH I-123-LABELED-  
IODOMETHYL-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 administr-  
ation. 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 <sup>131</sup>I 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.  
Shirono,K.Shimabukuro and S.Shinohara.  
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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 gland-  
s 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,  
Y.Kato,S.Yamanashi,H.Watanabe,K.Kawakami,  
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 obtain three dimensional information of  
adrenal position.