

80

THE ^{14}C -GLUCOSE METABOLISM IN LUNG CANCER. T.Suzuki, K.Imamura, Y.Tokai, N.Yamanouchi, M.Iio. Kosei General Hospital, St.Marianna University of Medicine and Nakano National Chest Hospital. Kawasaki and Tokyo.

The high uptake of ^{14}C -glucose was observed in lung cancer of human being. ^{14}C -glucose was synthesized through the method of Flifton's photosynthesis. ^{14}C -glucose was given in some kinds of lung diseases in all of which high uptake of ^{14}C -glucose was observed. We observed the specific uptake of ^{14}C -glucose in lung cancer. In whole cases of non malignant lung diseases except one case of teratoma, We couldn't find any uptake of ^{14}C -glucose. Cancer to normal tissue's rate ranged from 1.43-2.11. There was no difference of uptake rate in adenocarcinoma, squamous cell carcinoma and anaplastic carcinoma.

85

DIAGNOSIS OF PROSTATIC CARCINOMA BY RADIO-IMMUNOASSAY OF THE HUMAN PROSTATIC ACID PHOSPHATASE. Y.Takagi, I.Kitagawa, A.Kubo, S. Hashimoto, M.Murai. and H.Tazaki. Keio University School of Medicine. Tokyo.

We measured human prostatic acid phosphatase (PAP) with the technique of radio-immunoassay in samples of 64 normal (37 male, 27 female), 19 benign prostatic hypertrophy, 23 prostatic carcinoma, 35 other malignant diseases, 18 other benign diseases and 26 female breast carcinoma. In normal controls except 2, serum PAP levels were 0ng/ml. Sixteen of 23 prostatic carcinomas (69.5%), showed above 2ng/ml (mean \pm SD 12.7 \pm 14.8), whereas 17 of 18 benign prostatic hypertrophies showed normal PAP concentration (0.66 \pm 1.05) and most of all other malignant and benign diseases were 0ng/ml. In this trial, serum PAP level has very high specificity (97%) in the diagnosis of prostatic carcinoma, and we consider the method of radioimmunoassay of PAP is useful for differential diagnosis and evaluating the therapeutic effect of prostatic carcinoma.

87

DIAGNOSTIC VALUE OF R I SCINTIGRAPHY FOR THYROID TUMORS: COMPARISON OF HgCl_2 -197, Tl -chloride-201 AND Ga -citrate-67 IN THYROID SCINTIGRAPHY.

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Radioisotopes have become extensively utilizing as a useful means for the diagnosis of malignant tumors.

We have performed HgCl_2 -197, Tl -chloride-201 and Ga -citrate-67 scintigraphy for thyroid tumors.

Conclusion :

We could get the histological diagnosis of thyroid tumors using thyroid scintigraphy with these radioisotopes.

The results are as shown in this table.

Comparison of $^{197}\text{HgCl}_2$, ^{201}Tl -chloride and ^{67}Ga -citrate in thyroid scintigraphy

	$^{197}\text{HgCl}_2$	^{201}Tl -chloride	^{67}Ga -citrate
Thyroid Cancer			
differentiated carcinoma	+	+	-
anaplastic carcinoma	+	-	+
medullary carcinoma	+	+	-
Malignant Lymphoma	+	+	+
Adenoma			
colloid adenoma	\pm	-	-
tubular adenoma	\pm	+	-
trabecular adenoma	\pm	+	-
Graves's disease	-	+	-

+ : Uptake. - : No Uptake

88

CLINICAL EVALUATION OF Tl -201 CHLORIDE IMAGING IN MEDIASTINAL TUMORS —COMPARISON WITH Ga -67 CITRATE—. H.Sakata, M.Nakajo, K.Shirono, K.Shimabukuro and S.Shinohara. Department of Radiology School of Medicine, Kagoshima University. Kagoshima.

Tl -201 chloride imaging was evaluated in 10 patients with various mediastinal tumors in comparison with Ga -67 citrate respectively. Scintigraphic findings were classified as : (++)marked accumulation in the tumor, (+)slight—moderate, (-)negative. The obtained results were as follows.

	Tl -201 ++ + -	Ga -67 ++ + -
malignant lymphoma	2	2
malignant thymoma	1	1
yolk sac tumor	1	1
mediastinal lymph node meta.(thyroid cancer)	1	1
benign thymoma	2	2
benign teratoma	2	2
Castleman's lymphoma	1	1

The degree of accumulation of Tl -201 was lower than those of Ga -67 in malignant lymphoma and malignant thymoma. However, 2 with benign thymoma and one with the mediastinal lymph node metastasis from thyroid cancer which were negative on Ga -67 imaging revealed accumulation of Tl -201.

The Tl -201 tumor imaging was thought to be an available and useful method for the diagnosis of the mediastinal tumor.