

## 562

USEFULNESS OF SCINTIGRAPHY IN INCIDENTALLY DETECTED MEDIASTINAL ABNORMAL SHADOW  
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Significance and usefulness of scintigraphic studies in the cases of mediastinal abnormal shadow were investigated. All 30 cases were found out incidentally by mass screening or annual check-up. 7 cases of mediastinal tumor, 13 of abnormal vessels including aneurysm, 6 of sarcoidosis, and 4 of miscellaneous were experienced. Performed scintigraphic studies were radionuclide angiography, pool scintigraphy and Ga scintigraphy. Ga scintigraphy was useful for the detection of mediastinal tumor and sarcoidosis as well as pool scintigraphy and radionuclide angiography for that of abnormal vessels.

## 564

CLINICOPATHOLOGIC STUDY OF THYMUS SCINTIGRAM WITH THREE NUCLIDES.  
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We report on our studies made of accumulated positiveness rate, histological type, clinically morbid period and accumulated positiveness rate at recurrence by the use of 3 nuclides of  $^{201}\text{Tl}$ ,  $^{67}\text{Ga}$  and  $^{75}\text{Se}$  on thymoma. The three nuclides were used in 38 cases, of which 18 were complicated by serious amyosthema. Scintigram-positive cases with  $^{201}\text{Tl}$ ,  $^{67}\text{Ga}$  and  $^{75}\text{Se}$  were 30 (78.9%), 14 (36.8%) and 19 (50%), respectively. Cases classified by histological types (EP: epithelial cell superior type; LP: lymphocyte superior type; and MC: mixed type) were: 8-EP, 10-LP and 12-MC, out of 30  $^{201}\text{Tl}$  scintigram-positive cases; 4-EP, 6-LP and 4-MC, out of 14  $^{67}\text{Ga}$  scintigram-positive cases, and 9-EP, 5-LP and 4-MC, out of 19  $^{75}\text{Se}$  scintigram-positive cases. Cases classified in relation to clinically morbid periods were: 9-I period, 7-II period and 14-III-IV periods, out of 30  $^{201}\text{Tl}$  scintigram-positive cases; 3-I period, 3-II period and 8-III-IV periods, out of 14  $^{67}\text{Ga}$  scintigram-positive cases; and 6-I period, 4-II period and 9-III-IV periods, out of 19  $^{75}\text{Se}$  scintigram-positive cases. Recurrent cases were 5, of which  $^{201}\text{Tl}$  scintigram-positive cases were 5, and  $^{67}\text{Ga}$  and  $^{75}\text{Se}$  scintigram-positive cases were 3 each. From the above results, usefulness of thymus scintigram with the three nuclides was investigated.

## 563

CLINICAL USEFULNESS OF GA-67 SCINTIGRAPHY ON MALIGNANT PERITONEAL MESOTHELIOMA.  
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Ga-67 images were studied in four case of malignant peritoneal mesothelioma. In our four case, all cases were formed tumorous shape and histological type was fibrous pattern in two case and mixed pattern in two case.

Abnormal uptake of Ga-67 was seen in all cases correspond to extension of tumor mass, Ga-67 scintigraphy was very useful for diagnosis of tumor extension.

In Japanese, 107 case of malignant peritoneal mesothelioma by review of the literature and we investigated 12 case with mentioned about Ga-67 images among these 107 case. Uptake of Ga-67 at tumor site are seen 10 case among 12 case (83.3%), and it's suggested that Ga-67 uptake of malignant peritoneal mesothelioma is very high, and Ga-67 scintigraphy is useful for diagnosis of tumor extension and different diagnosis of peritonitis carcinomatosa because of most popular peritoneal malignancy. (Rate of Ga-67 in peritonitis carcinomatosa is less than 20-30%.)

## 565

RADIOIMMUNODETECTION OF HUMAN CERVICAL CANCER OF UTERUS IN MICE WITH RADIOIODINATED MONOCLONAL ANTIBODY  
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Monoclonal antibody specific for human cervical cancer of uterus in cell cultures (MOCA-Hela) was generated, and successful scintigraphy was obtained. IgG was purified and tested on the reaction with Hela, Hep-2, FL and Vero cells, and normal human serum by indirect radioimmunoassay with living cells. Immunoreactivity with Hela cells was 24% in 10µg and 16% in 1µg of IgG. The other cells and normal human serum did not react with IgG of MOCA-Hela. The IgG was labeled with I-131 by chloramine-T method, and injected into the mice (Nu/Nu) bearing cervical uterine cancer of 1cm to 2cm in diameter (11µCi/30µg IgG). Imaging studies were performed using a gamma camera at 24, 48 and 72 hr. Tumors were clearly demonstrated on 4 out of 6 mice at 24 hr after injection. In the other 2 mice, tumors were detected at 72 hr after injection. After imaging, tumor and organs were removed and weighed, and radioactivities were measured. The mean tumor/tissue ratios per mg was 0.7 to the blood, 1.4 to the liver, lung, kidney, and higher than 2 to the spleen, heart and thyroid.

Successful tumor imaging suggests that MOCA-Hela may be useful for radioimmuno-detection of human cervical cancer of uterus.