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THE DIAGNOSTIC SIGNIFICANCE OF Ga-67 SCINTIGRAPHY FOR EARLY DETECTION OF DRUG INDUCED PNEUMONITIS. K. Mukouda, M. Sasaki, N. Nakanishi, T. Koyama and S. Katsuta. Department of Clinical Radiology, Hiroshima Medical School Hospital. Hiroshima.

Early detection of drug induced pneumonitis is often missed by chest X-ray, blood gas analysis and pulmonary function test. Therefore, to compare the diagnostic efficacy of early detection of drug induced pulmonary toxicity, Ga-67 scintigraphy were performed in sixteen patients with primary lung cancer treated with Peplomycin from October 1981 to March 1983. In consequence, diffuse pulmonary accumulation of Ga-67 was observed in three patients previous to the appearance of any abnormal findings in chest X-ray, blood gas analysis and pulmonary function test. Of these three patients, two patients were made a diagnosis of drug induced pneumonitis by transbronchial lung biopsy and another one was made by clinical course. When diffuse pulmonary accumulation of Ga-67 is observed under carcinostatic treatment, we must determine whether it results from drug induced pneumonitis, pulmonary infection or pulmonary infiltration of malignancy. Lung biopsy is necessary examination to obtain final pathological diagnosis of Ga-67 accumulation. However, early detection of pulmonary lesions is more important approach prior to biopsy.

In conclusion, Ga-67 scintigraphy is most sensitive and significant method for early detection of drug induced pneumonitis.

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APPLICABILITY OF GA-67 SCINTIGRAPHY IN ENDOMETRIAL CANCER. M.Nishi, T.Fujita, S. Fukumoto, N.Akamatsu, K.Sekiba and K.Aono Okayama University School of Medicine. Okayama

During the past 4 years, 33 cases of endometrial cancer (EC) were performed Ga-67 scintigraphy (Ga-SG) and under taken the hysterectomy in Okayama University. Clinical stage of these cases are Ia:20, Ib:7, II:5, IV:1, and the positive rate of each stage are Ia:40%, Ib:57%, II:80%, IV:100%. Therefore the sensitivity of Ga-67 in EC is 52%. There were no significant difference of Ga-uptake in histological grading. Concerning to diffuse type, there were no positive finding in the case with cancer spread below 1/3 of cavity wall. In circumscribed type, 10 cm<sup>3</sup> of 3 dimensional product were considered to be limit of positive finding.

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USEFULNESS OF BONE SCINTIGRAPHY IN FOLLOW-UP GYNECOLOGIC MALIGNANCY AFTER TREATMENT. Y.Okamoto, M.Kumazawa, T.Maeda, T.Sano, S.Okamura, M.Ueki, O.Sugimoto, T.Sakata, K.Yamazaki and H.Akagi. Osaka Medical College. Takatsuki.

Bone metastasis of gynecologic malignancy is difficult to detect. For the purposes of early detection of bone metastasis, 274 cases were examined by bone scintigraphy with Tc-99m labeled phosphorous compounds. When bone scintigraphy is positive, plane X-P, CT, and the other examinations are carried out to find bone metastasis. The results are as follows; the cases showing positive bone scintigraphy were 75. Among them, 28 cases were found bone metastasis. Many metastatic lesions were in the vertebrae, the pelvic bone, and the costa. On the other hand, false positive cases were seen in the skull, the knee joint, and the sternum. It may therefore be concluded that bone metastasis of gynecologic malignancy being relatively common, bone scintigraphy is useful in follow-up gynecologic malignancy after treatment.

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COMBINED DIAGNOSTIC APPROACH TO OVARIAN TUMORS BY ULTRASONOGRAPHY, COMPUTED TOMOGRAPHY AND Ga-67 CITRATE COMPUTER SCINTIGRAPHY. S.Okamura, Y.Tanaka, Y.Fukuda, Y.Maeda, T.Maeda, M.Ueki, S.Sugimoto and H.Akagi. Osaka Medical College. Takatsuki.

Ultrasonography (USG), computed tomography (CT) and Ga-67 citrate computer tomography (Ga-CS) were carried out on 203 patients with ovarian tumor, who consulted to the department of obstetrics and gynecology, Osaka Medical College, since Feb. 1977 to Apr. 1983. USG was performed in 175 cases by Toshiba SAL-12-A, CT (EMI 5005/12 or GE CT/TX-2) was performed in 197 cases and Ga-CS in 157, after visualization and calculation by computer. In 98 cases diagnosis was made with the combined use of these methods. All patients underwent surgical operation and pathological examination. The accuracy and clinical evaluation of USG, CT, Ga-CS and their combined use were compared to those of bimanual peric examination. The diagnostic accuracy in differentiating between cystic and solid tumors was 77.8% by bimanual, 81.1% in USG, 87.3% in CT, 70.7% in Ga-CS and 91.8% in combined use. And the accuracy in differentiating between benign and malignant tumors was 74.4%, 89.7%, 91.0%, 93.0% and 95.0% respectively. The combined use of USG, CT and Ga-CS could guarantee higher accuracy in diagnosis than bimanual pelvic examination, and was considered to be a valuable diagnostic method.