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GALLIUM-67 SCANNING IN ABDOMINAL NEOPLASMS

H.Matsuda, T.Kamei, E.Matsumoto, T.Yamazaki, I.Tatsuno Department of Radiology, Kanazawa National Hospital

With the exception of specific tumors like hepatoma and malignant lymphoma, the accuracy of gallium-67 imaging in abdominal neoplasms is reported to be poor. But most of these reports were described in early 70's. With the advance of equipments, improvement of the accuracy and re-evaluation is expected in gallium-67 abdominal scanning. On that point, we investigated 42 abdominal neoplasms (gastric cancer 14, colon cancer 6, hepatoma 3, metastatic liver tumor 3, pancreatic cancer 2, malignant lymphoma 3, ovarian cancer 4, bladder cancer 2, other tumor 5) for last two years. Overall sensitivity was 67%. In gastrointistinal tumors and malignant lymphomas, sensitivity was higher than previous reports, respectively 19/28 (68%) and 3/3 (100 %), but it was only 4/9 (44%) in urogenital tumors as before. Because of the low false positive rates on adequate bowel preparation, gallium-67 scans were useful in evaluating extension, metastasis and recurrence of the gallium-67-avid tumors , and in assessing the response to various therapies. They were also useful in radiotherapy. Simultaneously, gallium-67 imaging has the additional advantage of porviding "total-body information".

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USEFULNESS OF WHOLE BODY SCAN WITH Ga-67-CITRATE OR Se-75-SELENOMETHIONINE POSITIVE SCAN TO DETECT EXTRAHEPATIC METASTASIS IN HEPATOMA.

H. Ochi, H. Nakazima, S. Sawa, S. Taniguchi, T. Fukuda, K. Hamada, H. Ikeda Y. Onoyama, S. Shiomi, T. Minowa, T. Kuroki Department of Radiology and The Third Internal Medicine, Osaka City University, Medical School, Osaka

Positive liver scan with Ga-67-citrate or Se-75-Selenomethionine has been shown to be useful in evaluation focal defects seen on Tc-99m-colloid liver scan. Since last 2 years, Ga-67 or Se-75 whole body scan has been performed in patients with hepatoma. Extrahepatic metastases were found in 12 cases (bone 8, lung 3, intrathoracic lymph nodes 1). Compared to the bone scan with Tc-99m-MDP performed at the same period, the size and activity of the metastatic bone lesions were much different from them with Ga-scan in some cases ; for example the abnormal lesions with Ga were larger and more dense than these with Tc-MDP. Comparative study of Ga-scan and Se-scan, the activity of the metastatic lesions were much higher in Ga-scan. When focal defect was found in the liver scan with colloid, whole body positive scan with Ga-67-citrate is very useful not only to diagnose hepatoma but also to detect extrahepatic metastases.

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RI IMAGING STUDY OF HEPATOCELLULAR CARCINOMA BEFORE AND AFTER HEPATIC ARTERIAL EMBOLIZATION THERAPY.

I. Fushimi*, H. Hashiguchi*, K. Gotou*, H. Ohishi**, S. Ohue**, H. Otuji***Department of Radiology, Suita Saiseikai Hospital **Department of Radiology, Nara Medical University.

The post-therapeutic RI imaging follow up examinations(liver and ^{67}Ga) of hepatocellular carcinoma managed by the hepatic arterial embolization therapy were compared with angiographic findings.

The cases examined were the three cases which, although diagnosed as hepatocellular carcinoma by clinical evidences, did not permit surgical resection of the lesion due to a complication in the tumor region.

The nuclear medicine investigation revealed a gradually diminishing tendency of SOL by hepatic gamma scanning and a marked reduction of the region of ^{67}Ga incorporation by ^{67}Ga scanning. Dimunition of the tumor was confirmed by angiography that showed either the decrease in or disapperance of tumor vessels. The area of decreased tumor vessels coincided with where ^{67}Ga was not incorporated.

The above, therefore, indicates that ^{67}Ga scanning contributes to evaluation of post-therapeutic effect of hepatic arterial embolization management and prediction of the time of the next embolization.

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STUDY OF IMAGE DIAGNOSTIC METHOD TO INTRA-ABDOMINAL MALIGNANT LYMPHOMA.

N. NAKAJIMA, A.OKAZAKI, H.NIIBE, T.NAGAI DEPARTMENT OF RADIOLOGY, GUNMA UNIVERSITY HOSPITAL, MAEBASHI. H.IKEDA, H. SUTO, K.SAKAINO, M.MATSUMOTO DEPARTMENT OF RADIOLOGY, GUNMA CANCER CENTER HOSPITAL, OOTA.

We study of diagnostic ability and diagnostic method to refer intra-abdominal malignant lymphoma. The objective cases are 38,and intra-abdominal disease are existed in 18 cases. These existence are follow,16 cases in para-aortic area,2 cases in stomach,2 cases in retroperitoneal and one case in each ileo-cecal area,splenic portal and uterine body. Ileo-cecal lesion and uterine body are solitary existence. The true positive rate is 0.61 in Ga-67 scintigram,0.82 in lymphography and 0.83 in CT scan. In Ga-67 scintigram,there are 2 cases of false positive and 7 cases of false negative. The accuracy is 0.76 in Ga-67 scintigram and 0.92 in CT scan. Ga-67 scintigram should be performed firstly in diagnostic skeduel. Lymphography is most sensitive diagnostic method in lymphtract. CT scan would be performed in the case of follow, 1) examination in upper abdomen when lymphography shows negative, 2) planning of radiotherapy.