

In conclusion, our method and result presented above are useful for quantitative assessment of

active bone marrow distribution.

Clinical Evaluation of Radiolymphadenography in Patient with Malignant Lymphoma Utilizing ^{67}Ga -citrate and $^{99\text{m}}\text{Tc}$ -Sulfur-Colloid

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^{67}Ga -citrate is the most useful radiopharmaceutical for scanning of malignant tissues especially malignant lymphoma. The abdominal lymph nodes, however, can be hardly visualized, because of normal distribution of ^{67}Ga activity to abdominal organs, such as liver, spleen and kidneys and excretions into bowel.

Scintiphotogram of abdominal lymphnodes can be easily got utilizing $^{99\text{m}}\text{Tc}$ -sulfur-Colloid. The lymphnode images by this method is well corresponded to the image of lymphangiography by lipijodol.

In this study, radiolymphadenography of both nuclides were investigated and these results were compared with each other.

Scintiphotoes with $^{99\text{m}}\text{Tc}$ -Sulfur-Colloid were taken 2-3 hours after 2 or 3 mCi of subcutaneous injection on the back of the both feet with local anesthesia.

Scintiphotoes with 1-2 mCi of ^{67}Ga -citrate were taken, 48-72 hours after intravenous injection following after saline enema.

tion following after saline enema.

Remakable uptake of ^{67}Ga -citrate to affected lymphnodes was observed in neck, axilla, mediastinum, and even in abdomen, before treatments. These uptake however decreased with any effective treatments and gave false positive images, then became false negative. It was very difficult to evaluate these images.

Normal $^{99\text{m}}\text{Tc}$ -Sulfur-Colloid scintiphoto showed lymphnodes chain groups from ingunal area to abdominal-para-aortic area, in the shape of inverted "Y".

In patient with malignant lymphoma scintiphotoes vary according to the degree of involvement, such as absence or interruption, marked asymmetry and enlargement.

Normalization on both scintiphotoes is thought as successful treatment. For clinical diagnosis and staging, follow-up of course and treatment, it is useful to use both nuclides for radiolymphadenography.

Studies on Iron Metabolism of Pathogenesis of Anemia Associated with Uterine Myoma

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Anemia associated with uterine myoma may be caused by indirect hormonal influences to iron metabolism that introduced by tumour formation, by dysmenorrhea and by regulation of these physiological phenomena.

The mechanism of the anemia associated with

uterine myoma has been considered as iron depletion by blood loss, but the mechanism of this anemia is yet uncertain.

The purpose of this study was to clarify the mechanism of this anemia associated with uterine myoma from the view of iron metabolism.

Fifteen cases of uterine myoma, five cases of iron deficiency anemia and five cases of normal female were included in this study.

The ferrokinetics of ^{59}Fe , body surface counting (uterine, sacrum, liver, spleen and temporal area) and microautoradiography from the histological section were examined for each cases.

In ferrokinetics of all myoma cases, PID decreased be low normal and PITER showed almost normal. Radioactivity of the uterine was almost equal those over the temporal area in normal females. Radioactivity between uterine, spleen and liver were no difference in iron deficiency anemia patients. In uterine myoma without dysmenorrhea body surface counting

patterns obtained same indication of iron deficiency anemia, except uterine area that increased considerably greater than either bone marrow or spleen. Uterine myoma with dysmenorrhea showed higher amplitude of the uterine curve than was usual. On the microautoradiographic findings of histological section satisfiable blacken dots were not observed.

As a result, iron deficiency anemia were sometimes seen in cases of uterine myoma without dysmenorrhea. Furthermore, radioactivity of myoma uterine area was much higher than other hematopoietic organs. These results may be suggested that has possibility of iron arrested activity in the myoma uterine.

Iron Absorption in Young Japanese

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Since we have found latent iron deficiency in the one third of the young Japanese female, their iron absorption rate was expected to be elevated. Ten male and female Japanese students of 20 to 22 years old were studied. Five microcuries of radioiron was administered in the form of ferrous sulfate with 4 mg of carrier iron. Subjects received the oral dose after fasting for a night and kept fasting for 2 more hours after the dose. The rate of iron absorption was determined with our Right-type whole-body counter.

The results were as follows: The young Japanese female absorbed average $29 \pm 6\%$, while American female absorbed average $12 \pm 5\%$.

Average value of serum iron was lower in Japanese female. One subject in the young Japanese female group was diagnosed as a real

iron deficiency anemia. The young Japanese male subjects of the same age absorbed $32 \pm 18\%$. On the other hand, American males $11 \pm 7\%$. Average value of serum iron were lower in the Japanese than American male as observed in the Japanese female. High rate of iron absorption in the young Japanese subjects would be related to latent or manifest iron deficiency. The correlation of reticulocyte and iron absorption were observed in American subjects as reported previously, and the young Japanese subjects studied were mostly in the region of iron deficiency anemias.

The difference in iron absorption rate between the Japanese and American subjects suggests the difference of iron content in the food.