

measured cases.

This simple method of analyzing radioiron

appearance curve would also be valuable to detect ineffective erythropoiesis.

Studies on the Release of Blood Cells of Bone Marrow

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The bone marrow functions, especially the release of blood cells, were studied by using female rabbits, weighing about 2500g, under morbid conditions with microautoradiographic technics and liquid scintillation counter.

The femur of one side was irradiated ^{60}Co or blockaded by indian ink, and then the rabbits were affected by infection or phlebotomy. One week later, $3\ \mu\text{Ci}$ of ^3H -thymidine was administered intravenously to the rabbits and one hour later blood samples were obtained from the nutrient veins of the bilateral femur marrows and peripheral artery.

These samples were used partly for radioautographic studies, and partly for liquid scintillator countings of serum.

The mean grain counts in myeloblasts of the rabbits blockaded by indian ink or affected by infection were decreased and those of the

rabbits affected by phlebotomy were increased. Similar results were noted in the granulocytic series.

The mean grain counts in the granulocytic series of the rabbits treated with ^{60}Co were lower than those of the rabbits blockaded by indian ink, (especially in myeloblasts).

The mean grain counts in the erythroblastic series of the rabbits affected by phlebotomy were increased.

Radioactivity of ^3H -thymidine in blood plasma of the rabbits affected by phlebotomy showed higher levels.

These results suggest that the proliferative activity of granulocytic cells is decreased by ^{60}Co irradiation or blockade of bone marrow, and that erythropoiesis is increased by phlebotomy.

Studies on Bone Marrow Distributions of $^{99\text{m}}\text{Tc}$ Sulfur Colloid with Scintillation Camera

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In normal subjects, the bone marrow figures obtained with $^{99\text{m}}\text{Tc}$ sulfur colloid were relatively clear and sharp only in larger bone such as skull, pelvis, humerus, and femur. The figures of sternum, foot and hand were hardly obtained. The intensity of the figures were seemed to be well corresponded anatomically to red bone marrow distributions.

In the patients with hypoplastic anemia the bone marrow pictures were able to be classified into two types. One is the islet form with clear and distinctive high density figures in obscure and low density background in skull, pelvis, shoulder, vertebrae, humerus and femur. This type of hypoplastic anemia was considered to be classified as the bone marrow