

evidently observed in the centralization phase of the marrow distribution after the splenectomy, in which the epiphyseal marrow disappeared prece-
dently to that in the neighbouring metaphysis.

The counter phenomenon was observed in chro-
nic myelogeneous leukemias in which the epiphyseal
marrow was more manifest than metaphyseal one
especially so in those in the terminal stage.

As we had previously reported, a periphery
extension factor and centralization one was deduc-
ed by principal component analysis on the 28
values of the local marrow activity. Intensity of
the epiphyseal active marrow was referred to the
score of these two principal components.

In chronic myelogeneous leukemias, prominent
epiphyseal marrow was present in no relation to
the degree of periphery extension nor to that of

central depression. In hereditary spherocytosis,
on the other hand, the more the score was of
periphery extension with central hyperplasia, the
more evident the epiphyseal marrow was.

These findings suggest that the epiphyseal
marrow behaves different from the metaphyseal
one independently on being proximal or distal
to the trunk. They also suggest that a different
regulatory mechanism exists to determine the
distribution pattern of the active marrow between
these two groups which develop apparently the
same pattern of periphery extension. To clarify
this mechanism, detailed and definite observation
on localization of the marrow is necessary and
this double image method using superimposing
technique is considered to be valuable for this
purpose.

The Concentration of Radioiron and Chromium in Pulmonary Hemosiderosis

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Case 1.

Seven μCi of ^{59}Fe was injected intravenously
to a 4 year old girl with pulmonary hemosi-
derosis.

Radioiron accumulation was visualized mostly
in the right lung 20 days after intravenous radio-
iron injection.

Case 2.

One hundred and fifteen μCi of ^{51}Cr labelled
red cell was injected into a 9 year old boy with
pulmonary hemosiderosis in remission for 8 months
after iron therapy. The scintillation camera image
showed the concentration of radiochromium in
the both side of the lung 13 days after intravenous
radiochromium labelled red cell injection.

These images were better in prone than in
supine position. The clinical laboratory findings of

these two cases were as follows.

Case. 1. ^{59}Fe -scan

SI=49 $\mu\text{g/dl}$, Hb=10.6 g/dl, Ht=36.5%,
RBC=514 $\times 10^4$, PIT=1.1 mg/kg/day, PID=
18 min., RCU=92%, Solenomegaly +, Phlegm:
Macrophages with hemosiderin. Radiographic
diagnosis: Pneumonitis.

Case 2. ^{51}Cr -scintiphoto

Nov. 1975 Before Fe therapy

SI=18 $\mu\text{g/dl}$, Hb=6 g/dl, Ht=21%, RBC=
284 $\times 10^4$, Ret=1.2%, Phlegm: Macrophages
with hemosiderin.

Feb. 1976 After Fe therapy

SI=130 $\mu\text{g/dl}$, Hb=14.5 g/dl, Ht=42%,
RBC=510 $\times 10^4$, Ret=0.2%.

Scintigram was taken in Sept. 1976.