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Blood Iodine in Leukemia.

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Early in the course of a study of the blood iodine levels in various disorders, it became apparent that patients with myeloid leukemia differed from those with leukemia of the lymphatic type in respect to their blood iodine.

An elevation of the blood iodine in a case of lymphatic leukemia was reported by Veil and Sturm.¹ Curtis and his associates have stated^{2, 3} that the blood iodine is increased in both lymphatic and myeloid leukemia, but in one case of chronic myeloid leukemia in whom the urinary loss of iodine was studied the blood iodine was approximately normal.⁴ Dassen and del Castillo⁵ found a high blood iodine in 2 cases of myeloid leukemia. Stevens,⁶ using a method similar to the one employed by us found a normal value for the blood iodine in one case of lymphatic leukemia. Summarizing, it is fair to say that the prevailing impression, based on some half dozen cases in the literature, seems to be that the blood iodine is elevated in leukemia regardless of type.

We have made blood iodine determinations according to the method of Trevorrow and Fashena⁷ on 17 patients with leukemia. Twelve of these were of the lymphatic type. The results are shown in Table I where the cases are arranged in descending scale according to the blood iodine level. Normal values with this method in our hands range from 3.5 to 6.0γ.

On reference to Table I, it will be noted that in the myeloid cases the blood iodine tends to be normal or below, while in the lymphatic type the blood iodine is normal or high. With one exception (F. de G.) there is no overlapping of the two groups. The average blood iodine for the lymphatic group is 10.2γ as compared with 3.3γ for the myeloid.

¹ Veil, W. H., and Sturm, A., *Deutsches Arch. f. klin. Med.*, 1925, **147**, 166.

² Curtis, G. M., Davis, C. B., and Phillips, F. J., *J. A. M. A.*, 1933, **101**, 901.

³ Curtis, G. M., Cole, V. V., and Phillips, F. J., *West. J. Surg.*, 1934, **42**, 435.

⁴ Curtis, G. M., and Barron, L. E., *Surgery*, 1937, **1**, 92.

⁵ Dassen, R., and del Castillo, E. B., *Semana Med.*, 1934, **41**, 1854.

⁶ Stevens, C. D., *J. Lab. and Clin. Med.*, 1937, **22**, 1074.

⁷ Trevorrow, V., and Fashena, G. J., *J. Biol. Chem.*, 1935, **110**, 29.

TABLE I.
Blood Iodine Values in Leukemia.

Patient	Sex	Age	Type of leukemia	Blood Iodine γ /100 cc
W.B.	M	56	lymphatic	17.9
M.S.	M	69	"	17.8
A.J.	M	64	"	14.1
A.D.	F	46	"	13.2
E.C.	M	56	"	11.7
R.T.	M	73	"	10.5
J.H.	M	61	"	9.3
C.B.	M	56	"	8.6
F.deG.	M	27	myeloid	7.4
S.T.	F	63	lymphatic	5.2
A.A.	M	75	"	4.7
I.L.	M	55	"	4.6
J.L.	M	54	"	4.3
J.P.	M	31	myeloid	3.8
N.M.	F	56	"	2.5
A.D.	F	52	"	1.7
M.P.	M	42	"	1.3

It seemed possible that the variation noted might be due to a difference in the iodine content of the white blood cells. However, in a few instances, when we made a crude attempt to separate the red cells from the white cells and plasma by means of a separating funnel, no difference could be demonstrated between the iodine content of whole blood and of the white cell-plasma fraction.

In 2 cases of lymphosarcoma the blood iodine was found to be high and it seems possible that this may be of some diagnostic value. The blood iodine was slightly elevated in 2 cases of Hodgkin's disease and normal in 2 others.

10090 P

Effect of Histamine Pretreatment upon Adrenalectomized Rats.

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There are many features of histamine "shock" and the "intoxication" of adrenal insufficiency which are similar. Karady has found¹ that the incidence and severity of surgical shock or histamine shock in the rat may be reduced by previous treatment with histamine. We have found that pretreatment with increasing doses of

¹ Karady, St., *Am. J. Physiol.*, 1938, **121**, 194.