

THE SERUM CALCIUM IN POLYCYTHEMIA VERA

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In a study of fourteen cases of polycythemia vera, Brown and Roth (1) found the serum calcium to be over 11.0 mgm. per hundred cubic centimeters in every case. The actual range of serum calcium values was 11.1 to 18.1 mgm. per hundred cubic centimeters. The average value for the group was 14.3 mgm. These authors noted a reduction in

TABLE 1
Data on patients

Case number	Sex	Age	Hemoglobin (Sahli)	Red blood cells	White blood cells	Serum calcium	Spleen palpable
			<i>per cent</i>	<i>millions</i>		<i>mgm. per 100 cc.</i>	
1	M.	54	107	7.5	20,300	10.0	+
2	M.	53	132	9.7	13,000	10.7	+
3	F.	63	125	7.0	16,200	7.9	+
4	M.	44	128	6.6	15,200	11.0	0
5	F.	60	119	7.8	14,700	10.8	+
6	M.	47	160	10.3	7,800	12.9	+
7	M.	47	102	6.9	11,600	10.7	+
8	M.	46	125	9.0	9,500	9.9	+
9	M.	57	128	8.9	15,200	11.3	+

serum calcium accompanying a fall in red blood cell count following treatment with phenylhydrazine.

We were stimulated by this report to make some additional studies of the calcium metabolism in polycythemia, but the work was halted in its incipency by our inability to confirm the findings of Brown and Roth.

Serum calcium determinations were made in nine cases of typical polycythemia vera using Clark and Collip's modification of the method of Kramer and Tisdall (2). The patients received no special diet, and

in only one (case 6) was phenylhydrazine administered before the first calcium determination was made. The results are shown in table 1.

From this tabulation it can be seen that in only two of the nine cases was the serum calcium in excess of 11.0 mgm. (12.9 and 11.3 mgm.) while in one case it was considerably less than 9.0 mgm. (7.9 mgm.). The remaining six cases all showed perfectly normal serum calcium values. The average for the group was 10.6 mgm.

From these findings we conclude that there is no significant variation in the serum calcium in polycythemia vera.

BIBLIOGRAPHY

1. Brown, G. E., and Roth, G. M., J. Clin. Invest., 1928, vi, 159. The Reduction of Hypercalcemia in Cases of Polycythemia Vera by Phenylhydrazine.
2. Clark, E. P., and Collip, J. B., J. Biol. Chem., 1925, lxxiii, 461. A Study of the Tisdall Method for the Determination of Blood Serum Calcium with a Suggested Modification.