VITAMIN B₁₂ AND HERPES ZOSTER OPHTHALMICUS*

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VITAMIN B₁₂ is quite often given to patients with herpes zoster ophthalmicus as it has been reported to reduce the severity of the disease and the incidence of complications (Maclatchy, 1956; Rössler, 1956). I thought that it would be interesting to see whether there was any evidence of vitamin B₁₂ deficiency in these patients.

Method

Sixteen patients with herpes zoster ophthalmicus were examined and a history was taken, chiefly to make sure that they had not been given vitamin B₁₂ recently in any form. Sixteen controls of the same sex and approximately the same age (± 4 years) were also examined.

The serum B₁₂ concentrations were measured by microbiological assay using the green alga *Euglena gracilis* var. *bacillaris* as test organism (Ross, 1952).

Results

The results are summarized in the Table (opposite). The mean total serum B₁₂ concentration of the sixteen patients was 537 $\mu\mu\text{g./ml.}$ and the mean free serum B₁₂ concentration was 42 $\mu\mu\text{g./ml.}$ The total serum B₁₂ concentration of the sixteen controls ranged from 240 to 900 $\mu\mu\text{g./ml.}$ (mean 499 $\mu\mu\text{g./ml.}$). The free serum B₁₂ concentration of the controls ranged from 5 to 103 $\mu\mu\text{g./ml.}$ (mean 35 $\mu\mu\text{g./ml.}$).

There was no relationship between the serum B₁₂ levels and the severity of the disease or incidence of complications in these patients.

Comment

These results show that there is no deficiency of vitamin B₁₂ in patients with herpes zoster ophthalmicus. If large doses of vitamin B₁₂ are given to patients with a normal serum B₁₂ level then almost total excretion of the vitamin occurs (Sokoloff, Sanneman, and Beard, 1952). It seems unlikely therefore that this vitamin would be of much use in this disease.

No controlled trial has shown that vitamin B₁₂ is of use in herpes zoster ophthalmicus. Helle and Ohela (1955) carried out a trial on three groups

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TABLE
COMPLICATIONS AND SERUM B₁₂ LEVELS OF SIXTEEN CASES OF HERPES
ZOSTER OPHTHALMICUS

Patient No.	Age (yrs)	Sex	Complications	Free B ₁₂ Level (μg./ml.)	Total B ₁₂ Level (μg./ml.)
1	64	F	Anterior uveitis	37	450
2	78	F	Keratitis	27	630
3	70	M	Keratitis; post-herpetic neuralgia	32	1,000
4	74	F	Post-herpetic neuralgia	60	240
5	63	M	Partial third nerve palsy	30	460
6	65	F	Episcleritis	5	420
7	41	M	Keratitis	85	360
8	68	M	Anterior uveitis	90	1,000
9	63	F	None	5	300
10	61	F	Anterior uveitis; secondary glaucoma; partial third nerve palsy	50	540
11	53	M	Keratitis; anterior uveitis	55	720
12	73	M	Keratitis; anterior uveitis; post-herpetic neuralgia	5	140
13	69	F	Anterior uveitis	5	280
14	37	M	Keratitis; anterior uveitis	155	570
15	55	M	None	5	880
16	63	F	Keratitis	35	600

of herpes zoster patients with neuralgia, in which one group was given vitamin B₁₂, one vitamin B₁, and one local treatment alone. They found no significant difference between the three groups in the time that the pain persisted. Probably the results would be the same in herpes zoster ophthalmicus.

Summary

No evidence of vitamin B₁₂ deficiency was found in sixteen patients with herpes zoster ophthalmicus. Probably vitamin B₁₂ has no effect in reducing the severity of this disease or its complications.

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REFERENCES

HELLE, J., and OHELA, K. (1955). *Ann. Med. exp. Biol. Fenn.*, **33**, 116.
MACLATCHY, R. S. (1956). *Brit. J. Ophthal.*, **40**, 762.
ROSS, G. I. M. (1952). *J. clin. Path.*, **5**, 250.
RÖSSLER, H. (1956). *Klin. Mbl. Augenheilk.*, **128**, 727.
SOKOLOFF, M. F., SANNEMAN, E. H., and BEARD, M. F. (1952). *Blood*, **7**, 243.