

8002 C

Complement Titer of the Blood in Allergic Conditions.

EVELYN B. TILDEN. (Introduced by Arthur I. Kendall.)

From the Department of Research Bacteriology, Northwestern University Medical School.

Titration of the complement of the blood serum has been recommended for the diagnosis of liver disease,¹ rheumatic affections,² and yellow fever,³ and recently it has been stated,⁴ on the basis of a single case report by Deutsch and Weiss,⁵ that complement titer is markedly lowered in allergy. Inasmuch, therefore, as no considerable number of titrations appears to have been carried out on the blood of typical cases of allergic disease, *i. e.*, hay fever and asthma, it seemed desirable to study a series of such cases.

The sera from allergic patients were kindly furnished by Dr. S.

TABLE I.

Case No.	Type of allergy	Symptoms and Treatment	Complement Titers*
1	Hay fever	Active symptoms, beginning treatment	.05
2	" "	" " " "	.05
3	" "	" " " "	.07
4	Asthma	Chronic, under treatment	.05
5 (9/22/34)	Hay fever	Active symptoms, under treatment	.07
6	Asthma	Chronic, had been treated a long time	.02
7	" "	" " " " " " " "	.05
8	" "	" " under treatment	.05
9	" "	Well at time of test	.07
10	" "	Chronic, under treatment	.05
11	" "	Comparatively well	.07
12	" "	Chronic, beginning treatment	.05
5 (12/8/34)	Hay fever	Active symptoms, under treatment	.05
13	Asthma	Chronic, treated for a long time	.05
14	Urticaria		.07
15	Asthma	Chronic, under treatment	.05
16	" "	" " " "	.05
17	Hay fever	Not active	.07
18	Asthma	Chronic, well for 2 yrs., recurrence 1 month before test	.05
			Average .05

* Cc. of serum required to hemolyze 1 cc. of 1% sheep cells in the presence of 2 units of antishoop amboceptor.

¹ Bergel, A., and Schüle, F., *Wien. klin. Woch.*, 1931, **44**, 1562; **45**, 53.

² Buchholz, B., *Deut. Arch. Klin. Med.*, 1934, **176**, 330.

³ Costa Cruz, J. da, and Villela, C. G., *Compt. rend. Soc. de Biol.*, 1933, **112**, 915.

⁴ Schattenberg, H. J., and Harris, W. H., *PROC. SOC. EXP. BIOL. AND MED.*, 1934, **31**, 1446.

⁵ Deutsch, F., and Weiss, E., *Med. Klin.*, 1933, **29**, 1402.

M. Feinberg, in charge of the Allergy Clinic, and the control sera were obtained through the courtesy of Dr. O. E. Hepler, of the Clinical Pathology Laboratory, who also supplied the sheep cells and amboceptor used in the titrations. The complement titrations were carried out on the same day as the routine Wassermann tests, and the cells and amboceptor used had been titrated with guinea pig complement. The control series comprised a large number of sera (more than a hundred), which were being used for other experiments.

Veil and Buchholz⁶ found the complement titer of normal blood to range between 0.02 cc. and 0.06 cc., with an average value of 0.05 cc. A similar titer was found for the control sera of the present series (0.02 cc. to 0.07 cc., with an average of 0.05 cc.), and the allergic sera showed a similar range and similar average value (Table I).

Conclusion. The amount of complement present in the blood of allergic patients of this series (18 cases) was similar to that in the control sera from persons coming to the general medical clinic.

8003 P

A Study of Experimental Meningococcal Infection. I. Method.

C. PHILLIP MILLER. (With the technical assistance of Ruth Castles.)

From the Department of Medicine, University of Chicago, and the A. B. Kuppenheimer Research Foundation.

It was reported¹ that mice could be infected by intraperitoneal inoculation with small numbers of virulent meningococci suspended in a solution of mucin. The mucin used in those original experiments was a commercial product which is prepared from hog's stomach and marketed for the treatment of gastric ulcer. The strains of meningococci employed had been freshly isolated from the spinal fluids of patients suffering from epidemic meningitis, and of these strains the 2 which proved lethal in highest dilution were those which had been obtained under conditions that permitted initiation of the experimental infection in the mouse most quickly after aspiration of the spinal fluid.

When work on this problem was resumed after several months,

⁶ Veil, W. H., and Buchholz, B., *Klin. Woch.*, 1932, **11**, 2019.

¹ Miller, C. Phillip, *Science*, 1933, **78**, 340.