Pacific Coast Section.

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Heterophile Ophthalmic Anaphylaxis.*

J. V. CHAMBERS. (Introduced by W. H. Manwaring.)

From the Laboratory of Bacteriology and Experimental Pathology, Stanford University.

It would be of convenience to clinical allergists if conclusive experimental evidence were available in support of the postulated qualitative differences between synchronous, homologous, specific "antibodies" in different organs, tissues and body fluids of the same individual. Such differences are suggested by several recent laboratory studies, particularly by Cook and Spain's[1] alleged qualitatively different smooth muscle and cutaneous sensitizins in human serums, and by Schamburow's[2] alleged "reflex ocular immunity," specific agglutinins with the power of elective localization in the normal eye.

Seegal and Seegal[3] have recently demonstrated that a strictly local ophthalmic sensitivity can be produced in rabbits by the local injection of adequate sensitizing doses of routine antigens. This sensitivity is sufficient to give a specific unilateral ophthalmic allergy on intravenous injection with the same antigen. We have applied the Seegal technic to a study of the heterophile relationships between sheep erythrocytes and guinea pig kidney; doses, time intervals and allergic criteria being the same as those employed by them. Preliminary data from 35 rabbits suggest the following tentative conclusions:

(1) Practically all rabbits locally sensitized to sheep erythrocytes or to guinea pig kidney by the Seegal technic give marked unilateral

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1 Cook, R. A., and Spain, W. C., *J. Immunol.*, 1929, **17**, 295.

2 Schamburow, D. A., *Z. f. Hyg. u. Infektionskrank.*, 1932, **114**, 456.

3 Seegal, D., and Seegal, B. C., *J. Exp. Med.*, 1931, **54**, 249.

ophthalmic responses on intravenous injection with the homologous antigen. Approximately 75% of them give a demonstrable, though less marked allergic cross-reaction with the heterophile antigen.

(2) Anterior chamber injections of equivalent amounts of the alcohol-extractable lipoids from either antigen will not demonstrably sensitize the rabbit eye, nor is demonstrable sensitivity to either sheep erythrocytes or guinea pig kidney effected by local injection of the same lipoids adsorbed onto an alien protein "carrier" (*e. g.*, swine serum).

(3) Rabbits locally sensitized to either sheep erythrocytes or guinea pig kidney give no demonstrable ophthalmic response on intravenous injection with these lipoids or lipoid-protein complexes, nor does such injection demonstrate "desensitizing" the eye.

With the same natural antigens the alcohol-extractable lipoids are the dominant heterophile reacting factors in systemic (*i. e.*, humoral) anaphylaxis and test-tube complement-deviation reactions. From the above data, therefore, one would strongly suspect that there is a qualitatively different heterophile relationship in strictly local ophthalmic anaphylaxis, than there is in routine serum reactions.

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A Rapid Method for the Identification of Clostridium welchii.

ANSON HOYT. (Introduced by John F. Kessel.)

From the Department of Bacteriology, School of Medicine, University of Southern California, and the Laboratories of Unit I, Los Angeles County General Hospital.

In a study of the bacteriology of infected wounds, a rapid demonstration of the presence of *Cl. welchii* may be of considerable importance. Welch and Nuttall[1] showed that this organism produced abundant gas throughout the bodies of rabbits which had been injected intravenously with it, killed shortly thereafter, and incubated for a few hours at 37°C. The rabbit body provided an ideal anaerobic medium in which *Cl. welchii* would outgrow most aerobic organisms, and from which it could usually be isolated with ease.

White mice have been advantageously employed for the same purpose in this study. If a mouse is injected intravenously with a

[1] Welch, W. H., and Nuttall, G. H. F., *Johns Hopkins Hosp. Bull.*, 1892, **3**, 81.