

From the Department of Bacteriology and the Clinic of Dermatology,
University, Lund, Sweden

DISTRIBUTION OF GAMMA GLOBULIN GROUPS IN SERA FROM PATIENTS WITH ALLERGY AND PSORIASIS

By

SVEN BERGMAN

There is general agreement that serum factors with antibody properties play a dominant role in allergic conditions of the type "early response" (Chase 1947, Raffel 1953), which have also been called seroallergies (Hagerman 1955). Hereditary factors are important in atopies. Raffel (5) and others suggested the possibility of the production of antibodies with special characteristics in persons with allergy.

It was recently shown by Grubb (1956) that human sera can be divided into two so-called Gm groups, which were found to be hereditary and demonstrable in the gamma globulin fraction (Grubb & Laurell).

The purpose of the present investigation was to determine whether the distribution of these Gm groups in patients with seroallergies differs from that in a normal population. The material also included patients with psoriasis.

Both of these disease groups are subject to hereditary influences.

MATERIAL AND METHODS

The material consisted of sera from 127 patients with bronchial asthma, 36 with summer hay-fever, 32 with Besnier's

Prurigo (atopic dermatitis), 46 with urticaria and 54 with psoriasis.

Tests for agglutination and inhibition were carried out according to Grubb & Laurell.

RESULTS AND COMMENTS

The results are summarized in Table I.

Only 2 sera, both from patients with bronchial asthma, could not be grouped with certainty. These 2 were therefore regarded as "intermediate" and are not included in the table.

TABLE I
Distribution of Gm Groups in Serum from Patients with Allergy and Psoriasis.

Diagnos	Number tested	Gm (a+) Percentage	Gm (a-) Percentage	χ^2 *
Bronchial Asthma	125	56	44	0.53
Summer Hay-fever	36	48.6	51.4	1.25
Besnier's Prurigo	32	53.1	46.9	0.42
Urticaria	46	65.6	34.4	0.60
Psoriasis	54	61.1	38.9	0.04
Normal material acc. to Grubb & Laurell (3)	360	59.7	40.3	

* χ^2 is calculated on comparison with the material described in reference 3.

It is clear from Table I that the distribution of the Gm groups in the various diseases did not differ from what was found earlier in a normal material by Grubb & Laurell. This absence of any difference is in line with the assumption that, unlike the Gm groups, in hypersensitivity the antibodies do not pass the placenta.

In Rh sensitised patients the distribution of the Gm groups is also normal (Grubb & Laurell).

Of the 127 sera tested from patients with bronchial asthma 8 agglutinated Rh-positive red blood cells coated with the selected incomplete anti-Rh. Two of these patients also had

summer hay-fever and Besnier's Prurigo, respectively. Of these 8 sera, 3 were of "non-rheumatoid type" and 2 of "rheumatoid type" (2) while 3 were not strong enough to be typed with certainty.

SUMMARY

Sera from patients with bronchial asthma, summer hay-fever, Besnier's Prurigo, urticaria and psoriasis were not found to differ from normal regarding the distribution of the Gm groups.

REFERENCES

1. Chase, M. W.: J. Exp. Med., 86, 489, 1947.
2. Grubb, R.: Acta path. et microbiol. Scandinav., 39, 195, 1956.
3. Grubb, R. & Laurell, A.-B.: Acta path. et microbiol. Scandinav., 39, 390, 1956.
4. Hagerman, G.: Acta Rheum. Scan., Vol. 4, 209, 1955.
5. Raffel, S.: Immunity, Appleton-Century-Crofts, Inc., New York, 1953.

This document is a scanned copy of a printed document. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material.