EARLY AND LATE REACTIONS TO LEPROMIN IN CONTACTS*

by

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The present article deals with the intradermal reactions to lepromin in a group of 309 supposedly healthy contacts to leprosy patients. These contacts had been under observation of the authors for a period of four years, during which time they had had from 1 to 8 lepromin tests.

Attention was focused on the constancy of the reactions and the agreement between the early (Fernandez) and the late (Mitsuda) reactions with the object of determining whether they were of equal value in everyday dispensary practice or whether one had advantages not found in the other.

The whole or bacterial lepromin was used indiscriminately. This was prepared according to the technic described by Mitsuda-Hayashi (1) and by Fernandes-Olmos Castro (2). The purified protein lepromins were not used because of the great variability in their antigenic effect, resulting from the specific method of preparation.

Tests were done by intradermal injection of 0.2 cc. of the antigen in the back, at the level of the right scapular region. Two readings were made: the first after 48 hours, designated as the early reaction of Fernandez (R.P.F.) and the second after 21 days designated as the late reaction of Mitsuda (R.T.M.). The early reaction was considered positive only when it presented a wheal with a diameter of at least 1 cm. The late reaction was recorded as positive if it showed a nodule which was prominent and red, whether ulcerated or not.

CONSTANCY OF REACTIONS

There were 171 patients in whom at least 2 intradermal tests with lepromin were made, and in whom the early reaction was read. The late reaction was read in only 88 individuals.

In 143 or 84 per cent of the contacts the R.P.F. readings remained absolutely constant in successive tests, negative in 69 and positive in 74 cases (Table 1). In 21 cases or 12 per cent the reaction was relatively constant, being at first negative, then changing

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to positive and remaining positive in all later tests. In 7 cases or 4 per cent it was first positive and later became negative.

Table 1: Constancy of reactions

R.P.F. 171	Constant 164 — 96%	Absolute 143 — 84%	Negative 69
			Positive 74
		Relative, from — to + 21 — 12%	
	Inconstant 7 — 4%		
R.T.M. 88	Constant 85 — 97%	Absolute 73 — 83%	Negative 15
			Positive 58
		Relative, from — to + 12 — 14%	
	Inconstant 3 — 3%		

The R.T.M. reading was absolutely constant in 73 or 14 per cent of the 88 cases studied, negative in 15, and positive in 58 cases. In 12 cases or 14 per cent successive readings were relatively constant.

AGREEMENT OF RESULTS IN BOTH REACTIONS

In 191 cases in whom 1 or more intradermal tests with lepromin were done, it was possible to read both reactions. In 174 of these cases (91 per cent) both tests gave the same reading, negative in 79, and positive in 88 (Table 2). There were 7 in whom the first readings were negative, but who later gave positive readings. In 17 cases (9 per cent) there was disagreement in the results of the 2 tests. Thirteen were R.P.F. negative and R.T.M. positive, and in 4 cases the R.P.F. was positive and the R.T.M. negative.

Table 2: Agreement between R.P.F. and R.T.M.

R.T.M. Reading	R.P.F. Reading		
	Positive	Negative	Total
Positive	88	13	101
Negative	4	79	83
Total	92	92	184

POSSIBILITY OF READING BOTH REACTIONS

Of the 309 supposedly healthy contacts in whom the test was done, it was possible to read both reactions in only 191 cases.

COMMENTS

The percentage of contacts in which successive readings on the same antigen, made early or late, are the same is very high. From this we conclude that in the investigation of the allergic response of healthy contacts to lepromin, the two tests are of the same value. The small amount of disagreement may be interpreted as due to technical errors (subdermal injections, errors in reading, secondary infections, etc.). Therefore it makes no difference whether the early or late reactions are read. However, at least in our experience the early or R.P.F. reading can be made in a larger proportion of cases. It would then be advantageous to use as a routine the early reading, using always the bacterial or whole lepromin.

REFERENCES

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