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“LEPRA REACTION AND METEOROTROPISM”

To the EDITOR:

Dr. A. A. Stein, of Leningrad, has offered [the JOURNAL 3 (1935) 137] interesting suggestions as to the relation of lepra reactions and climatic conditions, he having found them to be most frequent under unstable atmospheric conditions. It is true, as he says, that various disease manifestations occur more frequently at the time of weather changes than during stable weather. Peterson, of Chicago, in his recent book “The Patient and the Weather” stressed

this same point. I have made similar observations with regard to attacks of acute appendicitis and also with suicides; periods of falling barometric pressure and rising temperature (the "warm front" periods) show a tendency to be accompanied by waves of suicides and acute appendicitis. Pneumonia and many other infectious diseases also show such a weather influence, and the same is true of eclampsia.

Stein found the great majority of his lepra reactions in Leningrad to fall on days of changing weather, only 6 out of 86 occurring during stable weather. Unfortunately, beyond saying that "in summer, and to some extent in winter, when the weather is stable," he does not indicate how much stable weather is experienced at Leningrad. It would have been useful had he indicated what proportion of the days out of each year are characterized by stable weather.

In the stormy regions of the north temperate zone, such as the northern United States and the Baltic Inlet of Europe, there are few days in each year when meteorologic conditions could be so characterized. Usually, with the frequent passage of "highs" or "lows," our atmosphere would be classed as distinctly unstable. Leningrad receives frequent cyclonic changes that pass over the British Islands and up the Baltic Inlet. Since reading Stein's paper I have seen weather data from Leningrad for 1908; from them it appears that very few days of the year could be classed as "stable." Perhaps Stein, in an early number of the *JOURNAL*, can give a graph of the temperature and pressure behavior for the full year of 1930, indicating the timing of his lepra reactions so that we can form a better idea of just what relation the reactions bear to weather changes.

When I was at the Cullion Leper Colony early in 1935, at the time Stein's article was in press, I was told that it was intended to follow-up there his suggestive findings. That should give valuable information along this line, for temperature and pressure changes take place in the Philippines much more independently of each other than in temperate regions. The findings in the large mass of patients at Cullion, of whom it is said that some 0.5 per cent are in the state of lepra reaction at any given time, will perhaps give us a clue as to just what meteorologic factors are active in producing disease reactions in patients. With the tropical typhoons the barometric pressure drops markedly with relatively little temperature change, while at other times of the year temperatures may show considerable fluctuation while the pressure remains stable. The results of an analysis

of lepra reactions in Culion or Manila in relation to weather changes would be of great interest to those working on this general problem.

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