

THE TUBERCULOSIS PROBLEM IN LIFE ASSURANCE.

A highly suggestive paper was read by Dr. Otto May, principal Medical Officer to the Prudential Assurance Company, London, England at a recent meeting of the Assurance Medical Society, on the above subject Dr. May said:—

It is a fact of universal experience that tuberculosis "runs in families." This fact was incontrovertible, but its explanation is still a matter of debate. Is it a question of inherited "predisposition," a "lack of resistance," or is it rather a contagion spreading from member to member through a family? Even if the hereditary view be accepted we must guard against the assumption that a tuberculosis family history necessarily renders the proposer an impaired life, acceptable only at special rates. This matter had been carefully investigated by statisticians, and the chief findings were summarized as follows:—

(1). The mortality experienced in the early years of insurance was heavy, especially for young ages at entry. In other words, the effect of a definite tuberculous family history shows itself mainly in the younger ages of entry and the early years of assurance.

(2). After the first five years of assurance the excess mortality is less marked, especially in the case of endowment assurances, in which it comes well within normal limits. The latter fact suggests the importance of selection by the assured—of the "bad life" more or less consciously choosing a whole-life assurance rather than an endowment.

(3). As regards the relative importance of lineals and collaterals, the writers have no hesitation in expressing the opinion that at least as much attention must be given to a history of tuberculosis amongst brothers and sisters as amongst parents.

(4). The degree of tuberculous family history is of much less importance than the age of entry, and may, in fact, be said to have no practical value for assurance purposes over age 35 at entry.

Age, Weight and Height.

In 1914 an elaborate medico-actuarial investigation embodying the experience of the leading American companies with regard to special risks, appeared, and the following findings with reference to tuberculous family history are specially interesting

(1). Family history of one parent and one collateral: at young age of entry (15/29) decided increase of mortality, especially in the case of underweights. This excess mortality is largely due to phthisis, the proportion of which to total deaths is closely related to degree of underweight.

(2). Family history—one parent and one brother or sister. Mortality high in younger ages (below 35) at entry among light-weights.

(3). For entry under 30, a record of tuberculosis appears of more consequence in the case of a brother or sister than of a parent, a result perhaps explicable by more rigid selection in the latter cases.

(4). Tall underweight men (5 ft. 11in.—6 ft. 2 in.), showed a considerably higher mortality than short and medium underweights (5 ft. 2 in.—5 ft. 10 in.)

(5). Except at entry ages under 30, the mortality has generally been lower than the normal, a result explainable only on the supposition that an unusually high standard of physical fitness has been required.

Contact Infection.

What importance should be attached to the circumstance of a proposer living or having recently lived in association with a person or persons suffering from "open tuberculosis?" According to some writers true contact infections in adult life are so exceptional as to be almost negligible, and hence, from the assurance point of view, not much importance need be attached to a proposer's living in a tuberculosis environment. If contact infection were a frequent phenomenon one could hardly postulate a more favourable condition for its occurrence than in the case of a healthy husband living with a phthisical wife, or vice versa. Yet the probability of infection between husband and wife is considerably less than between parent and child or brother and sister, a result suggesting that hereditary "lack of resistance" plays a considerably greater role than direct infection.

Another writer comes to the conclusion that marital infection is extremely common, his view being that over 50 per cent. of all cases of phthisis seen are due to direct personal infection. If it be granted that direct infectivity of tuberculosis from person to person is comparatively small, it is going too far to assume that it is in all cases negligible.

The Conditions of Mass-Infection.

"Mass-infection" is defined as a concentrated dose of bacilli sufficiently strong to overcome the existing resistance of the body. This varies from time to time. A dose of infection that may be harmless to an individual when he is fit, may be very noxious if he is run down in health. Contact in good hygienic surroundings, with adequate ventilation, is far less likely to be harmful than in a close ill-ventilated place. The risk of "mass-infection" in a hospital or sanatorium is practically negligible.

Dr. May's own views as to the treatment of contact cases were summarized as follows:—The points to be considered:—(a) Family History. (b) Personal history. (c) Personal condition of proposer, including age. (d) Hygienic conditions under which contact occurred.