

was 25,000. There were 5,283 families, and 63 deaths from consumption, during the year, between the ages of 15 and 35. But these 63 deaths had occurred in twenty-nine per cent. of the families in which deaths had occurred, leaving seventy-one per cent. that had not suffered from this disease. This would very clearly go to establish that the ravages of the disease are limited to a considerable extent to certain families. The above shows that fifty per cent. of the death rate from 15 to 35, which the 63 amounted to, was confined to twenty-nine per cent. of the families. But right here we are met with the difficulty, how many of these cases, in the same families, were due to infection? This question I shall endeavor to answer.

Many of the very ablest hospital physicians now contend that consumption can be communicated from the sick to the well. In 1865, Villemin of Paris announced his great discovery that tuberculosis could be communicated by the use of the matter coughed up from the lungs. Many confirmed these observations, among them being Sir Andrew Clark, Ransome and Drysdale. Such distinguished authorities as Osler, Bristowe, Bang, Sander-son, Koch, and many others have stated in the most positive terms that the disease must be regarded as a contagious one. Eristowe recently remarked at a meeting of a learned society that the germ of consumption was as surely the cause of consumption as the seed was the cause of the crop of corn. It was only a question of suitable soil. Dr. Bollinger within a very recent date has shown that a certain dosage of the germs has also something to do with the occurrence of infection. When, in 1881, Koch gave to the world his great discovery that consumption was a germ disease, then it became clear to the minds of most medical scientists that it would prove to be contagious. The problem that has been engaging attention since, is the method of the infection.

The important facts that I have just stated, that one-half the number of the deaths between 15 and 35 are due to tuberculosis, and that this half is confined to not more than one-third of the families, would go to prove contagion, as well as heredity. We are here on the borders of a problem of vast inductions. The question of heredity, that of contagion from a sick person, and that of direct infection by dust or food containing the germ, must all be weighed. For example, a young man develops the disease; his father died of it a short time before. Now, did heredity play any part in this case? Or, did the son contract the disease from the father? Or, did the son acquire the disease by inhaling tubercular dust at his work or by drinking tubercular milk or eating tubercular meat? It is easy to see that in the case just supposed, one, two or all three conditions might have been at work. The son may have inherited a suitable soil for the germ, and in addition may have taken into his system some of the germs from his father, and still further may have been employed in an unhealthy work shop, dusty and badly ventilated.

The late Hilton Fagge held that it was impossible to draw a line between inheritance and infection. It is probable that the children of a consumptive parent would be more liable to accidental contamination than those whose family record was clear. In crowded children's homes and unhealthy work-houses, there have been at times endemic attacks of the disease, as many as eighty per cent. suffering from it.

My own studies on this subject would go to confirm those of Dr. G. A. Heron, of London, that, in the past, heredity has been over-rated as a factor in the production of the disease, while contagion has been under-rated. To illustrate what I mean:—several members of a family, who live at home, contract the disease, one after