

THE CAUSE OF TYPHOID FEVER.

More than seven years ago a physician and writer of high standing wrote to a leading London medical journal on the cause of typhoid fever. "How long," he wrote, "will etiologists continue to resist the conclusion that the infective agent of typhoid is derived from a specific mildew, occurring on faecal matter." It seems as plain as can be that the contagium of typhoid, whatever it is, is most intimately associated with faecal matter. Scientific research proves that the contagium itself is a very low form of vegetable growth—a sort of mould, or that it is most intimately or inseparately connected with such a plant.

As the above named writer observes, "nothing is clearer than that most of these low terrestrial organisms will not only sustain themselves when they are accidentally immersed in fluids containing nitrogenous matter, but will multiply rapidly under the abnormal conditions."

The vegetation found over and over again in the intestines and other parts of the body of those who had died from typhoid fever, is the water condition of the plant, and by cultivation on the free surface of a suitable soil it reverts to its original or mildew form. "It is, then, a warrantable scientific inference that the vegetation in the typhoid tissues is a casual and degenerate stage of its existence, and that its true, or highest or original form, is that of a mildew growing on a free substrate.

"Other animal and vegetable matters may occasionally be overrun by this specific mildew of typhoid, and may thus cause the surrounding atmosphere to be charged with particles of the mildew. The toxic properties of these particles may be modified by the qualities of the substrate; but it is probable they will, if imbibed, cause some one or more of the typical symp-

toms and lesions of typhoid. Hence, possibly, febriculæ, and bastard or obscure forms of typhoid. The one great substrate, however, which has supplied the typhoid mildew in all ages and in all countries is faecal matter. By this hypothesis every phenomenon which has been observed in every epidemic, and in all isolated cases of the disease, may be clearly interpreted. For instance, the celebrated Munich problem, which has exercised Professor von Pettenkofer for so many years, admits of the readiest solution by this mildew on faecal matter. Granted that the rise and fall of the ground-water governs the Munich epidemics, and that typhoid rages most when the water is lowest, as the water falls in the privy-shafts, the excrement surface for the mildew increases, and, as a consequence, the air is poisoned to a greater extent. When the water rises, the substrate adhering to the sides of the excavations is covered, and the mildew swamped."

It appears evident, moreover, that in the water phase of this plant, it will develop and multiply in milk. Hence the origin of epidemics of typhoid through the milk supply.

With the view of obtaining information bearing upon the origin of typhoid fever, the editor of this Journal sent out some months ago to a large number of medical practitioners throughout the Dominion, the following questions:

1. In your experience, or so far as you have observed or recollect, in cases of well-marked typhoid fever, have you nearly always, most commonly, or only rarely, been able to trace its source as from another case of typhoid?

2. In other cases, have you, in a large proportion or in a small proportion, observed that the origin seemed to, or may have been associated with excreta, especially human excreta, as in privy vaults?