

endemic; but there seems to be something in the manner of living amongst certain classes of the community, that renders them more liable to the disease than others are. Amongst the country population, it proves to be more prevalent, according to our own Death Reports, than amongst those of the cities; and the larger the city, apparently, the smaller the proportion of deaths from diabetes. According to reports, in the city of New York, out of 1,379 deaths, only one was caused by diabetes; and in Philadelphia, only one in 875. Taking the five largest cities of Ontario, viz., Toronto, Hamilton, Ottawa, London, and Kingston together, we find seven deaths from diabetes in 4,524 deaths, or one in about 646. Taking all the cities and towns together, and we get 11 from diabetes in 6,737 deaths, or one in about 612. Taking the smaller cities and towns by themselves, we find 4 deaths from diabetes in 1,421 deaths, or one in about 355. Taking the whole Province, and we find 70 deaths from diabetes, in the grand total of 21,702 deaths, or 1 in about 310. But taking the *counties alone*, leaving out all the towns and cities, and we are confronted with the large proportion of 59 deaths from diabetes in 15,657 deaths, or 1 in about 254.

Again, out of the 31 cities and towns in Ontario, 14 (nearly half), viz., Brantford, Walkerton, St. Thomas, Windsor, Kingston, Owen Sound, Belleville, Goderich, Sarnia, Napanee, St. Catharines, Cobourg, Whitby, and Berlin report no cases of diabetes; and the large city of Toronto reports only 4; the cities of Hamilton, Ottawa, and London 1 each, and the city of Kingston none.

But when we turn to the counties, the facts are quite different, and add stronger confirmation to the theory which I venture to propound, that diabetes is more prevalent in agricultural regions than in towns and cities—that it is in fact a "*country disease*." *Thirty-nine* counties in Ontario have reported deaths; and only *eight* out of the thirty-nine (only about one-fifth) have reported no deaths from diabetes. These are the counties of Algoma, Elgin, Frontenac, Hastings, Norfolk, Oxford, Prescott and Russell, and Welland.

From the scattered situation of the foregoing counties and the proportionately small number which have been exempt from the disease, all notion of any endemic influence is dispelled; but the presumable fact remains, that there is some-

thing in the habits of life of our agricultural population which predisposes them to this disease. Of 11 cases of which I have taken note, 7 were farmers or farm laborers; and I think the remaining 4 lived either in small villages or in country places. Authorities state that it is more prevalent in the agricultural counties of England than elsewhere, and in Normandy in France, which is largely an agricultural section of country. Regarding its geographical distribution in the various countries of the world, there does not seem to be a sufficient difference in its occurrence amongst them to lead to any definite conclusions respecting its origin. India, and a few other countries are said to be more liable to it than the rest of the world.

The pathology of diabetes is a most difficult problem; perhaps for 200 years the best minds in the profession have been directed to its investigation, and of late years volumes have been written upon its proximate and remote causes.

Old Cullen, as we call him, came to a conclusion by his acute powers of observation, that "no topographical affection of the kidneys has a share in producing this disease, and that a fault in the assimilation of the fluids is rather to be blamed, and that even the *solid food taken in*, increases the quantity of the urine voided, at the same time with an increase of the saccharine matter."—(*Pract. Phys. Art., 1510*). Since his time, its origin has been sought for, one might say, in all the different organs and tissues of the body. The brain and nervous system (especially the sympathetic), it has been shown, play a very important part in the production of glycosuria. Some of the experimental operations which may give rise to it are the following, viz.:

1. Irritation of the diabetic centre, which is situated in the floor of the 4th ventricle, at the roots of the pneumogastric nerves.
2. Transverse section of the medulla oblongata.
3. Section of the spinal cord above the 2nd dorsal vertebra.
4. Section of the filaments of the sympathetic n., accompanying the vertebral artery.
5. Destruction or extirpation of the superior cervical ganglion.
6. Sometimes, but not always, division of the sympathetic in the chest.
7. Section or extirpation of the last cervical ganglion.
8. Section of the two nerve-filaments passing from the inferior cervical to the superior thoracic ganglion.
9. Section