THE CANADA LANCET.

A MONTHLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE, CRITICISM AND NEWS.

VOL. XVII. TORONTO, AUGUST, 1885. No. 12.

Original Communications.

DIPTHERIA.*

BY G. A. TYE, M.D., CHATHAM, ONT.

No subject can be presented to practical physicians that possesses a greater interest than diphtheria—a disease as ancient as history itself, and as widely spread as the human race. It stays not its ravages for country nor climate; it ruthlessly invades alike the hut of the peasant and the palace of the prince; it is not ashamed to claim its victims in the house of poverty, nor fears to enter the home of luxury. Many here to-day have had the circle of their own fireside broken, and every one here has felt his utter weakness when the home of his friends was desolated in spite of all his art, and to-day we unite our forces to meet a common foe.

We possess two means—*prevention* and *cure*—which enable us to lessen its ravages. Our greatest power at present lies in the former. It is a great satisfaction that at last we have a system of State medicine established in Ontario, and that legislative enactments now guard the birthright of every subject's health. Such legislation marks an advance in true civilization. The country owes much to the Ontario Board of Health for its energy, intelligence, and thoroughness in carrying out the Act. The people of Ontario are being rapidly educated in sanitary matters, and there are fair prospects that the prevalence of this disease, as well as many others, will be soon limited.

The report of the Registrar-General shows that it ranks high amongst the fatal diseases of this Province. For the year 1876 he reports a large increase in the number of deaths. In 1874 the deaths were not sufficiently numerous to be placed in the list of the ten highest causes of death, but in 1876 it stands third. Many deaths really due to diphtheria are returned as croup; but the death rate from croup also increased in the same year, showing that they were probably due to one cause. In 1877 it stood fifth; 1878, fourth; 1879, sixth; 1880, fifth; 1881, fourth; 1882, fifth, in which year there were 1,239 deaths from this cause alone.

The predisposing causes are telluric, meteorological and individual. Amongst the former are low, damp situations. Houses are placed close to the ground, with no provision for currents of air to pass beneath them to dry the soil or expel noxious vapours. Houses too closely surrounded with plants, shrubbery, or trees, are favourable to the development of low organisms. River flats, sites of old saw mills where there is much decomposing sawdust, seem to be prejudicial. I have observed several cases apparently due to these causes—at least no other could be found. I have notes of nine cases observed in the autumn of 1884, which occurred within two weeks in two adjoining blocks of small tenement houses, placed close upon the flat, damp, undrained ground. Dr. Ryall, Medical Health Officer of Hamilton, reports to the Board of Health (in April last) of that city, the condition of the premises in which diphtheria was found. The description is so vivid and terse that I produce it: "The results of the examination of the affected districts revealed cellars dirty and damp, smelling strongly of sewer gas, vegetables stored in cellars decomposing and smelling badly, kitchen sinks and baths untrapped and unventilated, being connected either with sewer or water-closet, or bad smells in back yards, defective pan water-closets, soft-water cisterns under the kitchen floor, well-water used which received drainage from the surface manure heaps. A few cases occurred where the premises were in good order, but the surroundings were bad." The germ of diphtheria, whatever that may be, always finds in such conditions a suitable nidus for development—breeding spots where one germ generates many. All these causes are in the preventible list, and with the aid of the physician the people can remove them.

Meteorological conditions of a certain kind are strongly predisposing. The Michigan State Board of Health finds that diphtheria is increased by—increased daily temperature above the average for that period of the year, increase of humidity, increase of cloudiness, excess of winds, excess of ozone, high barometric pressure. Our own health

*Read before Ont. Med. Association, London, June, 1885.