

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 and decomposing, smelling badly, kitchen sinks and baths untapped 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 receives drainage from the surface manure heaps abundant. 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 these causes.

Meteorological conditions of a certain kind are strongly predisposing. The Michigan State Board of Health find 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 reports establish the fact that the disease is most prevalent in November and December, when many of these conditions exist, and during this period there are high barometric pressure, magnetic displays, and an electrical condition of the air producing nascent oxygen and ozone.

The experiments of Benjamin Ward Richardson show that these gases are irritating to the respiratory passages, hence we find an excess in sore throats, and a corresponding increase in diphtheria. We must conclude from these premises that sore throat is a favourable locality for the reception of the diphtheria germ.

The throats of children are very susceptible to atmospheric changes, and consequently age is a predisposing cause. The greatest mortality occurs from two to five years of age. The Registrar-General's Report for 1879 states that, of 574 deaths, 283—or about one-half—were under five years; 184 between five and ten. In 1881, 72 per cent. were under sixteen; in 1882

there were 1,239 deaths, 83 per cent. were under fifteen. The exciting cause of this disease is probably a germ from some former case. Bacterial pathology has not yet clearly established its nature.

The natural history of these germs teaches us that they thrive best where there is moisture and decomposition of organic matter, and continue to produce their kind so long as favorable soil is present, and that those already formed may linger long in a locality after the production has ceased.

Dr. Bryce, in Health Report, says there does not appear in the whole catalogue of disease one which is so persistently endemic in a locality when once introduced.

What are the modes of communication?

It is communicated by the direct passage of morbid material from a diseased throat to one previously healthy. The history of tracheotomy presents some lamentable illustrations of this fact. It may be communicated by the inhalation of germs existing in an insanitary locality, although no case of the disease then exists there. It is communicated by germs wafted in the air, and that for a considerable distance; and they produce the disease, more especially when a predisposition exists, so that many suffer whose sanitary surroundings are apparently perfect; so that the clean, as well as the unclean, may be obliged to share the calamity.

I shall confirm these propositions by a few cases.

A medical man reports to the Provincial Board that the mother of a large family laid out the body of a little girl dead of diphtheria. In a few days four of her children are down with it. The pall-bearers were boys. One of them took it home, and seven of that family are ill.

Last December I saw a boy, aged fourteen, then ill for five days. His mother saw membrane in the throat. Croupy symptoms were strongly marked. It was a serious case. I found that three weeks previously he passed the night at the house of an uncle, and slept in a bed in which a child had recently died of diphtheria. Dr. Holmes, of Chatham, related a case which seems to show that it may be carried in clothing. A gentleman called at a