

the fact that so long as Boston is a commercial city, so long Boston harbor will be the centre of its business, and its growth will be around the harbor. The population of the whole territory now belonging to Boston was in 1865 268,626; and in 1870 292,499; the annual percentage of increase for that period was therefore 1.77. It is probable that the population of Boston, including all the annexed territory, does not exceed 320,000. Probably it does not reach that number.

These figures show that unless the growth has been considerably more rapid since 1870 than it was for the five years previous, twenty-four millions of gallons will give each inhabitant more than sixty gallons daily; and that the estimated increase of population in both districts (9181) would require an annual additional supply of less than three fourths of a million gallons daily. The above facts and figures have led the writer to the following conclusions:—

First, that the present sources, if fully developed, will give Boston and the towns dependent upon them an ample supply of water for ten or fifteen years to come.

Second, that the impurities in our water supplies have increased the death-rate of Boston in the years 1872 and 1873. It is this conviction that led the writer, while chairman of the committee above referred to, to urge upon those having the water supply under their charge to purify and develop their present sources before expending large sums to obtain an additional supply from another source.

To make Boston a large and prosperous city, it must be made a healthy city; to make it healthy, the causes of disease must be found and removed; to find the causes, we must be guided to our conclusions by facts, and not by theories, or opinions, or the wishes of interested parties; and to obtain facts, the city should be divided into permanent health districts, and accurate statistics of population and mortality should be tabulated every five years, when the taking of the census would make it possible to form accurate conclusions.

AN UNUSUAL CASE OF HERPES ZOSTER OPHTHALMICUS.

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It has been laid down as a clinical rule, and never to my knowledge contradicted,¹ that when the whole side of the nose is involved in herpes zoster the eye does not escape. The explanation is found in the fact that the same nerve (naso-ciliary) which supplies the skin of the lower

¹ When this case was reported at the meeting of the American Ophthalmological Society, July 18, 1874, Dr. Matthewson of Brooklyn spoke of a similar case which he had observed. Dr. Matthewson's case may be found in the Transactions of the society, 1874, p. 228.

part of the nose and the nasal mucous membrane supplies also the long root of the ciliary ganglion and the long ciliary nerves, and so the cornea and iris.

The following case forms an evident exception to the rule. The eruption was present to the tip of the nose, yet the eye escaped.

A little girl, four and a half years of age, suffering from an attack of herpes zoster ophthalmicus, was referred to me at the Boston Dispensary by Dr. F. B. Greenough, November 14, 1873. The mother stated that she had first noticed complaint of pain, and soon after a "pimple" at the root of the nose, about a week before.

When I saw the patient, there were numerous rather deep ulcerations, some of them covered with thick crusts, from beneath which pus oozed. The ulcerations were situated on the right side of the forehead and front part of the hairy scalp, the upper lid, and the whole side of the nose to the tip. The upper lid was swollen and closed. On raising it with an elevator the conjunctiva of the globe was found much congested, but without chemosis; the cornea and iris were clear and bright. There was no affection of the nasal mucous membrane.

The mother did not bring the child with any regularity, and I saw her only once again during the course of the disease, about a week later. The condition of the skin was a little better, the lid still swollen, the cornea and iris normal.

The first part of April, 1874, I visited the child at her home. There were large cicatricial pits on the right side of the forehead and root of the nose; rather smaller and more shallow ones, but still marked, on the upper lid and extending down the side of the nose to the end. The eye was perfectly normal in appearance. The mother said the whole duration of the disease was about three weeks.

It was impossible to obtain the history of the case with accuracy, on account of the youth of the patient, the ignorance of the mother, and her neglect to bring the child as directed. Still the fact of a well-marked eruption of herpes zoster to the end of the nose, without affection of the eye, was established.

The mucous membrane of the nose was also unaffected. The latter circumstance, together with the absence of lesion of the eyeball, would go to show that the naso-ciliary nerve was not involved; and, assuming this to be the case, the presence of the eruption on the side of the nose may be readily accounted for by the supposition of an anomaly of nerve distribution. This supposition is probably correct; variations in the distribution of sensitive nerves are common, and Professor Turner has reported¹ just such a variation as would be required here: "The frontal nerve gave origin to a long, slender, infra-trochlear branch, which passed below the pulley of the superior oblique muscle, to be distributed along with the infra-trochlear branch of the naso-ciliary nerve."

¹ *Journal of Anatomy and Physiology*, November, 1871.