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THE LATE EPIDEMIC OF SCARLET FEVER
 IN
 ST. MARYLEBONE.

If every Medical Officer of Health in the metropolis would habitually furnish to the Registrar-General such information as he might be able to acquire relative to any epidemic outbreak in the parish or district with which he is officially connected, such information, in the aggregate, could not fail of being most useful, and of great practical value. In our present very imperfect knowledge of what the poison of contagion is, and how it spreads amongst a community, we are compelled to resort very much to statistics, and other ascertained facts, for indications of the means by which the progress of any epidemic disease can be checked; we note the density of population where it prevails, the class of persons attacked, and their general sanitary condition, the states of atmosphere and temperature, type of disease and rate of mortality, together with the probable agencies which contribute to form fresh centres of contagion and the apparent benefits which result from the use of disinfectants. By utilizing the knowledge thus acquired, a great deal of good is accomplished, and in proportion as our knowledge on these points extends, so will our power to combat with these periodic scourges increase.

Impressed with this idea, I have obtained all the information in my power relative to the recent epidemic of Scarlet Fever in St. Marylebone, which I have now the pleasure to publish, and although in many respects it is very imperfect, I trust it may be found to some extent useful.

The period of time over which the increased prevalence and fatality of Scarlet Fever in London extended was about six months, from the beginning of September, 1869, to the end of February, 1870. During that time the deaths from the disease registered in the metropolis amounted to 4,605, and were distributed over the different districts as follows:—

In the West District	...	...	357 deaths
„ North District	...	...	935 „
„ Central District	...	...	467 „
„ East District	...	...	1,343 „
„ South District	...	...	1,503 „

It was in the first week of December that it attained the greatest intensity, when 245 deaths from it were registered; from that period it slowly but gradually declined until the third week in February, when the deaths amounted to 103.

Referring now to the progress of the disease in this parish, I find that during the above-named period the number of deaths registered from it amounted to 184;* of these 35 occurred in the All Souls district, 15 in

* The average number of deaths annually in Marylebone from scarlet fever during the past 10 years has been 93, during the late epidemic the increase has been fourfold.

Cavendish Square district, 37 in the Rectory district, 32 in St. Mary's district, 39 in Christ Church district, and 26 in St. John's district. The largest number of deaths occurred in the third week in December, when 13 were registered, the smallest in the fourth week of January, when only 2 were registered. The proportion of deaths to attacks can only be approximately estimated, for the reason that I have no satisfactory means of knowing the number of cases treated in private medical practice; but from the returns furnished to me weekly by the charitable institutions in the parish, I find that between the first week of September, 1869, and the last week of February, 1870, the number of new cases of Scarlet Fever which came under treatment amounted to 583, and if one-third of this number be added as constituting the aggregate of the cases which occurred in private practice, we shall get a total of 777, which may be taken as a tolerably correct estimate of all the attacks from the disease in the parish during the six months that it prevailed as an epidemic. From these numbers it appears that the proportion of deaths to attacks was 23·7 per cent., or rather less than one in every four cases.

The number of deaths in each district shew that the disease was fairly distributed over the entire parish, and that both as regards the number of deaths and persons attacked, they bore a very near relation to the population of such district. In the Rectory district it was the most fatal, and in St. John's the least so. The number of deaths amongst children under 5 years of age was 123; between 5 and 20 years, 57, and above 20 years, 4. Many deaths were registered as having occurred from *Scarlatina maligna*, and *Scarlatina anginosa*, and some few from Dropsy supervening.

The disease was by no means especially prevalent amongst the dirtiest and most destitute classes, it principally occurred amongst children of the respectable poor, and more frequently than otherwise in houses where the Sanitary conditions were by no means defective; but one feature in regard to the disease is very noteworthy—by far the largest number of attacks and deaths occurred in houses which were occupied by several families—and from this fact we may fairly conclude that in this parish at least, and probably throughout the entire metropolis, it was propagated amongst the inhabitants by contagion, and that an impure atmosphere, produced by defective sanitary conditions, added but little or nothing to the force or virulence of such contagion. To attempt an enumeration of the various ways by which this disease is supposed to be disseminated amongst the population, would occupy a very considerable amount of time and space; it may however suffice to say, that the only known and reliable method for checking its progress is to isolate all who are attacked by it, until such time as the infection has entirely ceased, and thoroughly to disinfect clothing, bedding, and every article of furniture contained in the sick room.

Convinced that the only means which I had the power to employ for staying its ravages in this Parish was by the free and judicious use of disinfectants, I applied for, and readily obtained from the Vestry, authority to adopt such measures of disinfection as in my judgment I thought necessary. I therefore lost no time in procuring an abundant supply of Carbolic Acid, Carbolate of Lime, Chloride of Lime, Chlorate of Potash, Hydrochloric Acid, Sulphur, and Condy's Fluid, and having especially appointed Mr. Lightfoot, one of the Inspectors, to carry out my instructions, we at once commenced by systematically disinfecting every house in the Parish in which Fever or Scarlet Fever had been reported to me as having broken out. The method of disinfection was as follows:—Every room in which a person had died from Scarlet or Typhoid Fever, or from which a person had been removed suffering from either of these

diseases, was disinfected either by Chlorine or Sulphurous Acid Gas. All bed and body linen, carpets, napkins, &c., were hung on lines stretched across the room, the windows, fire places, and doors, were, so to speak, hermetically sealed, and large volumes of Chlorine, or Sulphurous Acid Gas evolved, the former by the admixture of Chlorate of Potash with Hydrochloric Acid, and the latter by the burning of Sulphur. This process was allowed to go on for two or three hours, after which doors and windows were thrown open, and left open until all offensive smell from the gases had passed away. In the other rooms, passages, and staircases of the infected houses Chloride of Lime, or Carbolate of Lime—as circumstances suggested—was sprinkled freely about, whilst all the drains, closets, and dustbins were well flushed with Carbohc Acid.

The number of houses in the parish subjected to this process of disinfection amounted to 241, of these 128 were perfectly clean and in good sanitary condition, 52 houses were dirty, in 33 the closets were either without water or badly supplied, in 15 the drains were untrapped, and in 13 nuisances injurious to health existed, arising either from defective pavements, dampness, or imperfect ventilation. In 15 of the houses that had been disinfected, fresh cases of Scarlet Fever occurred after disinfection, but Mr. Lightfoot reports that in these houses the disinfection was very partial and incomplete, owing to his inability to get the patient removed from the sick room; but he distinctly states that no fresh case occurred in any room or house where the process of disinfection had been thoroughly carried out.

In conclusion I have to express my entire approval of the energy and ability with which Mr. Lightfoot has discharged the duties entrusted to him, exposed as he continually was to the contagion both of Typhoid and Scarlet Fever, and that often in its greatest intensity, he continued steadily at his work, altogether regardless of personal risk or danger.

J. WHITMORE, M.D.,

*Medical Officer of Health,
St. Marylebone.*

COURT HOUSE,
May 5th, 1870.

WEEKLY DEATHS FROM SCARLATINA

In the Six Districts of the Parish of St. Marylebone.

Week ending	All Souls.	Cav. Square.	Rectory.	St. Mary's	Christ Church.	St. John's	Mean Temp.	Barometer.	Rainfall.	Total Deaths.
1869										
Sept. 4.....	2	...	...	...	3	1	56.1°	30.043	0.00	6
11.....	...	1	...	...	2	2	63.5°	29.536	0.69	5
18.....	2	...	1	...	3	...	58.1°	29.433	1.85	6
25.....	1	...	6	2	...	2	56.8°	29.738	0.12	11
Oct. 2.....	1	1	3	...	4	...	58.8°	29.613	0.81	9
9.....	...	1	3	...	...	...	52.5°	29.994	0.02	4
16.....	3	...	1	..	2	...	54.5°	29.823	0.25	6
23.....	2	...	1	2	2	1	42.7	29.846	0.90	8
30.....	2	...	3	2	2	1	40.0	29.850	0.21	10
Nov. 6.....	3	1	4	...	2	2	46.6	29.751	0.27	12
13.....	1	...	3	1	1	1	41.1	29.880	0.08	7
20.....	1	...	...	5	...	1	42.2	30.044	0.10	7
27.....	1	...	...	1	2	4	41.0	29.513	1.16	8
Dec. 4.....	3	1	1	1	...	2	34.2	29.719	0.80	8
11.....	1	3	1	2	1	2	39.2	29.886	0.43	10
18.....	1	...	2	2	5	3	44.7	29.360	1.23	13
25.....	1	1	2	3	2	...	38.2	29.488	0.86	9
1870										
Jan. 1.....	...	1	2	1	2	...	34.2	29.565	0.31	6
8.....	4	2	1	2	...	1	45.2	29.450	0.79	10
15.....	1	...	...	1	3	...	39.3	29.574	0.48	5
22.....	1	...	1	...	...	...	36.1	30.252	0.05	2
29.....	...	...	1	1	1	...	31.6	30.142	0.00	3
Feb. 5.....	1	...	1	...	1	1	42.0	29.648	0.25	4
12.....	...	2	...	2	...	...	32.4	29.800	0.25	4
19.....	1	1	...	1	...	1	30.7	29.901	0.05	4
26.....	2	...	...	3	1	1	36.9	29.503	0.05	7
	35	15	37	32	39	26	...	...	...	184