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with Dr Stark's best respects.

(28)

REPORT

ON THE

MORTALITY

OF

EDINBURGH AND LEITH,

FOR THE MONTHS OF

**January, February, March, April, and May
1848.**

BY


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R E P O R T.

THE mortality of Edinburgh during the past five months of this year amounted to 2519—1265 being males, 1119 females, and 135 still-born. The mortality of the corresponding months during the years 1845, 46, and 47, was respectively 1684, 1967, and 2560.

The mortality of Leith during the first five months of 1848 amounted to 458—193 being males, 237 females, and 28 still-born. The mortality of the corresponding months during the years 1845, 46, and 47, was respectively 226, 302, and 456.

The mean temperature of the above-named five months was, for January 33°.48, for February 39°.60, for March 41°.19, for April 43°.31, and for May 54°.58. The range of temperature was greatest in January, amounting to 49 degrees Fahr., and least in March, when it amounted to 35 degrees only. Thus the range of temperature in January was from 5 to 54 degrees, in February from 15 to 57, in March from 26 to 61, in April from 26 to 65, and in May from 35 to 78 degrees.

The quantity of rain which fell during January amounted to 1.26 inches, in February to 5.21 inches, in March to 2.80 inches, in April to 1.06 inches, and in May to 0.60 inches, being altogether 3.43 inches more than the fall of rain during the corresponding months of 1847.

During January west winds blew 20, east 9½ days. During February west and south-west blew 23½ days, east 5½ days. During March west, north-west, and south-west winds, blew 14 days; east, north-east, and south-east, 17 days. During April east, north-east, and south-east blew 18 days; west, north-west, and south-west 10 days. During May west and south-west blew 19½ days; east and south-east 11 days.

The barometer showed its greatest range during February, when it amounted to 2 inches; its least range in April, when it amounted to only 0.84 of an inch. The mean pressure of the atmosphere was lowest in February, being 29.06 inches, and highest in May, when the mean height of the column of mercury was 29.75 inches. It may be mentioned, that the mean height of the barometer for the last three years at Canaan Cottage, where the meteorological registers are kept, was 29.55 inches. The absolute greatest pressure of the atmosphere during the last five months occurred on the 24th of January, when the mercury rose to 30.20 inches, and the absolute lowest pressure on the 28th day of February, when the column of mercury descended to 28.10 inches.

From the above statement of the mortality it will be seen, that the total mortality of the first five months of this year was very nearly equal to that of the first five months of 1847, during which the mortality in Edinburgh was higher than it had ever previously been. The high mortality of the past months, however, chiefly occurred during January, February, and March, having been highest in January, and having steadily fallen till it almost attained its natural standard in May. Thus, during January the deaths (excluding still-births) amounted to 616, being at the rate of 19.8 deaths daily. During February the deaths numbered 542, being at the rate of 18.6 daily. During March the deaths amounted to 470, being at the rate of 15.1 daily. During April the deaths were 391,

or were at the rate of 13.0 daily. While during May the deaths fell to 365, being at the rate of only 11.7 deaths daily. The deaths during May were thus merely a fraction above the mean daily mortality of the last seven years—excluding last year, during which, from particular causes, the mortality registered in Edinburgh was excessive. There has thus been a steady and progressive diminution in the mortality of Edinburgh since the 30th day of November 1847, on which day, from causes already explained in former reports, the mortality reached the frightful height of 61 deaths, instead of 11, the usual daily average.

As no means as yet exist of ascertaining the number of deaths in the chief towns of Scotland, it may not be uninteresting to compare the ratio of mortality here with that of a few of the chief towns of England, for the first quarter of the present year. The calculations as to the English towns are made from the Registrar-General's report of the mortality of the principal towns of England for the first quarter of 1848.

The following table exhibits the absolute and proportional mortality of the several places mentioned, during the first quarters of the years 1846, 47, and 48, with the ratio of increase or decrease in the mortality during 1848, as compared with the mortality of the two previous years. As the year 1846 may be considered a year of medium mortality, the towns are arranged in the order of least increase as compared with that year.

TABLE I.—Proportional Mortality of different Towns during the First Quarter (ending 31st March) of the years 1846, 47, and 48.

Places.	Mortality of First Quarter, 1846.	Mortality of First Quarter, 1847.	Mortality of First Quarter, 1848.	Increase per cent. in 1848 above the mortality of 1846.	Percentage of Mortality in 1848 with that of 1847.
1. Carlisle,	248	340	294	18.5	— 15.6
2. London,	12,518	15,289	16,455	31.3	+ 7.6
3. England and Wales 117 districts,	43,850	56,105	57,710	31.6	+ 2.8
4. Edinburgh,	1,210	1,403	1,628	34.5	+ 15.3
5. Manchester,	1,527	2,185	2,079	35.4	— 5.1
6. Wolverhampton,	574	769	831	44.9	+ 6.7
7. Liverpool,	1,934	3,068	2,934	51.0	— 4.5
8. Leith,	163	280	267	63.8	— 1.4
9. Birmingham,	876	1,187	1,660	89.4	+ 39.8

Note.—The + mark in the last column denotes that the mortality of 1848 was greater than that of 1847 by the amount noted. The — mark denotes that it was less.

This table shows that, as compared with the standard of 1846, the mortality in Edinburgh during the first quarter of 1848 has been little beyond that of London, while it has been lower than that of Manchester, Wolverhampton, Liverpool, Leith, and Birmingham.

During the months of April and May the mortality of Edinburgh and Leith was the following, during the years 1845, 1846, 1847, and 1848.

	1845.	1846.	1847.	1848.
Edinburgh,	572	734	1009	756
Leith,	59	111	143	163

From this it will be seen that while the mortality of Edinburgh is rapidly falling to its natural standard, that of Leith continues on the increase.

The mortality of the present year has been chiefly kept up at its high rate by the prevalence of epidemic typhus fever. This fever raised the proportionate mortality of zymotic diseases (*i. e.* epidemic and contagious diseases) from 20 per cent. of the total mortality, which is about the average in Edinburgh, to 51 per cent. in December last. From the opening of the year, however, the proportional mortality from the zymotic diseases has fallen in Edinburgh from 47 per cent. of the total mortality, which was the proportion for January, to 32 per cent., the proportion for May; and as the fall has been steady and progressive, we have the prospect of seeing the mortality of this class of diseases speedily reduced to its normal proportion. In Leith, however, which was not exposed to the same aggravating causes as Edinburgh, the mortality of the zymotic diseases during the past months of this year amounted only to 28 per cent. of the total deaths, falling slowly but steadily from 34 per cent. in January, to 22 per cent. of the total mortality in May.

Of the zymotic diseases, typhus fever has been by far the most prevalent. In Edinburgh the deaths therefrom constituted no less than 72 per cent. of the mortality of the class of zymotic diseases, while in Leith they only amounted to 55 per cent. of the same class of diseases. Or, to compare the proportion of deaths from typhus fever with the total mortality, while in Edinburgh the deaths from that fever constituted 28 per cent. of the total mortality, in Leith they were in the proportion of 16 per cent. only. During the above five months 707 persons died from typhus fever in Edinburgh, of whom 432 were males, and only 275 females. In Leith 69 died from typhus fever, of whom 32 were males, and 37 females; thus adding another fact to those already noted in former reports of the different proportion of the sexes falling victims to this disease in places where the fever is to a certain extent kept up by importation, from those in which it solely depends on endemic and epidemic causes.

Of the 31 deaths in Edinburgh, and 3 in Leith, from small-pox, only 3 were reported to have been previously vaccinated. As connected with this disease, it may be mentioned that in several parts of Scotland, where small-pox is at present raging as an epidemic, cow-pox is at the same time prevailing among the cattle; thus showing the close analogy, if not the actual identity of the two diseases.

Measles and hooping-cough, the usual fatal epidemics of children, have been unusually rare during the past months of this year. Scarlet fever, however, has taken their place, and been more prevalent than it has been for several years. In general the epidemic has been mild, but 50 cases in Edinburgh have proved fatal, 25 being males, and 25 females. In Leith also scarlet fever has been unusually prevalent, causing there 16 deaths, 10 being males, and 6 females. It has often been remarked that while one epidemic is raging others are in abeyance. In so far as the epidemics of children are concerned, this has been the case in Edinburgh. In the winter 1835-36, when scarlatina raged to a greater extent than has since been noticed, measles and hooping-cough were exceedingly rare; and the same circumstance was observed during the present epidemic of scarlatina. On the other hand, when measles and hooping-cough were prevalent, scarlet fever has been rare, as was the case in the years 1846-47.

The mortality from influenza has progressively diminished from January, when the deaths therefrom were 26, till April, when they numbered two only. No deaths from that cause were registered during May.

Diseases of the brain were more numerous, and their fatality greater, during the balmy and genial month of May, with its mean temperature of 54.58 degrees, than during any other month of the past year—a fact

still more remarkable when compared with the total mortality of each month. Thus during January the deaths from diseases of the brain were in the proportion of 5.3 to the 100 deaths from all causes. In February they were in the proportion of 6.0 to the 100 deaths. In March as 7.4 to the 100 deaths. In April as 7.6 to the 100 deaths. But in May the deaths from diseases of the brain increased to the proportion of 11.3 to the 100 deaths from all causes; thus apparently proving that the fatality of brain diseases is greater in hot than in cold weather.

Diseases of the respiratory organs were most fatal during the inclement month of January, and least fatal during the balmy month of May. Including croup and influenza, 131 deaths from diseases of the respiratory organs occurred in January, only 74 from the same causes in May. It has often been remarked that consumption is most fatal during the spring months, and the published observations of Casper and others seem to prove the fact. The Edinburgh Mortality Tables bear out this remark, and the following table will show that the mortality from consumption during the spring quarter of the two past years is higher than that of any other quarter of those years.

Quarters of Year.	Deaths from Consumption in 1846.	Deaths from Consumption in 1847.
1st or Winter Quarter,	157	193
2d or Spring Quarter,	166	210
3d or Summer Quarter,	159	194
4th or Autumn Quarter,	157	194

If reckoned by months, however, it appears that a nearly equal mortality from consumption occurs during the coldest or most inclement month, as during the first balmy month of the year. Thus in 1846 the greatest number of deaths from consumption occurred during the months of December and of May, during each of which 67 deaths occurred. In 1847, again, the greatest number of deaths from that disease occurred during December, when 83 died; but during April of that year 82 deaths were recorded. During the past months of this year the deaths from consumption were most numerous during March, and next most numerous during January.

The mortality from diseases of the heart and blood-vessels during the past months was greatest during the months of March and May, but no conclusion could be founded on this circumstance, seeing that during last year an equal mortality from heart disease occurred during the spring and autumn quarters, while in 1846 the fatality of these diseases was least during spring.

Inflammatory affections of the bowels were most common during the month of January, and gradually diminished in frequency till the end of May. The same remark was this year applicable to the mortality of all affections of the organs of digestion.

The deaths registered under the head of old age were most numerous during January—cold ungenial weather being especially noxious to the aged.

Still-births in Edinburgh were more numerous during May than during any previous month of the present year. While only 19 still-births took place during each of the months of April and May, their numbers suddenly increased to 34 during the month of May.

The following is an abstract of the Edinburgh and Leith Mortality Tables for the months of January, February, March, April, and May 1848, classified according to ages and diseases.

TABLE OF AGES. January 1st to May 31st 1848.

AGES.	EDINBURGH.										LEITH.									
	January.		February.		March.		April.		May.		January.		February.		March.		April.		May.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Still-born, .	18	13	18	14	13	6	13	6	18	16	6	10	3	3	5	2	2	2	2	2
1 year and under,	35	33	53	24	25	23	25	16	32	21	28	16	3	3	2	4	4	8	8	8
2	12	21	28	14	11	14	11	13	15	9	13	13	4	5	4	4	3	3	3	3
5	21	19	10	13	19	20	19	14	16	17	13	4	2	5	2	4	4	3	3	3
10	17	7	10	14	6	13	6	9	8	7	8	0	0	2	3	3	4	4	1	1
15	8	2	11	4	8	7	8	3	3	6	7	1	1	1	2	2	0	0	0	0
20	13	12	13	9	21	2	21	10	9	7	3	2	3	1	1	2	2	1	1	1
30	40	31	45	35	25	28	25	21	21	14	37	25	9	6	3	4	2	2	2	1
40	50	21	30	32	22	24	22	30	21	17	43	22	3	7	2	5	5	2	2	1
50	50	34	24	27	25	22	25	26	23	17	32	25	4	7	4	4	4	4	4	2
60	31	33	34	23	13	16	13	11	22	21	18	13	3	3	3	4	3	3	3	2
70	18	34	15	22	14	26	14	14	10	13	12	14	2	2	4	2	2	2	2	1
80	19	22	13	17	9	22	9	16	6	11	11	9	6	1	4	1	1	1	1	1
90	7	10	6	6	0	7	0	8	6	5	5	6	1	1	5	0	0	0	0	0
100	0	4	1	2	0	1	0	2	1	1	0	0	0	0	0	0	1	0	0	0
103	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Not stated,	9	3	5	2	0	1	0	0	4	2	1	0	0	0	2	0	0	3	1	1
Total,	348	299	316	258	211	234	211	199	215	184	255	234	199	44	55	38	47	41	50	37
	647		574		410	489	410	399		104	99	85	91	91	79					

CLASSIFIED TABLE OF DISEASES. Jan. 1st to May 31st 1848.

Class.	DISEASES.	EDINBURGH.					LEITH.				
		Jan.	Feb.	Mar.	Ap.	May	Jan.	Feb.	Mar.	Ap.	May
I.	Small-pox,	6	3	4	7	11	2	...	...	...	1
	Measles,	3	5	4	3	3	1	3	...	1	1
	Scarlet fever,	13	9	9	9	10	1	6	3	5	1
	Hooping-cough,	15	8	10	3	8	...	...	1	1	1
	Croup,	8	4	7	3	5	...	3	4	1	1
	Diarrhœa,	2	6	8	8	8	...	1	...	...	...
	Influenza,	26	10	3	2	...	7	...	1	...	...
	Typhus fever,	209	201	128	102	67	20	20	8	10	11
	Erysipelas,	6	4	3	4	2	2	2	1	2	...
	Other zymotic diseases,	1	5	3	2	4	...	1	...	...	1
II.	Dropsy,	14	9	12	18	13	1	3	1	2	1
	Cancer,	...	1	1	...	3	2	...	...	4	1
	Debility,	16	25	8	9	13	3	1	3	4	1
	Sudden deaths,	1	4	2	2	1	1	1	3	...	...
	Other dis. of uncert. seat,	1	5	8	11	8	1	1	3	2	2
III.	Cephalitis,	4	4	4	1	3	...	...	...	...	...
	Hydrocephalus,	4	13	11	8	13	1	2	4	2	2
	Apoplexy,	12	3	4	9	6	2	...	...	1	1
	Paralysis,	7	8	9	6	4	2	2	2	...	...
	Convulsions,	2	3	2	2	3	1	1	...	...	...
	Other diseases of brain,	4	2	5	4	8	2	...	1	1	1
IV.	Pneumonia,	12	17	12	17	9	3	1	1	4	3
	Asthma,	14	10	9	3	6	2	1	2	...	1
	Consumption,	57	42	58	54	47	10	9	14	14	17
	Other dis. of resp. organs,	14	12	7	6	7	2	3	2	2	...
V.	Dis. of heart & blood-ves.	7	6	8	6	8	...	...	1	3	1
VI.	Teething,	12	12	16	8	6	...	3	...	2	2
	Inflammation of bowels,	32	24	18	19	14	5	7	9	4	5
	Tabes mesenterica,	9	20	9	9	10	2	1	2	3	3
	Other dis. of org. of digest.	11	5	9	4	5	1	2	2	...	1
VII.	Kidney and urinary dis.	2	...	...	4	1	...	2	...	...	...
VIII.	Child-birth,	7	7	7	8	2	1	...	2	2	...
	Dis. of uterus, ovaries, &c.	1	1	4	...	...	1	...	...	...	1
IX.	Rheumatism,	1	2	...	2	...	...	...	...	...	...
	Spine, joint, and bone dis.	1	1	1	1	1	...	...	...	...	...
X.	Ulcer, fistula, & skin dis.	1	1	...	...	...	...	...	1	...	...
XI.	Old age,	57	37	46	28	31	17	13	4	11	11
XII.	Intemperance	...	...	...	...	1	...	...	...	...	1
	Violent deaths & suicides,	10	5	12	6	15	2	1	3	3	1
	Causes not specified,	14	8	9	3	9	...	1	2	4	2
	Total deaths,	616	542	470	391	365	95	91	81	88	75
XIII.	Still-born,	31	32	19	19	34	9	8	4	3	4
	Total,	647	574	489	410	399	104	99	85	91	79

22 NORTHUMBERLAND STREET,
June 1848.