

Report of the principal natural diseases that have prevailed amongst the children of the Royal Military Asylum at Chelsea : from its first establishment in 1804, to the 1st of January, 1814, including a period of ten years, with some remarks thereon / By P. MacGregor, surgeon to the Institution ; communicated by Doctor Roget.

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OF THE
PRINCIPAL NATURAL DISEASES
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AT CHELSEA,
FROM ITS FIRST ESTABLISHMENT IN 1804, TO THE 1ST OF JANUARY,
1814, INCLUDING A PERIOD OF TEN YEARS, WITH SOME
REMARKS THEREON.

By **P. MACGREGOR, Esq.**

SURGEON TO THE INSTITUTION;
SURGEON TO HIS ROYAL HIGHNESS THE DUKE OF YORK;
AND ASSISTANT SURGEON TO THE LOCK HOSPITAL.

COMMUNICATED BY

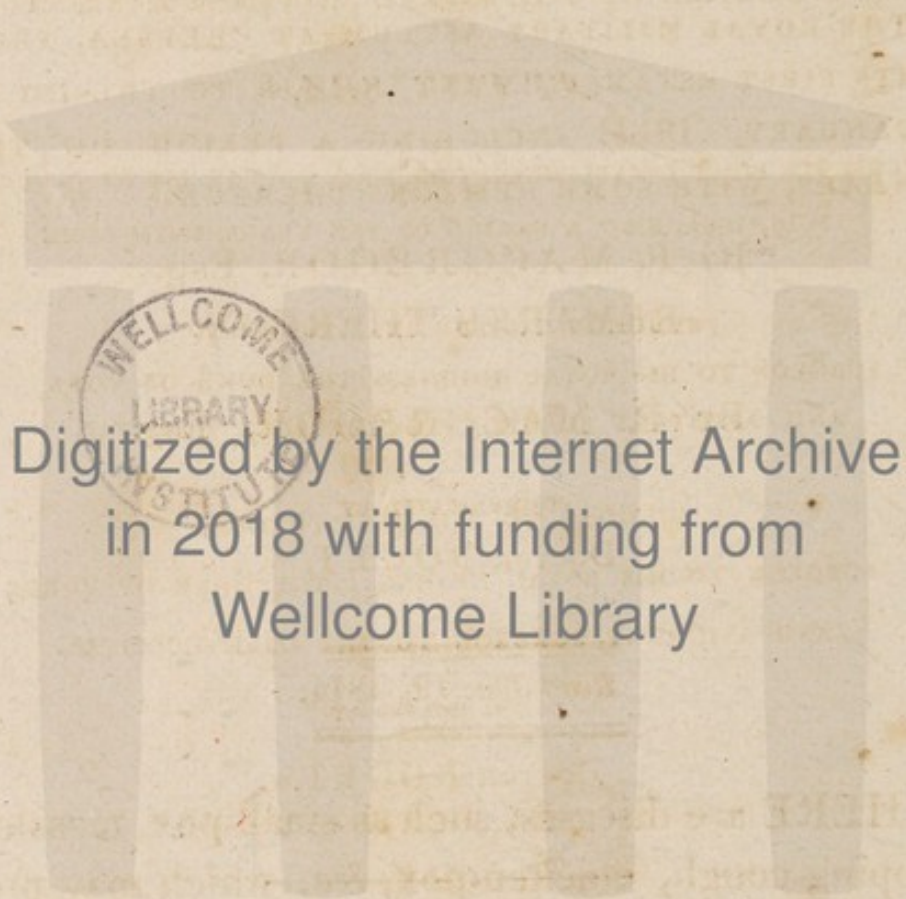
DOCTOR ROGET.

FROM THE FIFTH VOLUME OF THE MEDICO-CHIRURGICAL
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COMMUNICATED BY
DOCTOR ROGET.

Read June 19, 1814.

THERE are diseases, such as small-pox, measles, hooping-cough, chicken-pox, &c. which may properly be defined the natural diseases of the human body, as they are known in general to affect most of our species once during life, in this, and every other country where the body is exposed to that peculiar state of the atmosphere which produces them, or to the matter of contagion arising from persons labouring under them.

At the Military Asylum 1200 children (800 boys and 400 girls) are at present fed, clothed,

and educated under the protection of government. They are the children of soldiers of the regular army, and are admitted from the age of five to twelve years. The boys are sent out from the Asylum to the army, or to the trades they choose to adopt, when they attain the age of fourteen years ; and the girls are sent at the same age to service.

My situation as surgeon to this very extensive establishment for children for a period of more than ten years, has afforded me some opportunity of observing whether measles, whooping-cough, and scarlet fever have been more fatal and severe at the Royal Military Asylum, in the children male and female, that have undergone vaccination, than in those that have been subjected to the casual, or inoculated small-pox.

The result of the inquiry, so far as my opportunities have enabled me to form an opinion, leads to the conclusion, that measles, whooping-cough, and scarlet fever have not been more fatal, or even more severe, at the Military Asylum, in cow-pox, than in small-pox subjects.

I have also further observed at what seasons, and under what other circumstances, measles have been most fatal and severe ; and, on the contrary, under what circumstances this natural disorder has generally passed through its progressive stages,

to a favourable termination, with least injury to the constitution of the individual.

Since the introduction of inoculation for the small-pox into this country, about the year 1721, that terrible disease has become much less fatal and severe. The discovery of vaccination by Dr. Jenner, made public in 1798, as a substitute for the small-pox, has now been the means of that disease having nearly disappeared amongst us; and if the wise regulations proposed by the governments of different countries be sufficiently enforced and fully countenanced by the medical profession, we may hope, ere long, notwithstanding the various objections that have been urged against vaccination, to see the small-pox entirely eradicated from the list of diseases prevailing in this and most other parts of the globe.

The measles is the next most fatal and severe disease, and probably the most infectious, which the rising generation in this country have to encounter in their progress through life. The practice of inoculation for this disease with a view of rendering it less fatal and severe, has been tried by Dr. Home, of Edinburgh, and also I believe by others since he first published his account of the experiment. It has not been found to answer the favourable expectations that were formed respecting it, and has therefore fallen into disuse, having never been practised, but on a very limited scale.

The suggestion of any general means, that may be likely to lessen the fatality that usually attends the disorder in question, may therefore be deserving of some consideration.

I have observed, that measles have been more or less fatal and severe, according to the season of the year at which they happened to prevail : though certainly some years they have been milder at the same season than in others ; and the causes of such marked differences, though generally observed, have not, as far as I know, been satisfactorily accounted for. But it is deserving of notice that, amongst the children at the Military Asylum, measles have been comparatively milder, and invariably less fatal, when they have prevailed in the months of June, July, August, and September, than when they have been rife in the other months of the year, and that three deaths only out of the sixteen deaths from this disease, stated in the annexed return, have occurred in the months alluded to ; though it repeatedly prevailed, at least as extensively in the summer season during the last ten years, as it did at the other periods of the year.

It also further appears from the Infirmary records, that two of the children who died in the summer season, were born in the West Indies, and were so delicate and unhealthy, that they might probably have been carried off by the first

severe disease that attacked them after their arrival in this country *.

It has, I believe, been generally admitted, that measles are milder in warm than in cold climates; and we know that the parts of the body most seriously affected in the disease, and contained within the cavity of the chest, more speedily recover from their effects in summer, than in winter.

If then it is found by the observation of others who have sufficient opportunity of ascertaining the fact correctly, that measles, when they occur in this country in the summer season, are invariably, or at least generally, less fatal and severe than when they prevail during the other seasons of the year; and that they are also known to be milder in warm climates than in ours; might not many lives be saved, and the disease be made compa-

* In the 3d Number of the London Medical, Surgical, and Pharmaceutical Repository, I find a statement, on the authority of Mr. Field, the Apothecary of Christ's Hospital, which corresponds very much with what has occurred at the Military Asylum respecting the mildness of measles when they prevail in this country during one of the four months of June, July, August, and September. I shall transcribe it in the words of the reporter: "In Christ's Church Hospital, measles prevailed in September 1807, July 1810, and September 1812. The total number affected was 103, out of which there were no deaths immediately arising from measles, although three died of croup upon the termination, or as a sequela of the disease."

ratively milder, by exposing healthy children who may have undergone previous preparation to the contagion of measles early in the summer season, at the age which may be found from experience to be the most safe, for passing through the various stages of the disorder favourably?

RETURN of the principal natural Diseases that have prevailed amongst the Children of the Royal Military Asylum, at Chelsea, from the 1st of January, 1804, to the 1st of January, 1814.

Number of Children who have had the Casual or Inoculated Small-Pox previous to their admission into the Asylum	1550
the Cow-Pox before, and since their admission into the Asylum	891
Measles since their admission into the Asylum	358
Hooping Cough since their admission, so severely as to be included in the Sick Return	150
the Scarlet Fever in October, November and December, 1813	131
Measles after Small-Pox since their admission	210
Measles after Cow-Pox since their admission	148
Number of Deaths from Measles after Small-Pox	11 or 1 in 19
Measles after Cow-Pox	5 or 1 in 29
Number of Children who have had the Hooping Cough after Small-Pox since their admission	* 110
after Cow-Pox since their admission	40
Number of Deaths from Hooping Cough after Small-Pox	4 or 1 in 27.
after Cow-Pox	* 2 or 1 in 20.
Number of Children who have had Scarlet Fever after Small-Pox	80
after Cow-Pox	51
Number of Deaths from Scarlet Fever after Small-Pox	4 or 1 in 20.
after Cow-Pox	2 or 1 in 25.
Number of Cases of Dropsy that succeeded Scarlet Fever (in Small-Pox subjects 5—in Cow-Pox subjects 2)	7 or 1 in 19.
Number of Deaths from Dropsy succeeding Scarlet Fever (a Cow-Pox subject)	1

* It is proper to notice, that this is rather at variance with the conclusion that has been drawn respecting the mortality from Hooping Cough in the Children who have previously had Cow-Pox.

ADDITION TO THE FOREGOING PAPER,

*Being Extracts from Letters to Dr. MARCET, from
WILLIAM HENRY, M.D. F.R.S. Physician
to the Infirmary at Manchester.*

Manchester, Jan. 18, 1814.

ON the subject of your inquiry respecting the comparative fatality of measles, at this and former periods, I regret that I have not been able to obtain such full and accurate information, as I could have wished. One parish register contains the account of burials at one church only (the Collegiate Church); and at this church the practice of annexing, to the names of persons interred, the disorder of which they have died, was discontinued for a long series of years, and was revived only about two years ago. The proportion, however, of deaths from measles, to the total number of deaths registered at the same church about 40 years ago, may, fortunately, be gathered from Dr. Percival's Medical and Experimental Essays, and is shewn by the following table.

	Annual Average of Deaths by Measles.	Annual Average of Deaths by all Disorders.
From 1754 to 1758	21	651
1758 to 1764	10.6	639
1764 to 1769	9.6	659
1769 to 1774	21.6	651
Total	62.8	2600

During the two last years, the total number of deaths, and of deaths ascribed to measles, were as follows :

	Deaths by Measles.	Total Deaths.
1812	60	911
1813	18	929
Average of two years	39	920

It would appear, therefore, on comparing the results of the first table, with those of the second, that the fatality of the measles has been much greater on an average of the years 1812 and 1813, than on the average of 20 years, from 1754 to 1774* ; for $2600 : 62.8 :: 920 : 22.2$ instead of 39, the actual average. But taking the interval from 1769 to 1774, the average proportion of fatal cases of measles to the same total (920) will be found to rise as high as 30.5. And if the documents had been furnished for a still shorter interval, it is probable that an average might have been obtained, fully as great as that of 1812 and 1813 ; for the mortality of the measles, as every medical practitioner knows, varies widely with the nature of the prevailing epidemic.

The books of our Infirmary and Dispensary supply no data, that can be of use in determining this question ; for the poor here are but little in

* The year 1760 is not included in Dr. Percival's Tables.

the habit of applying for medical aid in the measles. During the last quarter of 1813, three cases only of measles are registered, as having occurred among the out and home patients. I have applied, therefore, to almost every respectable surgeon and apothecary in Manchester, for the result of his experience on this subject among the higher and middle classes; and the reply has been, without exception or hesitation, that no increased fatality from measles has been observable in this district, since the introduction of the cow-pock. In this judgment, my father, who can look back upon a very extensive practice in the diseases of children for 60 years, entirely concurs; and Mr. Holland, of Knutsford, whose opportunities and qualifications for making valuable observations are unusually great, has expressed the same belief in a letter to me, which I inclose.

TO DR. HENRY.

MY DEAR SIR,

In answer to your inquiry "whether measles have been more fatal, or generally more severe since the introduction of vaccination," I can have no hesitation in saying that, in the circle of my practice, this has not been the case. Thirteen years have now elapsed since the cow-pox was introduced into this neighbourhood; and during the

whole of that time I have not, to the best of my recollection, inoculated a single child for the small-pox, that had not been previously vaccinated; and with the other practitioners in this part of the country, vaccination has been very generally substituted for small-pox inoculation. During this period, measles have been four times epidemic in this town and neighbourhood. On the first occasion, the symptoms were, in every instance, mild, as far as I had the opportunity of knowing. When the complaint appeared the second time, it was more severe, and several cases occurred in which the termination was fatal. There was however no difficulty in accounting for this. The complaint prevailed in the spring of 1807, when a long continuance of easterly winds had made catarrhal affections particularly frequent: and it excited no surprise that measles should then appear with unusual severity. When the wind changed, and the weather became milder, the character of the disease was altered; and no alarming symptoms accompanied it. In all the cases I saw, when we had the complaint frequent, the third and fourth time during the period I have mentioned, the symptoms were particularly mild; and I did not hear of a single case which occasioned the smallest alarm.

Believe me, dear Sir,

Your faithful friend,

P. HOLLAND.

Knutsford, Dec. 18, 1813.

Manchester, Jan. 21, 1814.

The church of St. John's is one at which the middle and higher ranks of our population are alone interred, and the nature of the diseases may therefore be considered as better ascertained.—I have put down the results in the form of a Table, the proportional numbers in the third column being calculated not by figures, but by the sliding rule, and therefore strictly correct only as to the first place of decimals.

The extraordinary fatality of the year 1812, may possibly have been owing in part to the prevalence of scarlet fever, which was also epidemic, and which probably occasioned many of the deaths set down to the account of the measles.

W. HENRY.

TABLE drawn from the Register of the Collegiate Church, Manchester, shewing the Proportion of Deaths from Measles, to Deaths from all Diseases.

[The two first Columns from a Table by Dr. Percival, in his *Essays Medical and Experimental*.]

Interval of Time.	Average Deaths from Measles during 1 year.	Average Annual Deaths from all Diseases.	Proportion of Deaths from Measles to Total Deaths.
From 1754 to 1758	21	651	3.2 in 100
1785 to 1764*	10.6	639	1.66 in 100
1764 to 1769	9.6	659	1.4 in 100
1769 to 1774	21.6	651	3.3 in 100
* Omitting 1760.			

Table from the Register of the same Church for 1812-13.

	Deaths from Measles.	Total Deaths.	Proportion of Deaths from Measles to Total Deaths.
During 1812	60	911	6.55 in 100
1813	18	929	1.94 in 100
Average of two years	39	920	4.25 in 100

Table from the Register of St. John's Church, Manchester.

During 1812	17	229	7.4 in 100
1813	4	250	1.6 in 100
Average of two years	10½	239½	4.35 in 100

THE END.

