A contribution to medical statistics from the acting medical officers of the New Town Dispensary of Edinburgh / [Robert Omond].

A

CONTRIBUTION TO MEDICAL STATISTICS,

FROM THE

ACTING MEDICAL OFFICERS

OF THE

NEW TOWN DISPENSARY OF EDINBURGH.

COMMUNICATED BY R. OMOND, M.D. EDIN., F.R.C.S.E., MEDICAL SECRETARY OF THE DISPENSARY, AND A. DOUGLAS MACLAGAN, M.D. EDIN., F.R.C.S.E., LECTURER ON MATERIA MEDICA.

(Extracted from the Edinburgh Monthly Journal of Medical Science—May 1841.*)*

In presenting to the medical profession the recorded practice of an Edinburgh Dispensary, during the currency of one year, it would be presumptuous to affirm that much information can be at once communicated. Such a record possesses little intrinsic value, and, except among those immediately connected with the institution, its detailed proceedings must be uninteresting. It is very different, however, when many such records are preserved, whether proceeding from several medical establishments, during the same year, or from the same establishment during a series of years. In either case, beneficial results may be confidently expected; and limiting the remark to the latter alternative, it may be safely asserted, that if, for a succession of years, there be kept registers of disease, similar to the following, and subjected, no doubt, to annual improvement, an amount of experience will, in due time, accumulate, not only instructive and valuable to the medical profession, but specially calculated to test and to establish the principles of medical statistics.

Of the various institutions in Edinburgh best adapted for these useful purposes, the Royal Infirmary occupies the first place, and there can be but one opinion regarding the utility of the exact system of registration recently pursued there; recording, as it does, not only the age, sex, and occupation of each patient, with the nature and history of the complaint, and its duration, but also registering any supervening disease, and, when a fatal result occurs, minutely analysing the cause of death. To possess, however, anything like an approximation to the actually existing state of disease in this city, during any particular period, each of the Dispensaries will require to supplement the Infirmary registers by a full report of its own experience, and thus all the medical institutions of the city will furnish the means of drawing carefully ascertained results from many thousand cases of the annually prevailing diseases.

With this intention, so far as the New Town Dispensary of Edinburgh is concerned, its medical officers have prepared a concise view of their practice and experience during the year 1840. The field of observation consists of 7273 patients, being either medical or surgical cases, and not including the obstetrical and vaccine departments. Of the above list, 4659 have been visited in their own dwellings, while 2614 have been prescribed for at the Dispensary. It sometimes happens that the same individual is first seen at home, and is then so far better as to come to the institution, or *vice versa*, but such cases are registered only once, and all of them as visited at home.

With regard to the 2614 patients who applied in person, their number does not furnish any direct evidence as to the general extent of disease, being increased only by the prevalence of trifling ailments, and at once diminished by the appearance of severe disease. The weather also causes the number of such cases to fluctuate. The same patient, who, on a fine day is able to walk to a Dispensary, is obliged to remain at home during a storm. Thus the summer is found to furnish more patients of this class than the winter. The average monthly applications during 1840, are between 217 and 218; during February the number fell to 178, while during August it rose to 262.

The following table gives a view of the cases in this department. To mention the specific disease of each patient, as in the Dispensary register, would be less interesting than troublesome. The division into nine general heads is of greater utility, and of more correct application to statistical purposes.

TABLE

OF

2614 PATIENTS WHO APPLIED AT THE DISPENSARY.

	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	During 1840.
Febrile and General Diseases,.....	11	22	20	27	13	24	24	33	20	15	21	12	242
Cutaneous Diseases,.....	30	32	40	40	38	50	43	50	33	21	14	25	416
Diseases of Brain, Nerves, &c.,.....	14	10	12	15	9	13	13	20	22	15	15	10	168
—— of the Chest,.....	48	28	51	25	45	33	40	33	36	36	51	49	475
—— of Stomach and Abdomen,.....	51	40	37	58	43	43	71	59	94	58	53	50	657
—— of Urinary Organs,	8	10	10	10	8	8	10	10	5	10	9	6	104
—— of Uterus,.....	8	7	8	3	2	8	4	8	9	2	2	3	64
Injuries of Loco-motive Organs,.....	20	18	14	17	18	14	18	30	18	11	22	22	222
Diseases of do.,.....	20	5	25	12	14	13	17	24	20	15	12	18	195
Anomalous Cases,.....	11	6	7	4	8	14	2	4	5	1	4	5	75
Number in each Month,	221	178	224	211	198	220	242	271	262	184	203	200	2614

Of these 2614 cases, the medical officers of the Dispensary have recorded the age, sex, and residence of each patient, the date of application, and the disease; but they find by experience, the extreme difficulty of persuading people in the working or pauper classes, to return punctually to the Dispensary, so as to ascertain the duration of ailments, and the effect of remedies. It is substantially correct, however, with regard to these cases, to consider almost all as cured. For every such patient, who is, or becomes dangerously ill, is recommended to remain at home, and is visited there, being thus transferred to the other class of cases, where results are carefully ascertained;—and of this more numerous department, the following is a general statement.

The division of diseases into general heads, has been retained, on account of its ready applicability to useful purposes; and in dealing with Dispensary practice in this way, few errors are likely to occur. With the same view, the subdivision into specific diseases is not pushed far. Peritonitis, for instance, includes all the inflammatory attacks of the abdominal viscera, and rheumatismus, a whole host of affections of the joints and muscles.

DISEASES AND RESULTS OF 4659 CASES,

VISITED IN THEIR OWN HOUSES.

		Cured.	Relieved.	Sent to Hos p't.	Irregular.	Died.	Event unknown.	Total.
Febrile and General Diseases, 1284 Cases.	Febricula	253	...	...	1	...	4	258
	Typhus	188	...	75	3	15	16	297
	Feb. Inf. Rem	13	1	...	1	...	...	15
	Feb. Intermittens	1	...	...	...	..	...	1
	Scarlatina	79	1	2	...	6	2	90
	Variola	142	2	5	3	32	4	188
	Varicella	6	...	...	...	...	...	6
	Rubeola	68	...	...	1	1	...	70
	Influenza	38	1	..	...	...	...	39
	Rheumatismus	139	30	8	5	1	6	189
	Erysipelas	50	1	9	...	...	1	61
	Hydrops	24	12	...	...	2	2	40
	Scrofula	3	6	...	1	...	2	12
	Marasmus	4	3	...	2	5	...	14
	Carcinoma		1	...	1	...	1	3
	Plethora	1	...	..	...	...	...	1
Cutaneous Diseases, 147 Cases.	Morbi Cutis Varii	116	24	...	2	...	5	147
Diseases of Brain and Nervous System, 214 Cases.	Morbus Cerebri	...	1	..	...	3	...	4
	Delirium Tremens	3	1	...	...	...	...	4
	Apoplexia, Paralysis	2	8	2	...	3	1	16
	Cephalalgia	33	3	2	...	...	...	38
	Convulsio	4	...	...	...	2	...	6
	Hydrocephalus	...	...	...	...	13	...	13
	Epilepsia	4	6	...	...	...	...	10
	Hysteria	18	5	...	...	...	2	25
	Neuralgia	5	2	...	...	...	...	7
	Morbi Oculi	69	9	...	2	...	2	82
	Morbi Auris	6	3	...	...	...	...	9

		Cured.	Relieved.	Sent to Hospital.	Irregular.	Died.	Event unknown.	Total.
Diseases of Pulmonary and Circulating System, 982 Cases.	Aphonia	1	...	...	...	...	...	1
	Asthma	13	33	...	1	...	1	48
	Catarrhus	425	45	6	7	12	19	514
	Pertussis	135	6	...	5	20	16	182
	Cynanche trachealis	6	...	..	1	3	...	10
	Pneumonia	76	5	5	...	3	1	90
	Hydrothorax	...	1	...	...	1	...	2
	Hemoptysis	9	1	1	...	...	...	11
	Phthisis	...	23	1	...	11	5	40
	Pleurodynia	44	2	...	...	...	1	47
	Morbi Cordis	4	19	1	...	5	1	30
	Aneurisma	...	2	...	...	...	1	3
	Varix	3	1	...	...	...	...	4
Diseases of Digestive System, 1086 Cases.	Aphthae	10	...	...	...	...	...	10
	Dentitio	47	2	...	...	...	...	49
	Odontalgia	13	...	. .	...	...	...	13
	Cynanche tonsillaris	82	1	...	...	...	2	85
	... parotidea	6	...	...	...	...	...	6
	Œsophagi Stricture	...	...	...	...	1	...	1
	Dyspepsia	267	63	1	3	...	7	341
	Hematemesis	9	...	...	...	...	...	9
	Icterus	3	1	...	...	...	...	4
	Constipatio	96	...	...	...	1	...	97
	Colica	20	1	...	...	...	...	21
	Cholera	6	...	...	...	...	...	6
	Diarrhœa	236	10	...	2	2	7	257
	Peritonitis	17	1	...	...	1	...	19
	Vermes	123	3	...	3	1	...	130
	Hemorrhoides	21	10	...	...	...	...	31
	Hernia	3	3	1	...	...	...	7
Diseases of Urinary System, 96 Cases.	Morbus Renis	3	...	...	...	1	...	4
	Morbus Vesicæ	9	2	1	...	...	...	12
	Morbus Testis	8	1	...	1	...	...	10
	Calculus	2	1	...	...	...	...	3
	Syphilis	25	13	3	8	1	2	52
	Gonorrhœa	12	1	...	1	...	1	15
Diseases of Uterus, 121 Cases.	Amenorrhœa	45	19	1	...	...	1	66
	Menorrhagia	13	4	1	1	...	...	19
	Leucorrhœa	17	3	...	...	...	1	21
	Morbus Uteri	2	1	...	1	...	...	4
	Gestatio	...	11	...	...	...	...	11

		Cured.	Relieved.	Sent to Hospital.	Irregular.	Died.	Event unknown.	Total.
Injuries and Diseases of Locomotive Organs, 525 Cases.	Morbi Ossium et Articulorum...	22	13	3	...	2	1	41
	Fractura.....	13	1	1	...	...	...	15
	Contusio.....	93	6	4	...	...	1	104
	Injuria Capitis.....	1	...	...	...	1	...	2
	Luxatio.....	6	...	...	...	...	1	7
	Subluxatio.....	41	2	...	...	...	2	45
	Morsus.....	3	...	...	...	...	...	3
	Tumor.....	9	6	...	...	2	...	17
	Vulnus.....	28	...	2	1	...	1	32
	Ustio.....	46	...	1	...	1	1	49
	Abscessus.....	78	4	...	4	...	3	89
	Ulcus.....	85	25	5	2	...	3	120
	Gangrena Pedis.....	...	1	...	...	...	...	1
Anomalous Cases, 210.		...	...	...	...	...	...	...

Such is a tabular view of all the cases treated in their own houses. The various columns show numbers for the whole year, and are collected from monthly tables kept at the Dispensary. Under the term relieved, are marked several patients who remove from town, or from the inspection of the medical officers, before any cure can be effected. Those dismissed for irregularity consist principally of persons who apply to other practitioners, or who persist in disobeying instructions. The proportion of deaths is 1 in 30, or, more correctly, it is 3·28 per cent. of all cases visited at home.

The months of January, May, and June, show the greatest number of fever cases. Without including febricula and infantile fever, there have occurred, during the whole year, 297 cases of typhus, being in the proportion to the whole practice of 1 to 15. Of these, the acting medical officers have sent 75 to the fever wards of the Royal Infirmary, and of the remainder treated in their own houses, there are accurately recorded 15 deaths, and 188 recoveries, that is, the ratio of the former to the latter is less than 1 fatal case in 12. It is to be remembered, however, that fever cases sent to hospital are in general marked by severity of symptoms, or they occur in families suffering from extreme destitution. Regarding the locality of fever, it is found that 32 per cent. are in the New Town, and 68 per cent. in the Old; or,

dividing the whole city into three districts, by two lines drawn from north to south; one through Pitt Street, Dundas Street, the Mound, and George IV's Bridge; the other by Broughton Road, Elder Street, Leith Wynd, and St Mary's Wynd, the result is, that in the middle one of these divisions, 39 per cent. of fever occurred; in the east division the proportion is as high as 42 per cent., but in the west it is only 19.

These three divisions are not thought to be equally populous, but of late years it has been found that the middle one supplies the New Town Dispensary with the greatest number of cases of all other diseases. The low number of fever cases in the west division, which includes the densely populated Grassmarket and neighbourhood, is probably peculiar to the year 1840; and including their experience during several years, the medical officers are not prepared to select any particular locality in the Old Town as specially subject to typhus. In this respect their views confirm those of Dr Alison, lately published in the Journal of the Statistical Society of London.[1]

In attempting to estimate the entire number of fever cases in Edinburgh, the plan generally adopted, is to double the number of admissions to the fever wards. Thus, because 6875 patients were entered during a period of five years ending December 1839, it is inferred that 13,750 occurred altogether; or, as Professor Alison states, the fever cases of Edinburgh and Leith, a population under 180,000, must have been nearly 15,000 during that period. This calculation, experience at the New Town Dispensary tends to show is below the real amount. Of 297 typhus cases, only 75 were sent to the hospital, and if any thing near the same proportion be treated at home by the medical officers of other dispensaries, and by private practitioners, then the estimate made with regard to Glasgow will be nearer the truth, as applied to Edinburgh, that only one-third of the patients are sent to the fever wards.

The progress of fever during the year, as well as of small-pox, hooping-cough, and measles, is exhibited by the following table, constructed on the linear system, now adopted in the Registrar-General's office, which not only conveys to the eye the impression of the average prevalence of each disease, but at the same time furnishes the exact numerical results for each month.

The dark line ——— is Typhus.
The interrupted line - - - - - - is Variola.
The crossed line ·+·+·+·+· is Pertussis.
The dotted line ..... is Rubeola.

[1] Illustration of the Practical Operation of the Scottish System of Management of the Poor. By W. P. Alison, M.D., Professor of the Institutes of Medicine in the University of Edinburgh.—Read before the Statistical Section of the British Association, 18th Sept. 1840.

With regard to variola, 188 cases have been treated. During the first six months of the year, 157 occurred, 28 of them being fatal. During the last six months, only 31 occurred, 4 being fatal. The actual number of deaths from small-pox is greater than from any other disease, and the mortality is also proportionally higher, being above 1 in 6, or, stated decimally, 1 in 5·8. In tracing the locality of variola, it is found, that 34 cases were in the New Town, and 154 in the Old; or adopting the same division of the whole city, as stated under typhus, the middle district furnishes 93 patients, the east 76, and the west 19. Among the fatal cases was one adult, who had never been vaccinated. The rest were children; and to show the extreme carelessness of many parents among the lower classes, regarding vaccination, it is sufficient to mention one fact: on a careful inspection, made two years ago, of a numerously inhabited close of the Grassmarket, it was ascertained, that of the children under seven years of age, only one-half had been vaccinated.

The other epidemic complaints do not require many remarks. Of scarlatina, 90 cases have occurred, 4 being fatal; and it prevailed most in September, October, and November. True influenza has not appeared to any great extent, and it looked more formidable in January than in any of the following months. Of 70 cases of rubeola during the year, only one was fatal. Pertussis has prevailed to a greater extent, and chiefly during the months of May, June, and July. But it has been found that, during February, March, and April, the fatal cases were 1 in 5, while, in the following months, when the disease spread more extensively, the mortality was only 1 in 12.

MEDICO STATISTICAL REPORT

of Edinburgh New Town Dispensary.

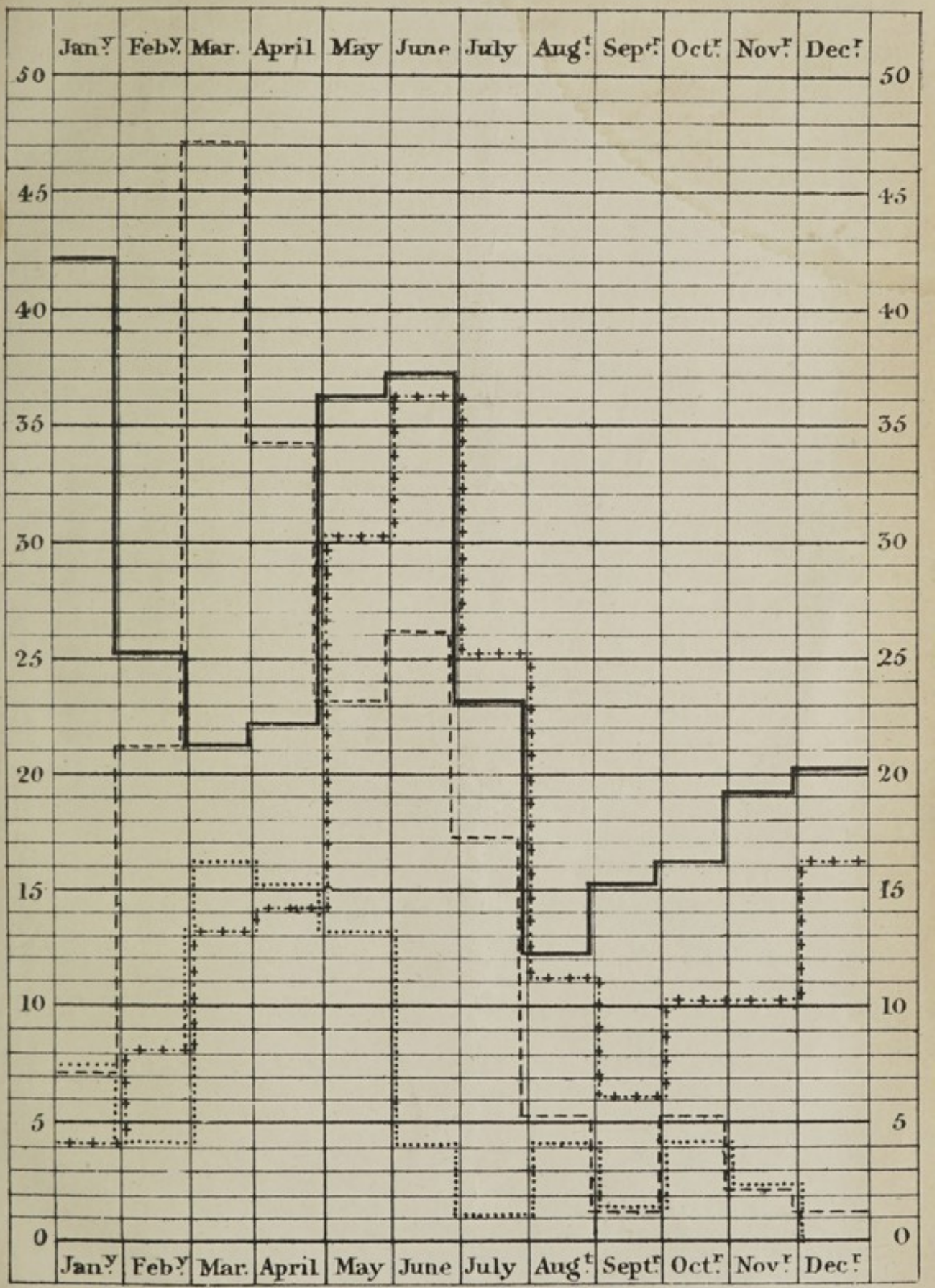

Table shewing the

Prevalence of Typhus, marked ——— *of Variola,* – – – – –

of Pertussis, .+.+.+.+. *of Rubeola,* .....