

of closing her hand also almost recovered. I observed that she was not able to close the left hand quite so firmly as the right.

REMARKS. This case is interesting in a practical point of view, as it shows the uselessness of any known plan of treatment; and also that so important a nerve as the median may be cut through, without any very serious injury to the future usefulness of the limb.

Bury St. Edmund's, June 1854.

PERISCOPIC REVIEW.

EPIDEMIOLOGY, HYGIENICS, AND STATISTICS.

REPORT ON THE RECENT PROGRESS OF CHOLERA.

PART I. BY JOHN CHATTO, ESQ.

THE epidemic which during the last year or two has been committing devastations in various parts of Europe seems to have arisen in Persia, in the years 1851-2, and prevailed there to a fearful extent. M. ERNEST CLOQUET, at that time a resident at Teheran, in the accounts he sent to the French Academy of Medicine, states that it first declared itself at Basserah in 1851, followed the course of the Tigris so as to reach Bagdad in 1852, and then traversing Kurdistan, spread into Azerbaijan. After ravaging this province, and especially its capital, Tauris (where, according to some accounts, probably much exaggerated, 1000 persons died daily), its course was directed to the south and south-east, along the borders of the Caspian Sea. Teheran in this way became the seat of cholera at the beginning of April 1853, the disease reaching it, contrary to all precedent, from the north. The temperature of this spring was remarkably low, the wind blowing from the N.E. and S.E., and the air being loaded with moisture. During April, May, and the half of June, at least forty-five persons were carried off per diem in a population reduced by flight to thirty or forty thousand. By the beginning of August, it had nearly ceased at Teheran, though still prevailing with great severity in other parts of Persia, especially in the eastern and southern provinces. It is calculated that, of a population of 160,000 souls, comprised in Teheran and its environs, from 15,000 to 16,000 perished. At the same time, the epidemic prevailed, though with less intensity, at Emmenah, placed at 7000 feet above the level of the sea; the weather, too, being so cold that snow fell in May.

The outbreak of cholera in Poland in 1852 was, according to Dr. TSCHEGHEIN, President of the Sanitary Commission, unprecedented in the sudden and spontaneous character of its appearance. No cases had been met with in that country since the end of 1851, when the disease suddenly appeared in the district of Sieradz, in the government of Warsaw, on May 24th, 1852, and spread thence in every direction. It did so, however, in the most irregular manner, sometimes concentrating itself in certain localities, and then spreading by leaps to distant populations, leaving intermediate places for the time unscathed. The first cases occurring at Warsaw appeared in separate parts of the city, and were not traceable to intercommunication. To the 5th of September, the number of cases amounted to 10,673, of which 4,462 died, 5,908 recovered, and 303 remained under treatment. The culminating point of the epidemic was the thirty-fourth day, the 10th of August, when 570 new cases occurred. The total number of cases occurring in the government of Warsaw to the 5th of September amounted to 44,928, of which 20,906 died, 20,159 recovered, and 4,710 remained under treatment; this being indeed the most disastrous epidemic of this disease ever witnessed in Poland. Notwithstanding the large armies stationed in this province, they furnished only 2,066 cases; the observance of hygienic laws having been most rigidly insisted on.

M. AMEÉE LATOUR, examining the history of the progress of this Polish epidemic, regards it as differing from other recorded visitations of the disease; for, although cholera had been raging in Persia, and around the Persian Gulf, it never advanced thence to the Russian eastern frontier. He thinks it bears more analogy to some of the great epidemics due to the local prevalence of peculiar "epidemic constitutions", such as those observed in London by Willis and Sydenham, in 1670 and 1676.

Kalisch, a town in Russian Poland, situated on the Prussian frontier, became in June 1853 a fearful focus of the disease,

fugitives transporting it hence in July to the Prussian towns Ostrowo and Pleschen, in the Duchy of Posen. Of the 5,799 inhabitants of Ostrowo, by the 8th of August, 276 had become attacked, and 115 had died, and 267 deaths occurred among the 5,481 inhabitants of Pleschen; the disease also rapidly spreading to other places in the government of Breslau. Breslau had indeed, not long prior to this, suffered from a visitation of cholera, which had prevailed from August 17th, 1851, to January 8th, 1852, furnishing 545 cases and 271 deaths in a population of 167,507. The epidemic seems on that occasion, according to the accounts in the Prussian *Medicinishe Zeitung*, to have travelled from Bohemia, where 53,121 individuals are stated to have been attacked during 1851, of this number 23,225 dying.

At a not much later date than that of the immigration of the disease by Kalisch, it traversed the frontiers of Eastern and Western Prussia, at other points, it being brought to several places apparently by raftmen floating timber from Galicia and Poland. By the 20th of August, 153 cases, furnishing 80 deaths, had occurred in the town of Dantzie, and by the 19th of September these numbers had increased to 1,164 and 674 respectively. The cases occurring in the entire government of the same name were 7,541 in number, and the deaths 4,572. Later still, Berlin and Landsberg were attacked, 235 cases and 152 deaths occurring in the former city, and 306 cases with 194 deaths taking place in the latter. Many other places suffered in the provinces of Brandenburg and Silesia, and some of these severely. The Marienwerden government furnished to the middle of November 9,294 cases, with 5,640 deaths. Among the 42,196 inhabitants of Posen, 2,571 cases and 1,356 deaths occurred; while, in the entire government of that name, there occurred 19,019 cases, with 11,292 deaths.

Dr. LÜEWENHARDT (*Medic.-Zeitung*, July 1853) gives a few interesting details of the outbreak of the epidemic at Prenzlau, a place of 12,720 inhabitants. No epidemic had occurred for a very long period, and the public health of the town was supposed to be in a very satisfactory state. However this may be as regards some of the more marked diseases, as a mortality of 30 to 32 per 1,000 occurred, there was evidently not much to boast of for a provincial town. The locality is singularly free from cases of pulmonary consumption, while typhoid and intermittent fevers, together with rheumatic and catarrhal affections, are prevalent; the town lying in a flat district, unsheltered by mountains from the north wind. Pneumonia and croup are also of frequent occurrence. Some cases of sporadic diarrhoea occurred in the autumn of 1852; but the affection had acquired less extension than in some other years, when a chimney-sweep arriving from Berlin exhibited symptoms of cholera on the 3rd of October, and the earliest subsequent cases were believed to be traceable to his residence. The epidemic reached its maximum by the fourth week, and then gradually decreased. From the 8th of October to the 23rd of December, 1,662 persons (764 males and 898 females) were attacked, and of these 622 (274 males and 348 females) died. Jews seem to have enjoyed marked exemption from the disease.

The epidemic of cholera which visited Prussia in 1853, contrary to what has been observed in former invasions, which have taken place by the Russo-Polish, Austrian, or Bohemian frontiers, made its descent at the seaboard, without, however, entirely neglecting its old course along the Vistula. The attack, indeed, was chiefly spent upon the maritime provinces, few places in Posen or Brandenburg suffering, except Berlin. It is remarkable that the first cases manifested themselves on the selfsame day (July 13th) at four widely distant places, viz., Memel, Dantzie, Stettin, and Thorn. Although the chief manifestations of the disease were observed, on this occasion, at the maritime towns, yet traces of its presence occurred, towards the end of July, at places situated on the frontiers of the Russian Baltic provinces and Poland. From Thorn, which communicates by the Vistula with Poland and Galicia, it spread to Kulm and other places, but to no great extent. At Dantzie, the cases chiefly occurred among Polish raftmen and foreign sailors, and thence it spread to some of the adjoining towns. The entire number of cases that occurred at Stettin amounted to 1,156, of which 710 died. To the 21st of November, 1,405 cases had been observed at Berlin. Of this number, 413 cases were treated at the Cholera Hospital, 256 dying, and 156 recovering; and 992 were treated elsewhere, 665 dying, and 327 recovering, making a total of 940 deaths, and 465 recoveries. The disease broke out at Anklam, in Pomerania, on the 26th of August, its introduction not being traceable to importation, and three persons residing in the same house being its first victims.

To the 1st of November, in a population of 10,000, there occurred 104 cases, with 57 deaths. At Meusel, the epidemic terminated at the end of October, having given rise to 286 cases and 91 deaths. In the government of Marienwerder, 49 places were attacked, furnishing 617 cases, with 379 deaths. In that of Frankfort-on-Oder, several places suffered after the 7th of August, the cases amounting in all to 568, with 322 deaths.

The epidemic was first observed in St. Petersburg on Oct. 1st, 1852, and, between that date and July 29th, 13,054 cases occurred, with 5,993 deaths and 7,255 recoveries, 466 cases still continuing under treatment. The maximum of the epidemic occurred in May and June, after which period its virulence much abated. Moscow was reached by a different route to heretofore, the disease arriving from the west, by Warsaw and St. Petersburg; while, on former occasions, it has done so by the south-east, by Astracan and intermediate places. It long continued to show itself in a merely sporadic form, so that, by the 22nd of January, 1853, only 69 cases had been met with; but by the 8th of April the maximum of 108 cases *per diem* was attained. The prevalence of the disease then diminished for awhile; but in May and June from 50 to 60 cases occurred daily. The total number of cases from January to August 1853 amounted to 5,864, 2,441 dying, 3,096 recovering, and 327 still continuing under treatment. Various places in the governments of Kiev and Tolya were fearfully ravaged.

Many other parts of the north of Europe suffered severely from cholera during 1853. In Denmark, it raged with great severity during the heats of July at Copenhagen, all the inhabitants who could do so flying the city. Between the 11th and 16th, there occurred 756 cases and 368 deaths; and if the comparative population of Paris and Copenhagen be considered, this would be equivalent to the production of from 3,000 to 4,000 cases and 1,200 to 1,500 deaths *per diem* in the former city. By the 20th of September, 7,515 cases and 4,074 deaths had occurred. To the 23rd of November, there had occurred 2,448 cases and 1,998 deaths in Christiana. In Finland and Sweden, many places suffered dreadfully, when their limited population is considered. At Helsingfors, 1,305 cases, with 500 deaths, had occurred by the 12th of August; and at Abo, 742 cases, with 299 deaths. The presence of the disease was officially recognised at Stockholm on the 26th of August, and by the 29th of November 4,797 cases and 2,890 deaths were reported. Many places in Jutland were attacked, and some with great severity.

From the 23rd of July to the 2nd of October, 1853, there occurred at Hamburg 537 cases and 379 deaths, the low and marshy districts especially suffering. While, in former visitations, English sailors suffered much, on the present occasion, they being submitted to a systematic ship-to-ship visitation, only about three deaths took place among 400 such persons.

The epidemic commenced at Rotterdam on the 23rd of August, the maximum reached during its prevalence being 66 cases *per diem*. By December, 1,162 cases, with 644 deaths, had occurred. M. VROLLE, writing in 20th Nov. 1853, states that cholera had become epidemic in Amsterdam, but progressed slowly; since from the 18th Sept., but 759 cases had occurred amidst a population of 250,000. Although the outbreak occurred during the great fair, where the most disgraceful orgies prevail, and the poor exist in great numbers, 20,000 persons in the Jewish quarter being in a state of absolute misery, yet the disease continued stationary at 7 cases *per diem*. He attributes this non-extension of the epidemic to the effective organisation of means for furnishing preventive treatment, through which above 3,000 cases of preliminary diarrhoea were promptly met.

The cholera that commenced in Paris in 1853 had been preceded by a severe epidemic of typhoid fever, which augmented the average mortality by 4,000 in 1853. The cholera beginning in the first week in November apparently ceased about the second week in January 1854. Strange as it may seem, the entire number of cases that have occurred cannot be given, as it has never yet been published. The medical journals of that capital have only been able to furnish an account of the total number of cases that have been admitted into the hospitals, and the number of deaths from cholera outside the walls of these institutions. To December 29th, 931 cases had been admitted within the hospitals, of which number 421 died, 336 recovered, and 174 remained under treatment. To the 18th of January, 1854, the total number of deaths from cholera in Paris amounted to 969. Of these, 505 occurred in the hospitals, 49 in the military hospitals, 321 in civil life, and 94 in the rural communes. As in 1849, a great number of cases seemed to have followed the bringing of cholera patients into wards in which were patients suffering from other diseases; while the extension of the disease was very slight in the military hos-

pitals, in which the cholera patients were treated in special wards. No case was observed in any hospital until cases had been brought from without.

From the end of January of the present year, this epidemic seemed to have disappeared, when early in March it again exhibited itself, and has continued to prevail with considerable severity to the present time. By the 8th of March, 22 cases, giving 13 deaths, had been observed in the hospitals, 19 of these cases arising within the walls of the hospitals themselves, and, with the exception of two or three cases, all appearing in the wards of La Charité, which, in the preceding December, had been devoted to the reception of cholera patients. A few cases were also met with about this time in civil practice. No diarrhoea had prevailed in at all a general manner prior to this renewed outbreak; influenza, pneumonia, and typhoid, having for some time constituted the chief complaints. The temperature of this period of the year, too, was not marked by the early thermometrical elevation sometimes seen in March and April, but more resembled that met with in November. Of 59 cases occurring within the hospital walls to the 16th of March, 46 were furnished by La Charité, this disproportion continuing to manifest itself long after, though in a less degree. Thus, of 46 cases so occurring between the 13th and 20th of April, 27 were met with in that hospital. Of the particulars of the recondescence of this epidemic, the French journals furnish us with yet more sparing accounts than those they were enabled to give of its commencement in 2853. The returns are indeed entirely confined to cases witnessed in the civil hospitals; no statements, except those of the vaguest character, being as yet obtainable concerning the prevalence of the disease and its mortality in private practice. From the latest accounts, however, the epidemic is evidently extending not only to various parts of the capital, but to several of the departments; while the military hospitals which at first were comparatively free from the disease, have of late presented numerous cases of its worst form. The following is a short tabular view of the returns given by the civil hospitals:—

	Cases.	Deaths.
From 20th to 26th April.....	291	120
" 27th April to 3rd May.....	189	—
" 4th to 10th May.....	138	—
" 11th to 17th May.....	62	—
" 18th to 31st May.....	104	—
" 1st to 14th June.....	249	139
" 15th to 21st June.....	261	135

Towards the end of May, the epidemic gave tokens of diminishing; but in June the deaths from the disease in civil life mounted up again to from 1 to 17 *per diem*; and to admissions to the hospitals to from 10 to 31 *per diem*.

The following table exhibits the number of cases treated in the civil hospitals from the outbreak of the disease in November, 1853:—

	Cases.	Recoveries.	Deaths.	Under treatment.
To 9 April..	1210	586	578	46
30 April..	1711	633	848	230
3 May..	1782	661	897	224
17 May..	2018	829	1063	126
14 June..	2335	936	1235	166
18 June..	2466	962	1306	198
21 June..	2596	988	1370	214
25 June..	2767	1014	1458	205

The following is the latest statement we have seen:—

	Cases treated in hospital.	Deaths in hospital.	Deaths at home.	Total deaths.
June 23 to 29..	296	182	210	392

Our data for a history of the cholera in Spain are rather scanty. From the Spanish periodicals, however, we gather that the disease broke out in Galicia in the early part of the present year, and has been almost confined to that part of the peninsula. At the end of March, it had nearly disappeared; but in April it broke out afresh, principally in the province of Pontevedra; where, during that month, 629 cases occurred, of which 200 proved fatal. From May 14th to 21st, 190 cases occurred in Pontevedra; 108 from May 26th to June 2nd; and 34 from June 9th to 15th. On the 16th, 17th, and 18th, no fresh cases occurred. Cholera broke out on May 6th on board of the ship *Abella*, at Corunna, having on board 200 emigrants—principally from Pontevedra—bound for Havanna. Fourteen cases occurred, of which seven died. On May 19th, cholera broke out in Corunna, in a boy said to be the brother of one of the sailors of the *Abella*. At first the disease did not seem to progress much in Corunna; but on June 30th, it is reported to have broken

out in several districts of that province, situated opposite Pontevedra, and separated from it by the river Arosa. The disease is not reported as having reached Madrid.

The above sketch of the recent progress of the cholera in Europe is very imperfect in its details, the facts thus far accessible being few and fragmentary. We shall shortly take a review of the manifestations which the disease exhibited in the United Kingdom during the same period.

The sources whence we have derived the information here epitomised are chiefly the following:—

Gazette Médicale for 1853, pp. 267, 555, 568, 579, 757, 846, Sept. 17th and 24th, and Nov. 8th; for 1854, pp. 22, 143, 157, 227, 249, 372, and 400.

Gazette des Hôpitaux, July 1853, and March to June 1854.

L'Union Médicale, 1853, Nos. 134, 136, and 153; 1854, Nos. 49, 52, 73, and 76.

Bulletin de l'Académie de Médecine, tome xviii, pp. 193, 655, 1153, 1161, 1178, 1188, and 1190; tome xix, pp. 434 and 537.

Medizinische Zeitung, 1852, pp. 50, 170, 180, 106, 222, 226, and 242; 1853, pp. 200, 224, 233, 238, 242, and July 12th.

Times newspaper, July 31st, August 17th, Sept. 21st, and October 22nd, 1853.

Siglo Medico, March 26th, April 2nd, 16th, 23rd, 30th, and May 7th.

El Heraldo Medico, May 20th, 24th, 28th, June 1st, 4th, 8th, 12th, and July 2nd.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MAY 23RD, 1854.

JAMES COPLAND, M.D., F.R.S., President, in the Chair.

OBSERVATIONS ON MORBID CHANGES IN THE MUCOUS MEMBRANE OF THE STOMACH. BY C. HANDFIELD JONES, M.D.*

The first part of this communication comprised a description more particularly of the minute glandular structure of the mucous membrane of the stomach, in which the author corroborated the account given by Kölliker. On first commencing his researches into this subject, he was not aware that lenticular or solitary glands had been seen in the mucous membrane of this viscus. The author, not imagining they could be normal structures, had at first viewed them as simply nuclear deposits, supposing they were of new formation. Kölliker had observed that these lenticular glands did not constantly occur in the stomach of adults, even though they might be possibly always present in those of children. In very many cases he had met with no traces of them; in others, they were seen to be extremely numerous, covering the whole surface of the stomach; yet the thought could hardly be excluded, that the morbid conditions of the part, which were always present, had not had something to do with their formation. The author thought it difficult to fix any exact limit to the healthy development of these glands. He considered the gastric tissue in its most normal and efficient state when there were but few of these glands or nuclear masses, and when those that existed did not encroach materially upon the tubular or gastric glands of the stomach. He thought great individual varieties might exist; that they were naturally larger and more numerous in some individuals than in others. He ventured to think that these solitary glands and their groups in the intestines (Peyer's patches) had really no use, and fulfilled no function in the human body, but existed in a rudimentary state, in obedience to the law of unity of type. They might be regarded as portions of undeveloped embryo substance, existing in inverse ratio to the surrounding specially organised tissues; and with this view their simple nuclear structure, so common in embryonic parts, was very accordant. The author thought that the epithelial contents of the tubular glands were thrown off during digestion, and formed an important constituent of the gastric juice, probably the so-called pepsin. The evidence of this rested on examination of the stomachs of animals killed while digestion was proceeding, and of a man who died suddenly soon after a meal.

The following deviations from the typically healthy condition of the stomach were mentioned as examples of morbid

* Two valuable papers on Degeneration of the Glandular Structure and of the Mucous Membrane of the Stomach, were published by Dr. Handfield Jones in the ASSOCIATION JOURNAL for Oct. 7th, 1853, and Jan. 27th, 1854.

changes:—1. *Nuclear masses.* It was doubtful what degree of development of these was to be considered as surpassing the physiological limit; but observation proved that they became both hypertrophied and atrophied; and the latter seemed to take place by a kind of liquefying, so that a cavity was formed containing a clear fluid and some nuclear corpuscles. 2. *Diffused nuclear formation.* The effect of this was, that the tubes became more or less atrophied and obscured by interstitial deposit. 3. *Intertubular fibroid formation.* The tubes became atrophied by the presence of a fibroid or granular deposit, in which some altered vestiges of the tubes might be brought into view by acetic acid. 4. *The tubes appeared to decay spontaneously,* but not from the presence of new fibroid tissue. 5. *Black pigmentary deposit,* occasionally within the tubes, more often between them; sometimes yellow pigment was found; both might be regarded as altered hæmaturia. 6. *Cystic formation,* produced in one of three ways:—first, a nuclear mass liquefied and left a cavity; secondly, white atrophy of the tubercular glands was going on, and a portion of one became distended; thirdly, a cyst was produced as a large vesicle, a true new formation. 7. *Mammillation,* usually affecting the pyloric region. 8. *Gathering up of the lower parts of the tubes,* so as to form a group of convolutions like the acme of a conglomerate gland. 9. *Unhealthy condition of the epithelium of the tubes,* occasionally exhibiting the characters of a fatty degeneration. 10. *Self-digestion* was of frequent occurrence, and invariably confined to the splenic region; the mucous membrane was more or less deeply coloured, thinned, smooth, and semi-transparent. In extreme cases, the nerves and vessels were seen altered, as when treated by strong acetic acid. 11. *Small dark red circumscribed spots,* manifestly the result of hæmorrhage; ulceration often took place in these. 12. *The tenacious adhesive mucus of gastric catarrh.* Its microscopic characters were very clearly described.

The author had observed torulæ in the mucus of the stomach of a diabetic patient. The paper was accompanied by a table of one hundred cases of *post mortem* examinations, in which the morbid changes in the mucous membrane of the stomach were fully and minutely described, together with an analysis of these cases, in which the influence of age and sex, habit of life, etc., were considered, as well as the frequency of the several morbid changes already enumerated. Eight drawings, executed by the author, illustrated very intelligibly the diseased conditions which the microscope had revealed.

Dr. Mayo would refer to a case of hypertrophy of mucous membrane which had occurred to him at the Marylebone Infirmary. A girl, aged 15, apparently in good health, was admitted into the Marylebone Workhouse. She was taken ill suddenly, remained sick for a few hours, and died. No previous history could be obtained. On examination, every viscus of the body, as well as the brain, was found healthy; but on examining the ileum, a large portion of the lower part of it was found studded with what appeared to be a number of warts, but which, on being examined by the microscope, turned out to be the natural structure of the part hypertrophied. These appearances, in our present state of knowledge, did not throw any light on the cause of death; but further observations made in the path which Dr. Jones had struck out, might show the connexion between such morbid appearances and the fatal result.

Dr. H. BENNET referred to the fact, that a large number of patients fell into bad health, particularly when suffering from uterine disease, from dyspepsia: it was not the ordinary form of indigestion, but the nutrition flagged, the digestion became imperfect, and marasmus occurred, with a large deposit of lithates in the urine; yet there was no evidence of any local mischief in the stomach. This state might exist for years. Might not these cases be explained by the examinations of Dr. Jones?

Mr. STREETER inquired if the author of the paper had microscopically examined the state of the stomach after delirium tremens, and also whether he had traced any correspondence between the diseases of the gastric mucous membrane and those of the tongue, mouth, and fauces, in aphtherous and diphtheritic disease? He thought the importance of the paper proceeded from its pointing so emphatically to the distinction between epithelial or cell-disease, and that of the vascular rete or network of vessels beneath the true mucous membrane. Aphtherous excoriation and diphtheritis were examples of pure epithelial disease, while albuminous and fibrinous effusions were sequences of true congestive or inflammatory conditions of the vessels. The former were generally the result of states of constitution, while the latter were more dependent on local and temporary causes; but in practice they were generally met with