Dr. Duncan's elaborate details, the publication of which has contributed so much to the remedy of these evils by exposing them to broad day, will furnish the reader with information and statistics on this and other heads, which, if he have not done so already, he will do well to read carefully, at least if he desires to form a true estimate of the condition of a large part of Great Britain in the nineteenth century, labouring under the disadvantages of legislative neglect of all sanitary laws. Whilst the continental powers have long ago wisely set us an example of watching over the health and morals of their people, performing their duties towards their neighbours and fellow-citizens, we have been occupied with our cumbrous and futile tariffs on goods. We have retained a no less cumbersome quarantine code, obstructive to commercial intercourse, though not to cholera or plague, whilst diseases have occurred in and about our doors, compared with the ravages of which, the periodical visits of oriental plague would have been a merciful exchange.

The new fever-district, or late epidemic range, skirted the old all round; with rare exceptions, on the south end of the town, where it scarcely could be traced. This range over the greater portion of the suburban circumference of the town is indicated by two kinds of markings—viz., small dark spots upon white ground, and similar white spots upon the dark or tinted ground, and it will be thus plain at a single glance, how legibly distinct the one invasion is from the other. It will be further observed, that whilst the main body of these markings lie east and north-east of an imaginary line, which may be drawn from the north end of the docks, diagonally, and waved towards the south-east extremity of the town, yet that some of them are introduced where the crosses are placed. Such isolated instances will always occur in every epidemic, being the sporadic outposts of the epidemic—if such a term be lawful. The circumferences and centres of each respectively may thus be said to intersect one another. The touching places of the epidemic circumference, verging upon the old fever focus, are mainly laid down in proportionate accordance with the data of localities obtained from the officers of the fever wards and North and South Dispensaries, who have kindly taken the trouble to consult their books, and to whom, therefore, for enabling me to complete this portion of the report, I am much indebted.

With regard to the *number* of markings of either kind and their precise position, I do not pretend to the laborious accuracy of those sanitary maps, wherein the occurrence of each case is rigidly put down by a mark. The small size of the map and the extended range of enquiry from several parties, whose notes of cases in private practice would seldom attach exactly to the precise spot, prevents this accuracy being adopted; nor did I, when first entering upon the subject of this paper, contemplate going so far as I have done, or it might have been possible to attain, with a good deal of additional trouble, the desired exactitude. I was at that time also ignorant of the extent to which such sanitary maps had been carried out, and only became acquainted with these important particulars a few weeks ago, when Dr. Sutherland kindly pointed them out to me in the reports of the Commissioners for the Health of Towns. All I can advance then, with confidence, is, that a general rendering has been given,

with as much fidelity as the nature of my materials and traditional knowledge enable me to give. I may add, that the map has been submitted for correction and criticism to the recent meeting of the Medical Society of Liverpool, and has received the benefit of the suggestions of the members.

There are no markings introduced on the Cheshire side, because I have not been able to learn that there were any cases on that side; at all events, if they did present themselves, they were not numerous, for the practitioners I enquired of had not seen any.

The Dispensaries are situated at the north and south ends of the town, the Fever wards are in a detached building belonging to the parish workhouse, situated on elevated ground, between the Infirmary and the Medical Institution. These are all on a line, upon a hilly range, the south end of which, as it subsides towards Tooteth Park, has the cemetery, called St. James's, excavated out of its shoulder.*

The Cheshire shore, bounding the Mersey opposite Liverpool, is introduced in order to show the site of the new docks erecting on the Wallasey Pool, as the years likely to be employed in their formation will probably furnish a number of cases of intermittent fever, from the mass of mud to be encountered, reposing on a sand and clay bottom, and to which I have here alluded for the sake of probable utility, though at the risk of being criticised for "travelling out of record" of the immediate object of my paper. The subject is, however, an important one, similar in nature to that with which I have been occupied.

I have also laid down in the map the course of the drain from the West-Derby Workhouse, which runs down by the wall of the necropolis, and receiving another drain, both after the confluence of their commingling streams, run underground for about two or three hundred yards, and then escape above ground on the hill side, and after pursuing an open course for perhaps a like distance, enter a culvert to get under Shaw Street, and join one of the main sewers.

* This cemetery is merely an old stone quarry, out of which a great quantity of sand-stone was quarried for constructing the docks, &c.

(To be continued.)

ON THE CAUSES, NATURE, AND TREATMENT OF THE LATE EPIDEMIC FEVER IN ROTHERHAM.

By EDWARD JAMES SHEARMAN, M.D.

(Read before the Sheffield Medical Society, 5th February, 1846.)

For the *Provincial Medical and Surgical Journal*.

(Continued from page 95.)

A peculiarity in the breaking out of this fever last year is not unworthy of notice; it almost exclusively attacked servant girls in the first instance, in nearly every street in the town; and most of those I attended had been very copiously dosed with strong purgative medicine, prescribed by druggists, before I was sent for, and I usually found them with a *tympanitic abdomen*. I think this may be accounted for in the following manner:—The atmosphere of the town at that time,

was charged with carbonic acid, sulphuretted, and carburetted hydrogen gases, arising from the churchyard, the open sewers, and the broken gas-pipes. In the day time the atmosphere was sufficiently warm, and the current of air enough to mix this deleterious gas with the atmospheric air; but at night the fog from the river, added to the general dense state of the air, prevented this combination. The servant women were first exposed to this atmosphere, having to rise earlier than the rest of the inhabitants, and their employment did not lead them away from it as that of the labouring men generally did. The supply of oxygen was deficient; the venous blood was not completely arterialized; they felt low, and unfit for work, and were dosed prodigiously by the knowing druggists, until sufficient irritation of the mucous membrane of the intestines arose, added to the loss of nervous energy from deficient supply of oxygen, and tympanitis was the result.

Most of the cases I have witnessed began with rigor, followed by diarrhœa, vomiting or nausea, anorexia, and great listlessness. This gradually increased to prostration of strength, and when I have been called in I have generally found patients with tympanitic abdomen, epigastric tenderness, and a very quick and often dicrotic pulse; tongue dry, and furred brown in the centre, with red edges; scanty high-coloured urine, depositing large quantities of uric acid; skin dry and very hot; sometimes great thirst, but often none; headache; often sleeplessness; conjunctiva of the eyes generally injected; and almost always some degree of bronchitis, indicated by a number of wheezing sounds of various qualities, distinctly heard through the stethoscope to proceed from a great number of minute bronchial tubes; and this has often terminated in pneumonia, when the crepitant rhonchus gradually replaced the bronchial. These symptoms have generally occupied the first fourteen days, and then a state, somewhat like the effect of a narcotic poison appeared; and if no amendment has then taken place, low muttering delirium, lying on the back with jactitation and subsultus tendinum; or sleeplessness, intolerance of light, raving and screaming, with subsultus; alkaline or ammoniacal urine; dark brown, or black, dry and crisp, or glazed tongue; sordes on the teeth; loss of power over the sphincter muscles; hiccup, and death:—terminating in coma, asphyxia or asthenia, as the capillaries of the head, chest, or general system happened to be principally affected. I have only seen one case of well marked maculæ, and two with mælæna.

The disease has generally gone on from the fourteenth to the twenty-first day, or thereabouts, before any crisis has taken place; and then either profuse perspiration, with excretion of large quantities of urate of ammonia, in the urine, long continued calm sleep, copious expectoration, or sudden return of appetite, has been the harbinger of return to health. The cases towards the end of the year were not of so virulent a nature, and much shorter than those in the beginning of the epidemic.

On reading the opinions of various authors on the *treatment of fever*, I have often felt a difficulty in deciding which to trust. Some recommend scarcely any treatment, merely to watch the patient through the disease, trusting entirely to the *vis medicatrix nature*; while others almost run into the opposite

extreme. Dr. Stokes, whose opinions I much value, says, "Fever is a disease which numbers amongst its victims, persons chiefly in the prime of life, and during the most active and useful state of existence,—fathers and mothers—persons who are the ornament and stay or support of their families; the intellectual, the industrious, the efficient; those whose lives are the most valuable to their friends and society. There is nothing more untrue than the assertion that the treatment of fever is a matter of indifference: on the contrary, there is no disease in which diligent attention and skilful treatment are more frequently successful than in fever, nor is there any affection of equal importance in which our therapeutic means are more efficient and valuable." Delirium, sleeplessness, stupor, convulsions, extreme subsultus, jactitation, sluggish and dilated, or else extremely contracted pupils, sudden depression and collapse from pneumonia or ulceration through the intestine, are the symptoms we have to fear after the fever has lasted some time; and the chief art of the physician consists, not so much in remedying these symptoms, as in anticipating them.

I am anxious to draw your attention to the diarrhœa and nausea or vomiting which has usually ushered in this disease; for I am of opinion, that by satisfactorily making out whether these symptoms arise from cerebral irritation or gastro-enteritis, and directing their proper treatment from the commencement, much of the safety of the patient depends; for we may have tympanitis in fever from want of nervous energy supplied by the brain, as well as from the effect of inflammation of the mucous membrane of the intestine. Dr. Stokes remarks, "Cerebral diarrhœa and vomiting in fever, set in generally at a *very early period* of the disease, and are seldom accompanied by the red and furred tongue, the bitter taste in the mouth, the burning thirst, and the epigastric tenderness, which belong to gastro-enteritic inflammation. The latter is relieved by leeching the belly; but cerebral diarrhœa is not. Gastro-enteritic diarrhœa is not accompanied by such copious discharges of bile as that from cerebral irritation. When vomiting follows derangement of the cerebral circulation in ordinary cases, without fever, bile is thrown up in large quantities."

The diarrhœa and tympanitis, or what is called by some, *dothi-enteritis*, has been very frequent amongst my patients, and very perplexing in the treatment. Most of them had been purged violently with some drastic medicine before I saw them, and presented tympanitic symptoms on the first examination. These cases very soon took on a very low type of fever, *the animal heat* decreasing. But by attending strictly to the rules above quoted, I think I have generally discovered whether the *cause* of the tympanitis has been in the *cerebrum* or the *glands of the mucous membrane*. If in the former, I have shaved the head, leeches, and applied cold evaporating lotions, and purged, followed by flying blisters; and then carefully given a combination of potassio-tartrate of antimony and tincture of opium. If in the latter, I have avoided any irritating aperient and fluid, and principally trusted to small doses of Dover's powder, with moderate doses of hydragrym cum creta, mild carminative aperients, good beef-tea, and now and then a little solid food; leeching the scrobiculus cordis, and using friction with the linimentum hydragryri compositum all over the abdomen:

I have invariably found saline draughts in a state of effervescence increase the tympanitis from either cause, and very often, during the first cases of the epidemic, I feel convinced I have brought on tympanitis, by allowing the use of them. By strictly attending to these rules, I have had considerable success in such cases. In two instances I have succeeded in relieving excessive and long continued tympanitis and diarrhoea, by the use of acetate of lead, as recommended by Dr. Bardsley.

Bronchitis and pneumonia have been equally prevalent in this disease; some cases have had pneumonia or bronchitis, with cerebral diarrhoea and tympanitis, low muttering delirium, paralysis of sphincters, &c. I have found no treatment so successful in such cases as the combination of antimony and opium, recommended by Dr. Graves.

R. Antimonii Potassio-Tartratis, gr. iv.; Tincturae Opii, dr. j.; Mistura Camphoræ, oz. viij. Misce.

Of this I have given half an ounce every two, three, or four hours, as circumstances dictated. It seldom produced either vomiting or purging after the first dose; but it requires very careful watching. Such cases, when they occur amongst the poor, must generally prove fatal.

My usual practice in fever is, never to induce the specific effect of mercury on the system, unless for the cure of pneumonia or bronchitis; and in such cases, if moderate local bleeding has not the effect of very soon relieving the symptoms, I cautiously introduce mercury so as to produce slight ptyalism, with as little loss of strength as possible to the system.

It appears to me that the most successful treatment of fever, always includes a sufficient supply of pure air; of nitrogen for the supply of the various tissues destroyed; and carbon and hydrogen for the supply of respiration and perspiration; and these should be exhibited in food and medicine, even against the patient's will. On this principle, carbonate of ammonia, wine, porter, and beef-tea, are found so useful in the latter stages; but this *supply of proper nourishment* should never be overlooked.

In the years 1837 and 1838, when there were nearly two thousand men employed in constructing the railroads in this district, a most malignant typhus fever broke out amongst those who inhabited a large house, which had been temporarily erected for their accommodation, and which was, unfortunately, neither drained nor ventilated. Their beds were seldom shook up, or allowed to cool; for, as one set of men got out of them, another set went to sleep in them, exhausted by great fatigue. The fever was very fatal at first; but, by well draining and ventilating this and various other houses in which they congregated, and the plentiful supply of porter and wine, granted by the North Midland Railway Company, the disease decreased rapidly, and at last totally disappeared, even in the hot weather in July.

I am sorry that, owing to so many patients having been attended by unlicensed practitioners, from whom the Registrar receives the certificates of death, it is not in my power to give the proportion of deaths to the number of cases treated.

Rotherham, February 4, 1846.

PROVINCIAL
Medical & Surgical Journal.
WEDNESDAY, MARCH 11, 1846.

Whatever may be the defects of the Charter of the College of Surgeons, it nevertheless possesses some elements of good, from which prospective benefit may be anticipated. One of its provisions, indeed, seems already to have infused a certain measure of better feeling into its governing body. We cannot but attribute the vote of censure passed on the Hunterian Oration, in part at least, to the wholesome check upon the Council afforded by the principle of periodical election, and the placing of that election in the hands of a considerable number of constituents.

It is not for one moment to be thought, that under any circumstances a body of gentlemen could do otherwise than disapprove of the outrage to hospitality and decency, of which that oration was made the vehicle; but disapprobation is not always expressed in so marked and decided a manner, various reasons often inducing the suppression of the feeling, or at least contributing to prevent any open manifestation of it. Neither is it to be inferred that those members of the council who were opposed to a vote of censure in this case, thereby stamped the oration with their approbation. We would fain hope, indeed, that the orator stands alone in the very peculiar ideas of propriety, gentlemanly feeling, and good taste, of which so unhappy an exhibition was made.

But to revert from the contemplation of so humiliating a subject as the short-comings of a man of eminence and talent, from whose intellectual powers and acquirements better things might have been expected, we cannot but hope that a more enlightened tone is making its way even into the council-chamber of the College. Mr. Cooper, the president of the College, in responding to the toast of the College of Surgeons, at the annual dinner of the gentlemen educated at Guy's Hospital, stated that he had always been on the liberal side in the Council, and assured the gentlemen present that the members of the Council inclined to liberality were increasing in number. The giving of the toast had been received with disapprobation by a great many of those present, which afforded Mr. Cooper occasion for the remarks to which we have referred. It is these apparently trivial indications of deference to public opinion which point to a change, and are the forecast shadows of the coming event. As such, at least, we are disposed to hail them, and whatever may become of the general measure for the regulation of the profession, however indefinitely it may be protracted, we shall rejoice to see our Colleges and Corporations placed in that position in the general estimation which liberal and enlightened principles cannot fail to secure for them.