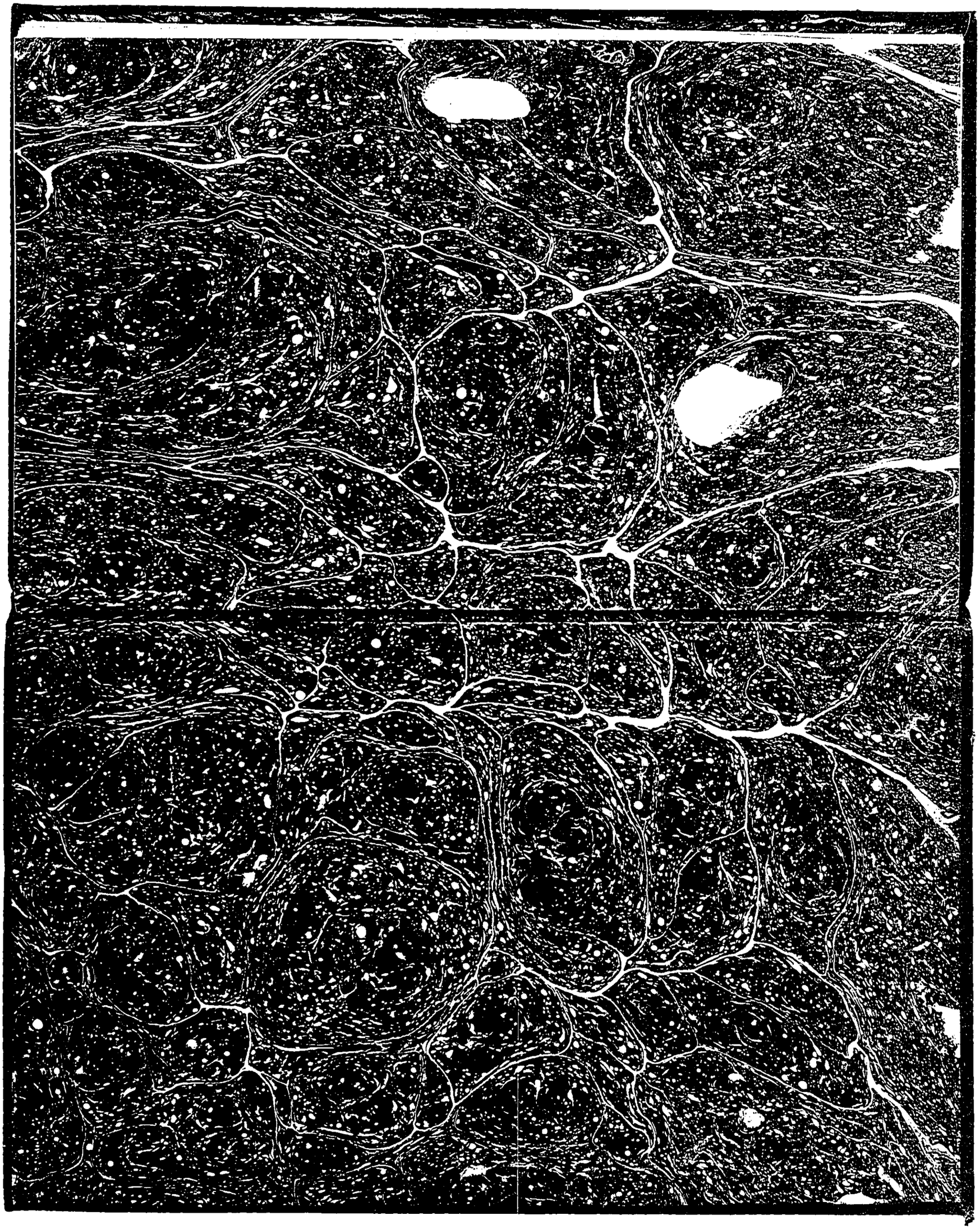

REMARKS

ON

EPIDEMIC FEVER,

Commonly called

TYPHUS.

Remarks

ON

EPIDEMIC FEVER,

Commonly called

TYPHUS;

AS IT APPEARED IN DUNDEE AND NEIGHBOURHOOD IN 1818 AND 1819;

Relating to

ITS CAUSES,

THE MEANS OF CHECKING ITS PROGRESS,

And the Mode of Managing the Patient,

So as to prevent the spreading of Contagion, and to destroy it where it may already exist.

LIKEWISE,

A FEW HINTS

TO CLERGYMEN OR OTHERS, HOW THEY MAY VISIT THE PATIENT;

TO RELATIVES AND NURSES,

How they may give their attendance, and perform their respective duties,

WITHOUT THE RISK OF INFECTION.

To which is annexed,

A PLAN

FOR ESTABLISHING A BOARD OF HEALTH,

With a view to the preservation of the Health of the Poor.

BY WILLIAM DICK, SURGEON.

DUNDEE:
PRINTED BY ALEX. COLVILLE AND CO.
1820.

TO

PATRICK ANDERSON, Esq.

PROVOST OF DUNDEE.

Sir,

The important situation which you hold in society, as Chief Magistrate of Dundee, and the readiness which you have always shewn, both as a Magistrate and a private Gentleman, not only to mitigate, by your personal exertions, the sufferings of the poor and the diseased, but also to give the fullest and most unwearied attention to every hint relative to that humane and important duty, have induced me to dedicate these pages to you.

It was under the auspices of the Magistrates of Dundee, that I acquired much of the experience

upon which the hints that I now submit to you and to the public are founded; and the readiness with which they devoted their time, their money, and their influence, to the establishing of a temporary Board of Health, when Typhus was lately spreading its ravages among the poorer classes of society, induces me to hope, that they will take measures to prevent the recurrence of that dreadful malady. If what I have written shall be found to be in any degree conducive to the public advantage, I shall feel that I have not laboured in vain; and I am confident, that to have intended to be useful is enough to secure your approbation.

I have the honour to be,

Sir,

Your very humble and most obedient servant,

WILLIAM DICK.

Introduction.

The remarks contained in the following pages would probably never have appeared, had it not been for the urgent and repeated solicitations of many whose opinion and judgment I respect; and also, from the hope that the hints offered may not be uninteresting to the community at large, and that they may be the means of removing the fear of contagion from the minds of the benevolent—who, were it not for this fear, might more readily and frequently visit the poor and the indigent in their sickness. In consequence of the dread of infection, I have known many suffer severely, who might otherwise have been kindly cared for, and had their wants relieved, and their distress in some degree alleviated. These hints are the result of what came under my own observation, in the course of a pretty extensive practice among those who were suffering under the late epidemic.

W. D.

Remarks

ON

EPIDEMIC FEVER,

Commonly called

TYPHUS.

The Fever, in a mild form, made its first appearance in 1817, to the westward of Dundee, gradually traversing the parishes more to the northward; and, in a contagious form, it first appeared in the parish of Strathmartine, at a large spinning work, at Trottick, about two miles north of Dundee. There, in the course of two months, about thirty of the labourers were seized with Typhus. They were committed to my care, and only one of them died.

In April 1818, it made its appearance in a contagious form in a lodging house at the west

end of Dundee, spreading with considerable rapidity over the suburbs; but what may appear rather singular, it did not visit the town particularly till early in the following autumn.

In May, on account of the epidemic appearance of the Fever, Alex. Riddoch, Esq. the then Provost, called a meeting of the Magistrates, Governors and Medical Gentlemen of the Infirmary; the result of which was, a proposal that the Infirmary should be thrown open for the reception of all Fever patients gratuitously. This expedient checked the progress of the Fever during the summer months; but towards the end of harvest it became more and more alarming: and a Report given in by the Medical Gentlemen connected with the Infirmary, induced Provost Anderson immediately to call a meeting of the Heritors, Magistrates, &c.

At this meeting a Committee was appointed to take the necessary steps for putting a stop to

the contagion, to procure a subscription for defraying the necessary expences, and also to draw up an Address, as under, for the information of the public.

" TYPHUS FEVER.

" The Committee of Health, appointed by " a General Meeting of the Magistrates, Jus- " tices of Peace, Ministers, and other Gentle- " men in Dundee, with a view of stopping the " ravages of the Typhus Fever in Dundee and " neighbourhood, considering that the General " Meeting had recommended an Address on the " subject, beg the attention of the public to the " following important facts and circumstances " connected with the existing state, and with " the prevention and cure of said Fever:

" The prevalence of Typhus Fever in Dun-
" dee and neighbourhood, is universally acknow-
" ledged and lamented; and although compa-
" ratively few have died of this disease, yet it
" has been very fatal to the health and circum-
" stances of many poor families.

" From the inquiries of the Committee, and
" the Medical Report drawn up at the instance
" of the Magistrates, the Committee are satis-
" fied that this contagious Fever originates in,
" and is propagated by, want of cleanliness in
" the houses, furniture, and clothes of the poor—
" by the accumulation of filth about their doors,
" and in the lanes and closes—by the want of
" air in the rooms of the sick, and by their be-
" ing often greatly overcrowded.

" The remedy for these evils is neither dis-
" tant nor expensive; and the Committee ear-
" nestly recommend to the poor a higher degree
" of attention to cleanliness in their persons and

" houses; to remove, without delay, all filth
" and nastiness from their lanes and closes, and
" to keep their apartments better ventilated, es-
" pecially when any of their families are under
" Fever. Attention to these particulars at first
" might have prevented the rise of the Fever;
" and attention to them now may lessen its se-
" verity, and in a short time stop its progress
" altogether.

" As the separation of the infected from the
" healthy is recommended by the Medical Gen-
" tlemen, as a thing of paramount importance
" for the prevention and cure of the malady, the
" Committee recommend a prompt attention to
" this precaution, and will always be ready to
" give every aid in their power for attaining an
" object of such importance. And, as the Go-
" vernors of the Infirmary have, with the most
" laudable liberality, thrown open their doors
" for the reception of all Fever patients, free of
" expence, the greatest facility is afforded for

" effecting the desired separation betwixt the
" healthy and the sick. It is therefore request-
" ed, that on the appearance of Fever in any
" poor family, application be made to Mr Wil-
" liam Dick, Surgeon, the Inspector appointed
" by the Committee, who will take every neces-
" sary step, under their superintendence, to pre-
" vent the spread of the disease, and to husband
" the health and the means of the poor.

" The Medical Gentlemen having recom-
" mended that the houses and clothes of persons
" infected with Fever be fumigated and cleansed,
" the former with hot lime and water, this pre-
" caution is recommended to the attention of
" all; and the Committee, on application being
" made to their Inspector, by such as are un-
" able to fumigate and wash their own houses
" and clothes, will take care that this shall be
" done for them, free of expence. To demon-
" strate the propriety of this measure, the Com-
" mittee have only to remind those whom they

" address of the numbers, who, after having been
" in a state of convalescence, have relapsed, in
" consequence of their being again exposed to
" the baneful contagion of unpurified houses and
" beds. If the Committee shall find this recom-
" mendation neglected, they will be under the
" necessity of applying to the proper Authori-
" ties to enforce a regulation so necessary for
" the health of the poor.

" As the contagion may be easily communi-
" cated, it is of the utmost importance that every
" precaution be used to prevent its introduction
" to spinning mills and factories. The utmost
" attention should, for this purpose, be paid to
" cleanliness and ventilation in all public works,
" and to the removal of the infected from among
" the healthy, either to their own houses, or to
" a public hospital.

" Persons from the country ought to be par-
" ticularly on their guard against unnecessary

" communication with Fever patients in town,
" as they are very liable to catch infection; and,
" by carrying the disease away with them, may
" greatly extend its baneful influence.

" As many of those suffering from Fever are
" without bed-clothes, body-clothes, and linens,
" requisite for ensuring their recovery, and for
" preventing the ill consequences of a relapse,
" from their being obliged to use infected bed-
" clothes, &c. all such articles as the more af-
" fluent may be able to spare for the use of the
" poor, will be gratefully received by the Inspec-
" tor for the Committee, and carefully applied
" for promoting the great object in view.

" While the Committee intreat the attention
" of the poor themselves to suggestions that have
" no object but their welfare, they rely on the
" co-operation and liberality of the rich to enable
" them to give effect to these plans of humanity
" and benevolence towards the poor; and they

" beg those to consider, that although a conta-
" gious epidemic may spend its first efforts in
" weakening the strength, or in thinning the
" ranks, of the poor, it can seldom be prevented
" from carrying its ravages into the families of
" the middle and higher ranks of society, with-
" out the use of such means as the Committee
" here recommend.

" By order of the Committee of Health.

" JAMES THOMSON, *Convener.*

"*DUNDEE, Dec.* 29, 1818."

The Committee, along with an Inspector whom they had appointed, next proceeded to procure a proper house of recovery; and, on ap-

plying through the proper authorities, they succeeded in obtaining the Barrack Hospital, to which the convalescents were removed from the Infirmary, to make room for the numerous urgent cases, which increased so rapidly that the usual accommodation of the Infirmary was insufficient. The Governors then generously ordered the large apartment usually appropriated to the holding of their meetings, the operation room, and the nurses rooms, all to be fitted up for Fever wards; but still, with this additional accommodation, many urgent cases could not be admitted for want of room.

The total number of Fever cases which came under the care of the Committee, or Board of Health, from 1st January to 1st August, 1819, were, ... 1264

Of whom there were sent to the Infirmary,	315
Attended by the Dispensary Surgeons at their own homes, ...	949

Recovered, of 315 sent to the Infirmary,	290
Died, ...	25
Recovered, of 949 attended at their own homes, nearly	879
Died, about	70

Of the 1264 cases 505 were removed to the house of recovery, where they were comfortably treated till fit for going to their own homes, which had been thoroughly cleaned under the direction of the Inspector, according to the mode prescribed by the Committee. Besides the cleansing of 360 dwelling apartments, 1494 individuals had their bed and body-clothes properly cleaned; and many of the most needy had clothing given them gratuitously.

Although it appears that the lower classes of the community were more immediately the subjects of this epidemic, and though in many in-

stances the infection could be traced from house to house, and of course, by early and proper management in the houses first infected, its progress might have been checked—yet those in the higher circles did not entirely escape its attacks. Of these some died; and even several of the medical practitioners were seized with it, three of whom had relapses. The greater part of the nurses in the Infirmary were also attacked; and one of them died, after having relapsed three times.

It may be proper to state to those who may not have had an opportunity of personally visiting the abodes of wretchedness and filth, which were particularly the scenes of this epidemic, the situation and circumstances in which many of the sufferers were found; some living in low cellars, noxious by their dampness, and without even a hole to admit either light or air, save what entered by the door. In visiting some of these places I was under the necessity of pro-

curing a light, even at noon-day, ere I could see the patient; and I have found four or five of a family in holes not eight feet square, where two or three were lying sick in a corner, or in what might be called the same bed; in some instances possessed neither of bed nor bedding, but lying either among old rags, or on the bare damp floor, without even a pallet of straw under them; sometimes three lying in one corner and four in another, covered with a matt or some old clothes; others lying under a few rags, literally naked. And here the kind interference of the Board of Health rendered most important service; for in such cases many must have perished, had it not been for the timely aid which it it afforded in removing the most urgent cases to the Infirmary, and procuring medical attendance to others.

I cannot close my notice of this scene of misery without adverting particularly to the Indigent Sick Society, whose kind and humane in-

terference was of the utmost benefit in many instances, where the poor sufferers had not a morsel to put in their mouths, by giving money to supply their pressing wants. And in all applications of this nature, the assistance afforded by that Society was most prompt and liberal.

SYMPTOMS.

Previously to our treating of the probable Causes of this contagious Fever, it may be proper to enumerate the Symptoms as they usually appeared.

1st, The patient complained for some days, and even sometimes for a week or more, of a confused state of the head; want of appetite, with some degree of thirst; chilly at intervals, with languor or a sense of debility; a sluggishness in motion, and slight pain in the limbs, particularly in the back and loins; the tongue rather white; the bowels constipated; the skin not much altered in appearance; the pulse, if frequent, feeble; and the countenance exhibiting an expression of anxiety.

2d, An unusual heat of the skin; frequent retchings, though little but insipid phlegm brought up; sickness, nausea, and a disrelish of every kind of food soon following; severe pains in the back and loins, with determined headach, and a considerable degree of thirst; vertigo, confusion of ideas, deep fetched sighs, with an oppressive kind of breathing. The pulse, from being small, and not much quicker than natural, becomes much more frequent—sometimes full and bounding, but often contracted and oppressed; throbbing of the temporal arteries, flushed countenance, suffusion of the eyes, intolerance of light; the tongue more or less furrowed towards the edges and extremely tender—trembles greatly when the patient attempts to put it out; the urine high-coloured and scanty.

3d, In this stage all the above symptoms increase in violence; the pulse becoming more frequent—from 100 to 120, 130, 140, and even sometimes higher; thirst excessive, nothing but

cold water relished; delirium, talking incoherently, difficulty of articulation; the teeth, tongue and lips covered with a dark brown crust; the inside of the mouth of a purple colour; fœtid breath; evacuations by stool black and fœtid; the urine of a disagreeable odour; cold clammy perspirations; the pulse trembling and fluttering rather than beating, and frequently intermittent; the nails pale or livid. At length hiccup, *subsultus tendinum*, involuntary evacuations, precede the fatal extinction of the vital spark, after the patient has languished 14, 18, 20, or 24 days, and sometimes much longer.

Lastly, all these respective symptoms vary according to particular circumstances and habits of body. In some, the pulse either much slower, or more frequent, than is usually observed in Fever; and this, at an early period of the disease, not indicated by other symptoms. In other respects, the body covered with *petechiæ*, other symptoms mild, and *vice versa*. The heat of

the skin almost natural, while other febrile symptoms are present in a high degree; and the tongue clean and moist during a very severe illness. Some grow extremely deaf and stupid towards the end, though quick and apprehensive of the least noise or light at the beginning; others roar incessantly during the whole course of the disease. At the commencement of the late epidemic, irregular cases of this kind were most common.

CAUSES.

HAVING thus enumerated the Symptoms of the Fever, I shall now proceed to take notice of its probable Causes.

The causes which generate and promote Fever, are whatever tend to debilitate the nervous system—as the contagious effluvia, *marsh miasmata*, &c.; and particularly excesses of any kind, as intemperance, late watching, extreme passion, excess of study, &c.; much fatigue, cold, depression of spirits, low diet, poverty with its companion scarcity; want of cleanliness; living in small houses exposed to offensive vapours, or where animal matters are allowed to corrupt;

and, perhaps, what is more than all, from persons living crowded together in dirty ill-aired lodging-houses, where the common comforts of light and fresh air are not enjoyed.

Likewise there may be enumerated among the causes, a moist atmosphere, impregnated with bad air; sudden changes from heat to cold, and *vice versa;* suppressed evacuations; improper food; blows or injuries received, externally or internally.

But of all the causes which are productive of Fever, none are so efficient as exposure to cold, under particular circumstances; for the human body being composed of a due proportion of solid and fluid parts, fitted for the regular performance of the functions of life, whatever interrupts these functions must be subversive of health, and must necessarily disturb and disorder the whole frame; and, by degrees, impair and destroy the strongest and best constitution. For example, a sudden transition from heat to cold will unquestionably check perspiration, and induce a general derangement of the circulating system, thereby increasing the action of the heart and arteries, and so producing Fever.

When the surface of the body is kept comfortably warm, the circulation of the blood is equally maintained in every organ essential to life; but when any considerable part of the surface of the body becomes chilled from deficiency of clothing, or long exposure to cold or damp, the blood that should be circulating in these parts is thrown in upon the internal parts, and so produces re-action, and consequently Fever. Likewise sitting long, or falling asleep in wet clothes; sleeping in damp linen, or damp apartments; exposing the head uncovered to the direct rays of the sun, or sleeping under his immediate influence, will seldom fail to produce Fever.

There is a peculiarity too in the atmospheric influence of some seasons, which tends to the production of certain diseases rather than of others; and it has probably been the peculiarity of the two immediately preceding seasons to induce what has been called "Typhus Fever," by the co-operation of causes, which, in some other seasons, might give rise to other diseases, as Sore Throat, Pleurisy, Rheumatism, Catarrh, &c. But, as has been observed, it has been the peculiarity of the last two seasons to generate the late prevailing Epidemic; and when this is accomplished, though it may arise spontaneously in one person, yet, by neglect of cleanliness and proper ventilation of the apartment where such an individual may be confined, contagion will be generated, by which the disease is communicated to the incautious visitor or attendant.

And, as to the immediate probable cause of the late Epidemic in this town and neighbourhood, it unquestionably was contagion, aided no

doubt, in a considerable degree, by several extraordinary concurrent circumstances. It was introduced by a travelling woman, a poor mendicant, who having had the Fever in Glasgow, got convalescent, and set out for Dundee. On arriving here she took up her abode in a lodging house, at the west end of the town; where, probably from the fatigue of her journey, she relapsed, and communicated the contagion to a number of her fellow-lodgers.

Having now noticed the chief probable causes of the Fever, I shall not further enlarge on them here, as in treating of the Means of preventing or checking the progress of Fever, I shall still have occasion to mention some causes, by the attending to which the disease may be in some measure prevented.

MEANS

OF

CHECKING ITS PROGRESS.

As the Epidemic excited considerable alarm in the minds of many individuals, I am anxious to relieve the mind from all undue apprehensions, and would rather be inclined to substitute the name "Mild Fever," in place of that of Typhus; the former being in my opinion much more appropriate—Typhus being the designation of a malignant fever, whilst that of "mild," as applied to the late Epidemic, is highly characteristic, as, by a judicious treatment of it at the commencement, it will seldom become malignant.

I may remark, that there is a great probability of preventing, or at least moderating an attack of Fever, by obviating or avoiding all such causes as may be requisite to co-operate with the influence of the seasons in its production.

I mentioned, in enumerating the probable causes of Fever, that there is an atmospheric influence and exhalations from the earth, which, with the co-operation of other causes, produce Fever; therefore, it is the duty of every person under certain states of the atmosphere, to avoid all contingencies that might co-operate in the production of Fever—especially persons of delicate constitutions, and those of tender years, and who have scarcely reached their fourteenth or fifteenth year, and who seem more liable to an attack of the mild Epidemic Fever, on the slightest aberration of conduct in point of dress, diet, or exposure to cold; whereas the strong and vigorous may expose themselves to the action of exciting causes with comparative safety.

How these deviations can produce the disease in question can be easily explained; but so as to be understood by those who are less acquainted with the structure and functions of the human system, may not be so easy.

There is a susceptibility in delicate persons, particularly when young, to impressions of every kind, to which the more robust are almost entire strangers; hence some delicate persons can predict the change of weather by their feelings, and young people are alive to every impression, mental and corporeal, in a manner peculiar to themselves. Witness the face and bosom suffused by a rush of blood to the vessels of the skin in a moment, by the effect of a single word or thought; observe also the effects of moderate cold on their feet and hands—they become red and chapped, and are subject to chilblains.

It is this susceptibility to impression that renders delicate, or young people, the peculiar vic-

tims of atmospheric influence. And this influence also operates readily upon the poor and the needy, whose bodies have been extenuated by scanty fare, and whose minds have been depressed by hopeless misery. Among such as these the atmospheric influence exerts its chief power, having the assistance of every predisposing cause. It is among these that contagion was generated, and the disease propagated far and wide in this neighbourhood.

There are also certain states or conditions of the human body, arising from the situation or mode of living, which may, and certainly do dispose the body to fall into a state of disorganization more readily; or, in other words, favour the occurrence of Typhus symptoms, so as to require a less degree of the exciting cause—the previous increased action. For example, I am convinced that the deficiency in the quality as well as in the quantity of the food, of the labouring classes of the community in this coun-

try, during some seasons past, has produced a relaxation of texture in their frames, which has rendered them more susceptible of disorganization, or destruction of the texture of the particular organs affected, in cases of Fever or any other acute disease.

Certain causes also, applied to the surface of the body, and driving the blood to the internal parts, as in the case of a common cold, may directly increase the action of the heart and principal arteries, from the greater quantity of blood thrown in upon them. But I apprehend that such action cannot exist long, without the blood being determined to some particular part, occasioning local congestion, or inflammation; and it is well known, that when once an inflammatory action takes place in any part of the body, the system at large is re-acted upon, and Fever is produced.

From the above considerations, parents and

guardians of youth, and the delicate in general, should be careful with respect to clothing, and particularly to have flannel next the skin, and to be particularly attentive to the warmth of the feet and legs.

Likewise persons of delicate health should attend to the adaptation of their clothing to the increasing coldness of the season; and they should be told, that there are many things to be avoided, which render the body highly susceptible to the impression of cold or damp: These are, sleeping with many bed-clothes, sitting in warm or crowded rooms, fatigue of body or mind, and indulgence in warm drinks.

Should inattention to any of these circumstances be committed by a person exposed to cold, a Fever may be expected as the consequence. But why should delicate persons expose themselves to any occasional causes of Fever—causes which it is in the power of every

one to avoid, if we except the children of misfortune, whose clothing is as scanty as their fare?

Errors in diet, and inattention to the state of the bowels, may also induce Fever. I will not here enter upon the manner in which these causes co-operate in the production of the disease; such a disquisition would be too intricate for the comprehension of any but professional persons; but, that they do co-operate, there is sufficient evidence in our daily practice.

If the stomach become loaded with an indigested and indigestible mass—if the bowels become constipated from fœcal accumulations, the irritation occasioned thereby, under the present condition of the vital powers incident to the influence of the atmospheric cause, will induce a case of mild Fever, not inferior in smartness of attack to one occasioned by exposure to cold, or to contagion: hence great care should be taken in the regulation of food.

Nothing is more pernicious than to eat without regard to the state of digestion. We should reflect, that it is what we can digest, and not what we can eat, that ought to direct our choice of food; and that whatever we eat that is difficult of digestion, whether on account of its quality or quantity, becomes a source of irritation, and ultimately of disease. No greater quantity should be eaten by any one than may be easily digested; and such as have not regular evacuations from the bowels, should procure them artificially.

Peculiarities of constitution present themselves in every individual, so that there are few remedies, even as aperients, applicable to all. In each individual case, therefore, the family Medical Practitioner should be consulted, that the digestive organs may be kept in a healthy condition; for, by the timely aid of an experienced Practitioner, the increased action in cases of Fever may be reduced—as an accumu-

lation of vitiated fœculent matter in the intestines must at all times prove a source of great irritation to the system; and more particularly so, in cases in which the morbid action is going on at the same time. And, in continued Fever, a torpid state of the bowels is, in general, a very prominent symptom; therefore, by the timely and judicious exhibition of an aperient, the bowels may be cleared of an accumulated load of fœces, and the quantity of circulating fluids may be reduced, thereby lowering the tone of the system at large, and diminishing any inflammatory action which may be present.

There are, indeed, strong and healthy people who are not readily elated by joy, or easily depressed by the sight of sorrow—whose nerves do not vibrate to every light breeze that passes over them, and who are favoured with constitutions calculated to resist all atmospheric influence; yet still there are circumstances of a temporary nature, which may arise, and, for a

time, place even their nerves in such a condition as to put them on a par with the delicate and the young, as to atmospheric influence: such as long watching by night, great and unusual fatigue of body or of mind, intemperance in the use of spirituous liquors and wines—all or any of which causes may render the strongest and most healthy person obnoxious to external influence, and a case of Fever may be the result.

Here I would remark, that early hours cannot be too much recommended to all classes of people; one hour's sleep before midnight restoring the exhausted powers of the body and mind more effectually than two hours after it. A corroboration of which is, the fact that those who have been remarkable for longevity have almost uniformly practised early retirement to bed, and early rising in the morning.

Besides the exciting causes above enumerated, and which ought to be carefully avoided,

there are general causes, which are referred to under the name of atmospheric influence, including marsh miasmata, contagious effluvia, &c. which have been frequently alluded to in this address, and which it is equally necessary to guard against as any other cause of an exciting nature.

As all these general causes are not cognizable by the senses, having neither perceptible bulk, nor hardness, nor flavour, nor odour, nor resistance, by which they could be seen, felt, tasted, smelt, or heard—their existence being known only by their effects; yet these imperceptible agents are the general causes of Fever.

That such agents do exist is evident. For example, oxygen gas has never yet been made cognizable to the senses; yet we cannot doubt of its existence, or of that peculiar substance to which Chemists have given that name—because of certain effects, or changes, produced by it in

natural bodies, under particular circumstances. These general causes can, for the most part, be easily avoided, in this more northern region, where the country is in a high state of cultivation, and where the atmosphere is less filled with putrid exhalations. But more of this under the next division of our subject.

MODE

or

MANAGING THE PATIENT, &c.

THE contagious effluvia is an invisible substance, generated by the human body, when confined long under the same clothing, in an ill-ventilated apartment; but most commonly by persons labouring under Fever. When generated, it may be retained in silk or woollen clothing for a considerable time, without losing its fever-exciting property. And it is exhaled from the body of the person generating it, floating around him in a concentrated state, sufficiently strong to induce Fever in a person coming within the range of its influence.

The most respectable medical testimonies agree on this point, that neglect of cleanliness and want of free air, may, and often do, add a character of contagion to the most mild and common fever.

That contagion is exhaled from the body, must be admitted, if we admit the body to be the source of its existence; and that contagion floats around the body, is the necessary consequence of its being in a state fit to be exhaled. Now it is evident, that the nearer you approach to the body, the more concentrated the contagion must be: the distance, however, at which contagion may act upon a visitor, must vary in different circumstances.

Thus, if a door and a window be opposite to each other, and the bed with the patient between them; then, on opening the door, a current of air may pass in at the window, and carry the contagious effluvia some yards from the bed

in an opposite direction. Whenever, therefore, a visitor enters a close chamber of this description, and throws open a window or other aperture, he ought to stand between this aperture and the bed. A Physician to a public institution in London, is said to have lost his life by not attending to this precaution.

That every person labouring under any species of fever, may, in certain circumstances, generate a contagion capable of communicating a Typhus disease, is a fact in medicine now clearly established; and that every person labouring under fever may be so managed, as not to generate a contagion capable of communicating a Typhus disease, is equally true.

Hence I would request the attention of my readers—I. To the Management of the Patient, so as to prevent the generation of contagion. And—II. To the Mode of avoiding its Action,

where it actually exists; or of destroying it in the strong holds of its formation.

I. MANAGEMENT OF THE PATIENT.

With respect to the former, the preventing of contagion, it is not my intention in the smallest degree, to supersede the necessity of medical advice and attendance, but the very reverse, namely, to encourage the patient or his friends to lose no time in consulting the family medical attendant; and likewise to recommend a cheerful compliance with, and submission to his prescriptions. They ought by no means to be led aside by family nostrums, and a superstitious adherence to old exploded practices and doctrines.

I have, in the beginning of this address, under the head Symptoms, pointed out the first stage of the ordinary mild Fever, with sufficient minuteness, I hope, to enable the attentive observer to recognise it. This is the only period of the disease in which art can interpose with a high probability of success: and it is of the last importance to the patient, that, at this stage of the disease, the Medical Practitioner be called in; for if a morbid action has commenced in any part of the body, it will go through the whole system, if not checked either by the efforts of nature, or by the interposition of art.

These morbid actions are a continued train of causes and effects, with regard to each other: consequently, if the disease can, by any means, be interrupted in its course, so as to destroy that action which would operate as the cause of succeeding morbid phenomena, the disease will terminate, in such a manner as that the patient will require reparation only of the injury already sustained.

In applying this reasoning to the history of Fever, I conceive, that when certain causes are applied to the body, sufficient to produce the disease in question, certain symptoms occur, indicating the commencement of morbid action; and, if that is not checked, it will produce disorganization of particular parts, indicated by further symptoms, which may be sufficient to lead to dissolution: or, the disease may, by its violence, at once occasion death. But if, in the beginning of the disease, we are able to check or overcome the febrile action, to such a degree as to destroy its power of producing disorganization of the parts affected, we cut short the disease, and prevent its fatal consequences.

Till the present era of medicine, this interesting period in Fever has been greatly overlooked; for the disease was not recognised till the second stage of symptoms pointed out the name and nature of the malady.

I trust these observations will operate as a warning to those interested, not to allow the hour of important opportunity to pass, but immediately to call the Medical Practitioner, before the disease may have tainted the whole constitution; as when it has once done this, the powers of the most active remedies—the most skilful management, though under the direction of the ablest Physician, may not be able to dislodge it.

Let the Medical Attendant then be promptly called in; and should any circumstance prevent his speedy attendance, immediately exhibit a brisk cathartic, repeating it every four hours till it operate freely.

After the bowels have been copiously evacuated, put the patient into a tepid bath, at 96° or 97° of temperature, for ten or fifteen minutes; after which let him be dried and then put to bed, with a medium quantity of bed-clothes.

By the time that this salutary process is over, it may be expected that the Medical Attendant shall have arrived, by whose treatment the disease may be disarmed of its fatal power, and consequently the generation of contagion prevented: for it fortunately happens, that the very means which are employed for the cure of Fever, under the enlightened practice of the present day, tend to prevent the production and concentration of contagious effluvia.

The use of the tepid bath at the commencement, the frequent cooling ablutions during the stage of excitement, the open window, the withdrawn curtains, the frequent changes of linen, and the employment of aperient medicines, all tend to prevent the generation of contagion.

In addition to the above I would say, in general, let the curtains of the bed be removed altogether; the sheets and pillow-cases be changed twice a week, or oftener, according to circum-

stances; the patient's linen every day; the hair cut short, or rather shaved, if the attack threaten severity, so that the head, with the face and hands, may be frequently bathed or sponged during the progress of the disease.

Let the windows be open all day, and now and then by night, according to the state of the weather, until the period of convalescence. Let a little fire be kept in the room, rather to give circulation to the air than warmth. The alvina discharges of the patient to be removed into another apartment for the inspection of the Medical Attendant, which it is his duty not to neglect. And let all towels, handkerchiefs, dressings from blisters, and other things imbued with the excretions of the patient, be immediately immersed in cold water, and carried to the wash-house, till they can be conveniently cleaned by boiling.

By attending to the above hints, I apprehend

that the generation of contagion may be, in a great measure, checked; and little or no danger to the attendants ensue, even in the worst forms of Fever.

II. MODE OF AVOIDING CONTAGION.

We now, Secondly, proceed to treat of the Mode of avoiding the Action of Contagion, where it is present; or of destroying it in the strong holds of its formation.

I believe every well informed person is pretty nearly settled in opinion, as to the contagious nature of Typhus Fever; but it is of vast importance that the public at large should also entertain correct notions upon this subject: and

surely, every production which rouses the attention to the using of the means for destroying the action of contagion, when existing, renders an important service to our fellow-creatures.

And here I may again briefly define what is meant by contagion. It denotes a substance, not indeed perceptible to the eye, produced from the body of a patient; and which will, if applied in considerable quantity to the body of a healthy person, give rise, or existence, to a similar disease. The existence of such a substance is evident in Small Pox, Scarletina, Measles, and other maladies; and the spreading of Typhus through families is one of the direct arguments in favour of existing contagion in that malady. It is conveyed either by immediate contact, or proximity, or fomites.

But, to revert to the mode of avoiding the action of contagion, if the patient is in a small and ill-ventilated apartment, immediately remove

him out of it, to one which is clean and well aired; and, after washing him with warm water and soap, let him be put in a clean bed, with well-aired sheets; then attend to every precaution formerly recommended under the head of Preventing the Generating of Contagion.

Let this new chamber be well ventilated, by allowing a free admission of fresh air into it, which will prevent the concentration of the effluvia in the apartment. And, as a powerful antidote to contagion, I would recommend due attention to fumigating the chamber, twice a day, with nitre and concentrated vitriolic acid, according to the directions of Dr Smith.

None but the necessary attendants should have any communication with the patient, in this stage of the disease; and even they should avoid sitting down on the patient's bed, and be careful not to inhale the vapour immediately issuing from his body. When near the patient, they

may have a sponge or handkerchief moistened in camphorated spirits or vinegar, and apply it to their mouths and nostrils; and, when approaching the bed-side of the patient, they should always take care to get on the side between the bed and the open window. There is no necessity for hanging over the breath of the sick; neither can there be any reason for caressing them, or lying down to rest beside them—imprudence in such matters forfeits all claim to the protection which precaution may afford.

With respect to the apartment from which the patient is removed, it will be necessary to have it first well fumigated; and if the inhabitants or family can be removed from the house infected, in preference to Dr Smith's plan, I would recommend its being fumigated with oxy-muriatic acid gas, extracted from the black oxid of manganese, sea salt, and diluted vitriolic acid. And, previous to washing the clothes and furniture, it may be highly proper to expose them to

the fumigation. Every aperture should be properly shut previously to the fumigation taking place: and it would be proper, if convenient, to continue this for forty-eight hours; but that may be left to the judgment of the Medical Practitioner.

Let the walls, ceiling, and floor of the apartment be clean swept, or brushed, immediately after the fumigation; and, if necessary, the walls and roof ought to be washed with quick lime, fresh slacked in water, and while it continues bubbling and hot.

Next, let all the wooden furniture and floor of the apartment be washed clean with hot water and ashes. Let all the dirty clothes be immersed in cold water for a night: in the morning wring them out, then boil them with soap and ashes; and, when properly washed, expose them to the air.

If these hints be properly attended to, they may be successful in the destroying of existing contagion.

But the above directions, it will evidently appear, are only applicable to such as possess more apartments than one. And, it will be naturally asked, what is to be done for the destruction of contagion in the small solitary hovels of the poor. For the nostrums of sprinkling vinegar, and of burning paper, can only conceal the offensive smell, but cannot alter the contagious property of the air in the apartment. Nor does the charm of camphor possess any anti-contagious property. Nor can the process of fumigation and cleaning be resorted to, so long as the poor sufferer lies in his hovel.

Here then an extensive field opens for the humane and benevolent exertions of a Board of Health, the object of which is particularly to check epidemic complaints, especially in their

commencement; and perhaps no large manufacturing town ought to be without such Establishment.

In order to gratify the wishes of a few respectable friends, I shall here give my views relative to such an Establishment.

A PLAN

For establishing a

BOARD OF HEALTH.

A PLAN

FOR ESTABLISHING

A BOARD OF HEALTH.

Infectious Fevers occasion much misery and mortality among mankind: they produce, indeed, the greatest wretchedness in poor families; but persons in all ranks of life are, in some degree, exposed to the danger. These fatal maladies are most destructive in large towns; but they often spread in country villages, and continue for months, and even years. It is pleasing, however, to reflect, that the intelligent and benevolent inhabitants of any place possess means, by the use of which they may, with ease and cer-

tainty, preserve themselves and their poorer neighbours from infection, and all its calamitous consequences. They may accomplish this by forming themselves into an Association or Board of Health, for superintending the health of the poor, and for diminishing the frequency of epidemic Fever.

The circumstances which produce and propagate epidemic among the lower ranks in society are chiefly—low, damp, and ill-ventilated habitations; inattention to cleanliness in manufacturing establishments; and, I may add, improper accumulations of night soil, and the exposure of the refuse of animal matters till they are in a putrid state; and also, the incautious intercourse of the poor in places which are infected. All these deserve the most serious attention, and demand more immediate correction.

It may be proper to mention here, another proof of the necessity of a Board of Health in

every large town. In every populous place there are numbers who die of Fever, and whose clothes are, in consequence, imbued with contagious matter; but which it is necessary to dispose of: contagious matter is thus frequently dispersed among the inhabitants.

As a confirmation of the truth of this, it is recorded, that some years previous to the peace in 1763 the crew of a French squadron, lying in the Bay of Halifax, were affected with Typhus Fever to such a degree that it was found necessary to carry the diseased on shore, and to erect tents for their reception. During this process, intelligence having reached the French Admiral of the approach of an English squadron, he was induced to embark his sick and convalescents in such haste as to be under the necessity of leaving many things, particularly the bedding, on shore. After the departure of the squadron, some Indians coming to the spot, seized the booty, and sold the blankets and other articles

among their tribe, in consequence of which an Epidemic soon made its appearance; and, we are informed, that by this disease Nova Scotia lost 30,000 of its Indian population.

But an important proof on this point is afforded us, so late as the arrival of Sir John Moore's army from Spain. In some of the sea-port towns in England, viz. Plymouth and Portsmouth, where the inhabitants purchased many articles of clothing brought home in the transports, contagion was spread. A medical writer particularly mentions an instance of a whole family, in Portsea, being cut off, in consequence of having purchased a blanket which had come out of a transport.

Similar instances also occurred on the arrival of our armies from Walcheren, in 1809 and 1810. And the same thing happened to a family in Rathlin, an island on the north coast of Ireland, a member of which having gone over to Greenock

to visit a relation, sick in Typhus Fever, and who died, returned home with the clothes of the deceased; which, on being used by the family, infected them with Typhus, which they communicated to several others, of whom some died.

There is another instance of a taylor, who, having purchased an infected blanket to sit upon at work, was seized with Typhus on the fourth day he had used it: and many pawn-brokers have been affected by the same means—all which sufficiently tend to show the propriety of preventing the sale of infected clothes, till properly cleaned, according to the rules formerly prescribed.

Here I could add several instances on this subject, which have occurred in the course of my own practice, but which delicacy forbids.

For the establishment, then, of a Board of Health, I would submit the following proposals:

1. Let an airy and commodious house, or ward, for the reception of Fever patients, be obtained; and thither let the worst and most neglected cases be removed, in order that the chance of spreading the infection may be diminished, and medical assistance and cleanliness the better secured.

2. In every establishment of this nature, flannel dresses should be provided for putting on the patients when received into the house, till their own clothes be taken away and properly cleansed. And, during their state of convalescence, they should wear a dress belonging to the house, as a jacket, trowsers, with stockings and cap, for the men; and a wrapping-gown, petticoat, stockings, and cap, for the women. And when fit for leaving the house, let the house clothes be taken off them, and immersed in water, till they can be properly cleaned; and let their own clothes, cleaned as already mentioned, be restored to them. Then they may return to

their families and occupations without hazard of communicating infection to others.

3. In a house of this description there should be a slipper-bath, for the purpose of immersing the patient during certain stages of Fever: and likewise a shower bath would be necessary, for other medical purposes.

4. As there are many articles of household furniture in which contagion may be lodged, and likewise some descriptions of body-clothes, particularly those of men, which cannot be properly cleansed with warm water and soap,—it would be of the greatest importance to have a Wash-house near the House of Recovery, provided with every apparatus for washing; and it should also have a Stove, for exposing to a high temperature such articles as cannot otherwise be purified from contagion. The establishment of Public Wash-houses, like those of Dublin and Manchester, and of many other large towns, is

a measure obviously fraught with great advantages to these towns.

5. In such an establishment, let one or more women, of cleanly habits and decent character, be got, to undertake the office of Nurses.

6. It may not be inconsistent with the nature of such an establishment, to offer a small remuneration to the person who should bring the first certain information to the Society, that an infectious Fever had made its appearance.

7. The establishment ought also to be provided with a Chair, of a particular construction, having a moveable lining of linen; and immediately on the patient's being taken out, this lining should be exposed to the air, and frequently washed. The person in whom the febrile symptoms appeared should, if not properly accommodated at home, be immediately conveyed to the House of Recovery.

8. The house, or hovel, whence a poor patient is removed, should be immediately cleansed and fumigated, and washed with hot lime; and all the dirty clothes immersed in cold water, till they can be properly washed. Every article of household furniture should be washed with hot water, soap, and ashes; and what articles cannot be cleansed in this way, should be exposed to a high temperature.

9. A Medical Inspector should be appointed to see the Regulations of the establishment carried into effect; and he should be required to keep a Register of Infectious Fevers, on a plan to be regulated by the Board.

Such is a brief outline of principles which might be necessary to take into consideration by a Society appointed as a Board of Health.

INTERNAL REGULATIONS

FOR A

HOUSE OF RECOVERY.

1. The Fever Wards should be furnished with malleable iron bedsteads, without curtains; and the ticks should be filled with clean fresh oat straw, which can be renewed as often as circumstances may require, and the ticks can be easily washed when necessary.

2. Let every patient, when brought into the House of Recovery, be immediately stript of their infectious clothes, clean washed with warm water and soap, and clean apparel belonging to the house put on them.

3. The infectious clothes which have been taken off the patients, or brought to the house, should be immediately carried to the wash-house, and properly cleaned and aired.

4. On shifting the linen or bed-clothes of patients, let them be immediately immersed in cold water, and carried off to the wash-house for cleaning and airing.

6. The floors of the Fever wards shall be carefully washed with hot water twice a-week, and oftener if necessary; and the places near the beds of the sick every day; and the convalescents' wards as often as circumstances may require.

6. All the Fever wards should be daily fumigated with nitre and concentrated vitriolic acid, according to the directions of Dr Smyth. The walls and ceiling should be frequently washed with quick lime, fresh slacked in water.

7. No relations or acquaintances should be allowed to visit the sick without permission from the Medical Attendant, unless in cases where it would be cruelty to refuse admission to near relatives; and in such circumstances they should be directed to attend to the regulations prescribed for avoiding the action of contagion.

8. The convalescents should not be allowed to leave the house, or be discharged, without a consultation of the Physicians, for fear of relapses.

9. When a patient dies, the body should be removed, as soon as possible, to an apartment appropriated for that purpose; and the relations should proceed to the interment as soon as propriety may permit.

To conclude my remarks respecting the establishing of a Board of Health, I would observe

that institutions of this nature are particularly suited to large manufacturing towns; and probably though the town might not be of extensive population, the benefit of such an establishment would soon be discovered. This opinion is founded on this fact, that among the lower classes of society such irregularities and errors prevail, as will ever afford scope for the direction and interference of the more enlightened and humane. It can never admit of a doubt, that in the lower ranks of society in particular, much misery and real suffering exist, which might be greatly alleviated, were they strictly watched and promptly attended to by an establishment such as I am here recommending.—These remarks the writer of these pages deems worthy of some consideration: to his own mind they appear very conclusive. He leaves them therefore with his intelligent readers, not doubting but they may carry conviction to their minds also, on a subject of no small importance to the community at large.

A FEW HINTS

TO CLERGYMEN, VISITORS, AND NURSES.

I now proceed to offer a few remarks, or hints, to Clergymen, Relations, Visitors, and Nurses, with a view to their direction how they may visit the patient in Fever—give their attendance and perform their respective duties, without the risk of infection.

Clergymen and others, when called to visit patients in epidemic Fevers, should order nurses or friends to have the door and window, or windows, and bed-curtains open, so that a free circulation of air may be in the house before their arrival.

They should not go into the room with an empty stomach, or when fatigued; and when approaching the bed-side, they should always take care to get on the side between the patient and the window; and they ought to stand about a yard's distance from the patient. And, as the air in a sick room has at all times a more infectious quality in some parts of the room than in others, they should avoid the current of the patient's breath, and the air which ascends from his body, especially if the bed-curtains be closed.

Having left the room, they should blow from their nostrils, and spit out of their mouths any infectious matter which may have been inhaled. And if necessity or humanity should induce them to touch the patient, infection may frequently be prevented by a temporary holding in of the breath, and by turning away the face while the patient speaks. They should also wash their hands, mouth, and nostrils, on retiring from the room.

A due attention to these remarks may remove all apprehension, and encourage the benevolent Clergyman to afford his assistance, who might otherwise be deterred from so necessary and Christian a duty.

As it is the duty of Nurses to attend to the comforts and welfare of the patient, and to every order or direction of the Medical Attendant, they also are peculiarly liable to contagion: to avoid which they must carefully attend to cleanliness, and the admission of fresh air into the room; and, when the patient requires help in any way, the nurse ought to tie a handkerchief across her face, below the eyes, in order to prevent exhalations from the patient from entering her mouth or nostrils.

Nothing that may produce smell or exhalation should be allowed to remain in the room;

and, as soon as possible after handling the patient, the Nurse ought to wash her face and hands with cold water; after which let the bed-curtains and windows be opened, it being understood that they are shut while the Nurse is turning the patient, changing his linens, or doing whatever else may expose his body to the air.

The floor, near the patient's bed, should be rubbed clean every day with a wet mop or cloth: and the Nurse should never taste any food or drink the patient may have left; nor should she use the same utensils till properly washed.

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