

viscera: in women the viscera to which hydatids generally attach themselves, are the ovaria; and in men most commonly the liver.

The three great varieties to be considered here, are the dropsy of the chest, or hydrothorax: the dropsy of the belly, or ascites; and the general dropsy of the cellular membrane, or anasarca.

As the nature of the complaint is the same in those varieties, and only modified by the different seats of the disease; the peculiarities of the parts where the watery fluid is collected; and their greater or less delicacy and importance to life; the mode of treatment must in all be founded on the same general principles: and the most successful remedies in one kind are likely to be the most successful in the others. It will be necessary, however, in the progress of the cure, to keep constantly in view the peculiarities and functions of the parts affected, and to adapt our treatment to those varieties.

Anasarca, hydrothorax, and ascites are seldom found perfectly distinct from each other: for though in most of the dropsical patients we meet with, one of the three predominates, yet that one is commonly combined with one, and frequently with both of the others.

ANASARCA.

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SYMPTOMS OF ANASARCA.

In anasarca there is a soft, pale swelling of some part, or of the whole of the surface of the body and limbs, which pits on being pressed.* The swelling is at first partial, and most commonly begins about the ankles and feet; it then ascends, and spreads until it occupies a large portion, or perhaps the whole of the surface of the limbs and trunk of the body, and sometimes penetrates even into the cellular membrane of the lungs: there are however instances where the swelling is from the commencement universal; and there are a few instances also where the upper parts of the body have been first attacked: the cellular membrane, under the eyes, is commonly swelled, whence the general complaint has been called hydrops: the scrotum and prepuce in men, and the pudenda in women, often swell to an enormous size; the fluid being copiously collected in the loose cellular membrane: the fat is absorbed, whence there is great emaciation,

* Sometimes an erysipelatous inflammation spreads over the dropsical surface, especially in the legs, whence the skin becomes hot, inflamed, and hard; this appearance is most commonly combined with diseased liver, and is not uncommon in habitual drunkards; it happens too in those poor people whose naked legs are much exposed to the weather, such as washer-women.

emaciation, but it is prevented by the dropsical enlargement from being perceived: * the countenance looks dull and languid; the urine is scanty, and of a dark brown colour, and in its passage attended commonly by an unusual heat; the skin is dry and cold; breathing quick and hurried, particularly on exertion or motion; there is often a cough; the patient feels unusual lassitude and weakness, and generally suffers from thirst; the pulse is small, and sometimes irregular; the appetite is uniformly impaired; the sleep is interrupted and unrefreshing; costiveness mostly attends dropsy, but some cases are met with in which the urine and stools are passed in natural quantity, and there are instances even of purging.

Anasarca occurs frequently without any admixture of hydrothorax or ascites; but it commonly accompanies, in a greater or less degree, both of the others; especially hydrothorax, in which it is so constant, that it is enumerated as one of its symptoms.

ASCITES,

* The swelling of the lower extremities, the most common appearance of the disease at its commencement, arises from the watery exhalations, by their gravity, descending into the lowest parts of the body, in consequence of the body being very much in an erect posture: another cause is the more languid circulation of the blood in the lower extremities, whence arises an increased exhalation into the cellular membrane.

ASCITES, OR DROPSY OF THE BELLY.

SYMPTOMS OF ASCITES.

The symptoms are, a swelling of the belly, which, in the progress of the complaint, becomes very large and tense; a fluctuation felt about the loins and lower part of the belly; * flatulence, or wind, in the stomach and bowels; increased weight of the belly; and (as in anasarca) languid countenance; hurried and laborious breathing; cough; scanty and deep coloured urine; weakness and relaxation; thirst; impaired appetite; small, and sometimes irregular pulse; bad sleep; costiveness; cold skin, and sometimes livid complexion.

HYDROTHORAX, OR DROPSY OF THE CHEST.

SYMPTOMS OF HYDROTHORAX.

In dropsy of the chest there is an increased difficulty of reclining in an horizontal posture; sleep much interrupted, and attended by frightful dreams; great difficulty of breathing, amounting, in many instances, to orthopnoea, and threatening

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* The enlargement oftentimes is first perceived in the upper part of the belly, from the fluid in the bottom of it pressing up the floating viscera of the abdomen, towards the arch of the ribs, and pit of the stomach. This enlargement becomes more sensible where there is chronic disease of the liver, the increased size of which adds to the bulk at the upper part.

ening suffocation; the patient can best remain in an erect attitude, and, in some instances, inclined rather forward, with the chest supported against some firm substance, as a table: there is a sense of tightness about the chest, arising from an accumulation of water which impedes the free motion of the lungs: in the progress of the disease the countenance and the lips become livid and bloated; the patient is often suddenly roused from his sleep as if startled; there is sometimes a spitting of blood.

Along with those peculiar marks of hydrothorax, the common symptoms of anasarca and ascites also occur, such as languid countenance; cough; scanty and deep coloured urine; lassitude; thirst; impaired appetite; costiveness; coldness of the extremities; great irregularity of the pulse: * anasarca is very common in cases of hydrothorax; and it is not uncommon to meet with instances in which all three are combined.

In hydrothorax there is said to be a fluctuation sometimes perceived in the chest, upon applying
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* All the possible varieties of irregularity in the pulse are to be met with in dropsy, particularly in hydrothorax: if the watery fluid is collected in the pericardium, or if the heart or large arteries are ossified or diseased, the irregularity of the pulse is the greater.

the hand to the forepart of the chest, moving back the upper part of the body, and then bringing it suddenly forward. Such a fluctuation however is not always perceived; and though it were constant, yet the steps necessary to ascertain it, are attended with such danger, that they should not be hastily resorted to, as the trial has been known to induce palpitation, and fainting; and sometimes nearly to have killed the patient suddenly: it is an experiment too which is not necessary; for the great dyspnœa; the lividity of complexion; the distress in breathing, which makes the patient remain in an erect or prone posture; and the severe cough, accompanied by the general symptoms of dropsy, sufficiently characterize this species of the complaint.

The brain is sometimes affected in the progress of dropsy with symptoms of apoplexy, such as stertorous breathing and stupor, * and sometimes the sight is lost pro tempore: † a jaundiced tinge
of

* The apoplectic and comatose symptoms seem to arise from effusion on the brain; and are produced by the same cause on which the lividity of the cheeks and lips, and the bloated fullness of the eyes and face depend, viz. obstructions to the passage of the blood through the lungs, and consequent accumulation in the head.

† About eight years ago I met with a case of general anasarca and ascites in a man between fifty and sixty years old, who got a relapse of his dropsy every winter, for four successive winters;

of the whole surface has been seen where the liver was primarily diseased; and in hydrothorax all the symptoms of a feverish paroxysm have been sometimes observed. Slight effusions of blood under the cuticle, causing ecchymosis and petechial marks, have likewise been seen in this disease.

CAUSES OF DROPSY.

The causes of dropsy are such as give rise to increased exhalations into the cellular membrane and cavities of the body, without a proportionably increased absorption: the circumstances which increase those exhalations are; suppressed perspiration; * a sedentary life; tumors, or ligatures; enlargements

winters; from a course of medicines continued for four or five weeks, his dropsy commonly disappeared; after which he returned to his ordinary occupation of a labourer: at this he worked until the relapse of the following winter brought him again to the dispensary: after the expiration of the 4th year, he continued during three seasons free from the complaint; but last winter I visited him again, labouring under dropsy, in the usual form. During the three last attacks he got a dimness of sight nearly amounting to blindness, which disappeared almost entirely from the use of the medicines exhibited with a view to the cure of his dropsy only.

* Suppressed perspiration produces dropsy, by determining a greater quantity of fluids to other parts, and thereby increasing the exhalations in those parts.

enlargements of the heart, and adhesions to the surrounding parts; organic lesions in the heart, and neighbouring parts, such as polypus or ossifications in the heart, or in the large arteries, or ossifications of the valves at the mouths of these arteries. These causes operate by impeding the free circulation of the blood through the heart, and by thus producing increased exhalation, chiefly in the course of the vessels which are nearest to, and which most immediately return the blood to the heart; hence hydrothorax is most commonly the dropsy, produced by these causes: but the causes first enumerated, such as suppressed perspiration, sedentary life, tumours and ligatures, will cause any species of the disease.

Ascites and hydrothorax, by their pressure, will bring on anasarca, hence, they seldom occur without anasarca existing at the same time.

Long standing will cause partial anasarca, though walking a great deal without fatiguing will not, but will rather remove the dropsical swelling of the feet, caused by standing; walking, in this case, increases muscular action, promotes the circulation, and absorption at the same time, and thus removes the complaint: asthma and pneumonia, by causing the blood to be obstructed in its circulation through the lungs, will increase the watery exhalation, and will often produce dropsy, principally of the chest; some

some eruptive diseases are often attended with dropsy, such as erysipelas and scarlatina; obstructions of the different viscera of the belly are some of the most common causes of dropsy, such as schirrhous enlargements of the spleen, of the omentum, of the pancreas, of the kidneys, but especially obstructions of the liver:* dropsies are often the consequence of acute diseases in hot climates, and sometimes even in temperate and cold countries: debilitating causes of all sorts may lay a foundation for dropsy, such as repeated attacks of venereal complaints; large discharges of blood; † great evacuations of any sort, such as diarrhæa, dysentery, and even diabetes, and nursing in very delicate persons:

* In obstructions of the liver, the blood of the floating viscera of the abdomen is retarded in its progress to the heart, in consequence of which, there is an increased determination to the exhalants connected with that circulation, that is to the numberless exhalants on the very extensive surface of the mesentery, whence sometimes arise great and sudden collections of watery fluids in the cavity of the belly, producing ascites.

It is likewise probable, that the relaxed state of health, which uniformly occurs in persons of obstructed viscera, by allowing a greater quantity of watery fluids to escape through the exhalants, and by weakening the tone of the absorbents, increases the general tendency to dropsy.

† This points out a necessary caution not to carry blood-letting too far in acute diseases.

persons: amongst the causes of dropsy is plethora, particularly if attended with weakness; thus, repeated blood-letting will cause fulness and dropsy; its effects, with respect to the circulating mass of fluids, consist in renewing the quantity of those fluids soon, but with less proportion of crassamentum; the watery parts therefore of those fluids are increased, and a disposition to a more copious exhalation is produced: repelled eruptions are by some considered as causes of dropsy, and also the drying up of old sores; the stopping of habitual discharges, such as issues and setons; likewise bad or poor diet; want of sufficient nourishment; and such a weakness of the digestive organs as cannot extract sufficient nourishment from the food, will dispose to the complaint: a suppression of urine has been considered capable of causing dropsy, but though it may produce a translation of that fluid to unusual cavities, it is probable that it never has been the cause of dropsy; the opinion seems to have been formed in consequence of this circumstance, that in dropsical complaints, the urine is diminished.*

Dropsy

* The difficult breathing, the anguish, and the disturbed sleep, which are common symptoms of dropsy, are caused by weakness and by pressure on the lungs; in dropsy of the chest, the cause of this pressure is obvious; in general anasarca, the watery

Dropsy is most apt to attack the old; the infirm; the dissipated; and most particularly those whose constitutions have been broken down by former disorders; the poor who suffer from fatigue, bad diet, and the severity of the weather; and persons who have long resided in tropical climates.

PROGNOSIS.

watery fluid insinuates itself into the cellular texture of the lungs and occasions similar distress, except that in anasarca it is more uniform and less sudden: in ascites, the diaphragm is by the collection of water in the belly pushed upwards, and thus by its pressure, it prevents the lungs from being dilated, and causes the distress of cough, shortness of breath, and disturbed sleep: the paleness of the face and of the lips, depends on the watery nature of the blood, and on its languid circulation: the livid colour, and bloated appearance of the face, and the blackness of the lips, which occur in the last stage of dangerous dropsy, especially hydrothorax, are caused by the venous blood, accumulated in the vessels of those parts, in consequence of its difficult passage through the lungs; the increased watery exhalation into the cavities of the body, and into the cellular texture is attended by a diminished proportion of fluids in other parts; hence arises scanty and high coloured urine, and thirst: the confinement of the bowels is occasioned partly by the general weakness of the system, of which the intestines partake; partly by the want of the natural stimulus of bile, when the liver is engaged; and partly by external pressure. An impediment to the free and natural action of the heart, and a disturbance of the functions of the brain, in consequence of increased pressure, will cause palpitation, with an irregular and intermittent pulse, so usual in bad cases of dropsy.

PROGNOSIS.

It is obvious, from the account already given of dropsy, that it is sometimes the primary complaint, and sometimes the sequela, or consequence of other complaints; but the latter is the more frequent occurrence: when it is the primary complaint, unconnected with any previous derangement of the system, the prospect of recovery is greatest: when it is the consequence of other complaints, the danger is proportionably greater, and always most alarming when the primary complaint on which it depends is itself incurable: such are the ossifications of the great arteries, of their valves, of the heart itself; aneurisms of the arteries; incurable schirrhus or ossification of the liver, or other viscera of the belly; or so great an enlargement of the liver, as to leave no chance of being cured.

It happens, however, that most frequently, the disease of the liver will yield to medicines; and a dropsy, in such cases, though combined with liver disease, will often be permanently cured also.

The anasarca, or dropsy of the cellular membrane, is the sort most commonly and easily cured; indeed, where it is unconnected with any of the other two sorts, it will be removed in a great majority of cases.

Whether

Whether dropsy of the chest, or of the belly is most easily cured, seems very doubtful. When there is no incurable disease of the heart, of the arteries, or their valves, or of the viscera of the belly, as the foundation of the disease, perhaps dropsy of the chest will be cured in a greater number of instances, than a dropsy of the belly: but where such injuries of any important viscus, or of the arteries and heart exist, the termination is fatal; and even in such cases, the dropsical collections shall often be removed, and yet the patient, in a short time after, fall a victim to the primary disease. In hydrothorax, the patient sometimes falls dead as suddenly as if killed by apoplexy.

The dropsy of the chest and belly are in all instances, much more difficult to cure than anasarca, because they are commonly connected with diseased viscera, and because we can apply general and topical remedies to the surface, which is the seat of anasarca, but in dropsy of the chest and belly, the water is in cavities which we cannot reach, and immediate applications to which are utterly impracticable. Though the cure is commonly conducted on the principle of procuring increased watery evacuations especially by stool and urine; yet it sometimes happens that purging will set in, and become an alarming symptom, and by wasting the strength of the patient

patient often prove fatal, notwithstanding all the attention and skill of the physician. A bloated face; livid cheeks and lips; great anguish in breathing; and cold extremities leave very little hopes of recovery. An irregular pulse is always a very bad sign, and alarming in proportion to the greatness of the irregularity. When in the course of the treatment, the symptoms continue day after day to grow worse, it is a bad symptom, for then the progress to a fatal termination is commonly rapid.

The prognosis, however, should be always guarded; because instances occur, in which the young and vigorous will fall victims to the mildest form of dropsy, viz. anasarca; and on the contrary, where the aged, the enfeebled, and the intemperate, will sometimes recover from the worst kinds of it, viz. dropsy of the chest or belly.

CURE OF DROPSY.

In attempting the cure of dropsy, our first object should be to carry off the collected fluids; then to cure those causes which have produced the accumulation; and lastly, to restore the health and vigour of the system, so as to enable it to support itself against any future return of the complaint. The first and second indication are

are generally, though not always, attained by the same treatment; and it sometimes happens that where those two purposes are accomplished, nature will effect the third.

After having given a free and extensive trial to the diuretics, purgatives and strengtheners generally employed for the cure of dropsy, in the course of an extensive practice at the Dublin general dispensary; I fixed upon the following plan, as being that which I found most commonly, and most permanently successful.* I

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* It is a great misfortune, that in a complaint of distressing weakness, the remedies on which we must rely for ultimate success are evacnants, that is, medicines whose property it is to weaken: this, however, must be the case, because it will be vain to attempt a cure without removing the collected fluids. The evacnants employed must be either emetics; sudorifics; diuretics; cathartics; or mechanical means to discharge the water by puncture: this method of carrying off the water by an operation is seldom practised in dropsy of the chest, or cellular membrane; but frequently in dropsy of the belly, and in a few instances with success, where a considerable portion of vigour still remains, and where the tone and elasticity of the parts are not greatly injured by the duration and severity of the complaint. Tapping generally gives great relief, at least for a time, and even increases the flow of urine. There are some instances of permanent benefit from this operation, but they are extremely rare. The most usual occurrence is, that in a few days the dropsical swelling returns, and must be again carried off by a new opening; and thus the

order two of the pills, No. 43, to be given every night; but if there are appearances of dropsy of the chest, two of the pills, No. 44, which differ from the others, only in containing a grain of digitalis in every dose. A tea-spoonfull of the electuary, No. 5, is to be taken every morning, and to be repeated twice or three times in the course of the day: the directions are to take a tea-spoonfull

the operation must be repeated frequently, and at short intervals. The impediment which the functions of the body suffer from the pressure of the water, often frustrates the effect of medicines; the operation removes this impediment, and suddenly increases the flow of urine, the pressure having injured or prevented the secretion in the urinary organs: and though the body fills rapidly after the tapping, yet from the intolerable distress and weakness caused by the pressure of the water, when medicines lose their effect, the operation must be practised, even with a view to procure temporary relief.

Other mechanical remedies used in dropsy are, punctures and scarifications. Whether the punctures or scarifications be the plan decided upon, they ought always to be superficial, and at some distance from one another, perhaps at the distance of an inch or more. The danger from those methods is, that gangrene may supervene, and especially in the legs, where the circulation is most languid; but this danger is lessened by making them at some distance from one another, and as near to the trunk as the nature of the complaint will admit. Sometimes one puncture will run into gangrene, though the others heal; and sometimes one set of punctures or scarifications will heal, but upon the water collecting again, the new punctures or scarifications, or some of them, will run into a fatal gangrene.

a tea-spoonful of the electuary in the morning, and to repeat it every three hours until two or three doses of it be taken in the day.

This treatment keeps the bowels regular, and in the course of a week, generally increases the discharge by urine; the pills along with their laxative effects are in some degree diuretic, and contain a preparation of mercury, which slowly and gradually affects the system in such a manner, as to make it more easily acted upon by laxative and diuretic medicines of another kind, such as the electuary contains. The watery evacuations by urine and by stool are thus increased; and it commonly happens, (at least in a great number of cases,) that without any other medicine, the patient is entirely freed from dropsical swellings by this treatment only: the watery stools and the large quantity of urine diminish the exhalations

* The most useful cathartics are those which cause very liquid discharges by stool. The following are the class most commonly recommended: claterium, or winter apple; aloë; scammony; gamboge; jalap, and calomel. All these are occasionally employed by different practitioners; but the claterium is at present least in use. These medicines frequently act upon the kidneys likewise, increase their secretion, and bring away large quantities of urine: they are sometimes exhibited separately, and sometimes combined, more or less, with one another: I think their effects are most valuable when they are combined.

exhalations into other parts, which were the cause of the dropsy, on the common principle, that an increased action in one part causes diminished action in another: it is obvious, that there is an increased absorption of the dropsical collection also; this is proved by the sudden depletion which often takes place from the use of those medicines. Their doses must in many instances be increased to produce the desired effect, because there is in dropsy a great degree of torpor, whence the system is not easily stimulated as in other diseases; it is safest, however, always to begin with the moderate doses here pointed out, which, in cases of emergency, might be enlarged to the extent desired. It is when the quantity of the urine is greatly increased, that the dropsical symptoms are found to subside most sensibly, and with the greatest relief to the patients, the watery discharge which passes off in this manner giving very little distress: purgatives, though they reduce the swellings, yet weaken very much; therefore they are most useful when their diuretic effects are produced: when the urine increases, it will be proper to persevere in the use of the electuary, or of some other diuretic, (always taking care, that the bowels are kept tolerably free,) until the symptoms disappear.*

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* The diuretics commonly in use, are squills, crystals of tartar, digitalis, and kali acetatum: colchicum is now seldom employed.

The purgatives frequently cause a griping and pain of the belly: when this occurs, these medicines must be omitted, and small doses of castor oil and tincture of senna exhibited as in No. 23, this in most cases of griping is a soothing, agreeable medicine. Nourishing broths; jellies; and a glass of good wine should be allowed. In dropsy of the chest, digitalis is added to the pills, as in No. 44; sometimes the digitalis may be given with advantage in tincture, of which from ten to twenty drops may be taken in an agreeable draught three or four times a day; it relieves the breathing, and often encreases the flow of urine. Blisters to the breast, or between the shoulders, are very useful in this kind of dropsy; but with a view to a permanent effect from a drain about the chest, issues between the shoulders, or a seton are to be preferred: the issues should be made large, so as to hold two or three peas.

In anasarca, flannel rollers coiled round the feet and legs, from the toes upwards to the knees, greatly assist in carrying off the swellings: similar rollers round the belly are of great use in dropsy

employed. I have found great benefit from the use of squills and crystals of tartar, as they are combined with the pills and electuary which I recommend. Digitalis is greatly commended in dropsy of the chest; it is sometimes given in powder, and sometimes in tincture.

dropsy of the belly: these rollers, by their pressure and warmth, support the muscles of the parts and promote absorption.

In all kinds of dropsy, the body should be kept comfortably warm, and in as pure dry air as possible. The diet should be nourishing and easily digested, such as gruel, jellies, broths, eggs, dry toast, or toast with a little fresh butter, and, where the stomach can bear it, a bit of meat. The patient ought to be allowed to take a moderate drink of some subacid light liquor, from time to time, such as imperial, small beer, lemonade, butter-milk, orange juice, whey, &c. a little old wine must be allowed, particularly at meals; and if there is great weakness, a glass of wine will be proper three or four times a day: it may be taken pure, or mixed with water, or with whey, according to the patient's liking.

After the dropsical collections are removed, a course of light bitters, aromatics, and chalybeates will be useful, as in No. 45: exercise in the open air, flannels worn close to the body, and the continued use of the rollers, and of the issues, where such are necessary, must be adopted for a long time after the convalescence. If the weather permits, the exercise should be on horseback, or in an open carriage. Inland pure country air is to be preferred to any other.

Where liver disease has induced the dropsy,* it is obvious that the removal of the swellings alone will not restore health; in such cases it will be necessary to proceed to the cure of the liver, according to the plan recommended in treating of diseased liver.

COMMON or TYPHUS FEVER.

This fever has been called by various names; such as, nervous fever, low fever, spotted fever, fourteen day fever, sometimes hospital or jail fever, and sometimes putrid or malignant fever.

Fever

* Emetics and sudorifics have been tried in dropsy, but the danger of the one, and the difficulty of forcing a sweat with the other, added to their small benefit when compared with the purgative and diuretic plan, prevent them from being now much relied on. There is a quack poultice, consisting of pounded snails, powdered liverwort, barley meal, and as much water or beer as will be necessary to give them a consistence in boiling, much extolled in the cure of dropsy of the belly; it is directed to be applied to the umbilicus, and it is said to have caused profuse perspiration, and thus to have cured dangerous instances of dropsy. It is probable, that the application of a warm emollient poultice to the belly, might have produced a copious sweat, and thereby caused a depletion; there is little reason to expect much benefit in any other way from the ingredients in this poultice.

Fever is entitled to particular attention, as being a disease perhaps the most universal and constant with which this country is afflicted.

In consequence of its prevalence at all seasons of the year, it has been a question at what season it is most universal.

The symptoms of fever are greatly modified by the difference of climate and season: thus in warm climates, and in the warm seasons of temperate climates, the bile is morbidly secreted and gives a character to the fever; whilst in cold countries and seasons, it is accompanied by a cough and other pectoral symptoms: hence in its first attack, it is supposed to be no more than a cold, a mistake frequently pregnant with mischief. The symptoms which belong to fever at different times and in different persons, are very numerous: the most proper and useful method of arranging them therefore is, according to their most ordinary appearance.

SYMPTOMS.

The first symptoms are, an uneasy sensation of cold or shivering; lassitude, as if from great fatigue; an unwillingness to make an effort either of mind or body; depression of spirits; loss of appetite, with a loathing of food, especially of animal food; sickness

sickness of stomach and vomiting; head-ache, and in different instances, it is in various parts of the head, but most commonly in the forehead, and not unfrequently in the back part of the head, extending to the neck; pain of the back; soreness of the whole body, as if the patient had been bruised or beaten; clamminess of the tongue and mouth; tongue at first whitish, but it soon becomes foul and yellow, and gradually advances to a dark brown colour; bad taste of mouth; thirst; bowels commonly slow; sometimes a sense of creeping over the whole body, called horripilatio; oppression and uneasiness about the pit of the stomach; the skin is dry and hot; the eyes look dull and heavy.

The face is different from its natural appearance; for it is either pale and shrunk, or red and turgid; sleep either is banished entirely, or it is interrupted and not refreshing; light and noise create much distress, even when the patients tell you that they are not sensible of much uneasiness in their head.

The urine is commonly in small quantity, and high coloured; deafness is a common symptom; from the contracted state of the surface, sores and eruptions dry up and shrink; and in some cases, the skin of the patient communicates to the hand, a feeling of a prickly pungent heat:
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this happens most usually in that modification of fever, called malignant, or putrid; the patient generally longs for cold and acid drink; the breathing is quick and hurried.

In this and other cold countries, catarrhal symptoms, such as cough, hoarseness, and pain in some part of the chest, often occur in the beginning of fever; but these symptoms are merely accidental; the pulse is small, somewhat quicker than in health, and its quickness is increased by the smallest exertion, even by that of sitting erect in bed.

Such are the symptoms which generally characterize fever, during the first week, in its ordinary state of severity. When the disease is very slight, even those symptoms are milder in degree, and fever in number; but when it attacks with great violence, those symptoms are more severe, and accompanied with others which have not yet been enumerated.

Unless the complaint is cut short during the first week, the symptoms grow worse about the second. The strength sinks apace; along with the vertigo or head-ache which existed before, delirium comes on, principally at night, and when the patient is dozing; but in a little time the delirium continues during the day, and whilst
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the patient is awake; it is sometimes violent, exciting the patient to vehement rage and great exertions of strength, so as frequently to rush out of his bed and room, if permitted; but more commonly it is of the low muttering kind, unattended with any violent efforts. The delirium ferox is accompanied with a turgid redness of the face; inflamed appearance of the eyes; great pain of head; pulsation of the carotid and temporal arteries; in the mild or low delirium the face appears of a dirty pale colour; the eyes hollow, watery, of a dirty red tinge, and slow and heavy in their motion. Instead of lying on either side, the patient now feels inclined to remain mostly on the back, and in the still more advanced stages of the fever, always on the back. In the moments of recollection, the depression of spirits will sometimes amount to despondency: the memory now becomes slow and somewhat difficult; the flesh is wasted; the whole body is more shrunk than natural; the skin acquires a dirty colour, more or less inclined to yellow; and in bilious seasons, the skin from the beginning has, in many instances, a yellow tinge. Spots, called petechiæ, often appear, first and principally over the upper part of the body, such as the breast, neck, and shoulders; and in a short time, over the whole of the trunk and extremities also: these spots are various in shape, extent and colour; but the deeper or more livid is their colour

colour, the greater is their danger;* they sometimes resemble the small punctures of flea-bites; sometimes they are large and irregularly circular; in some instances, they are thinly scattered over the skin, so that large portions of it appear fair between them; but often they are so crowded and thick, as to give the skin a dark colour; and in some instances the skin appears marbled: the petechiæ are observed to be most crowded and dusky, where poverty, foul air, and want of cleanliness exist. The foulness of the tongue turns into a dark thick crust, chopped and scarred in various places: in several instances the tongue clears off and becomes clean, but its colour then is a deep red, much darker than its natural flesh-colour; in these cases, it soon becomes dry and parched again, and a dark brown crust forms upon it extending to and lapping over its point † the lips and teeth become incrustated; these crusts require to be gradually and gently cleared away from

* To this observation there is an exception, namely, when some time before death, the whole skin acquires a deadly pale cast; then the petechiæ partake of this paleness, and acquire a lighter colour.

† I have seen two instances of an inflamed oval blotch on the middle of the tongue, circumscribed and deeper in its colour than the rest of the tongue, and not unlike venereal blotches, which arise from an infected system.

from time to time; because during their existence there is a sickening taste in the mouth, communicating its effects to the stomach; and then the most grateful drink has not its proper flavour, but partakes of the foul taste of the incrustations; or more properly, it is the foulness of the tongue, of the teeth, and of the lips, and not the flavour of the drink or aliments, that is tasted by the patient. Sometimes, when the tongue and lips are parched, and covered with those crusts, the patient has no desire for drink, and this is an alarming symptom, as Huxham properly observes: it shews great insensibility in the nervous system, and points out the necessity of a strict attention to the state of the brain.

A tinnitus aurium, or noise in the ears, often gives great distress; the patients frequently fancy themselves in company with absent persons, which occasions much low muttering conversation: with this is often connected another symptom, called *floccos colligere*, here the patients put out their hands and feel for something which they fancy before them: under this impression they seize the bed-cloths, pull them up and examine them with attention: sometimes they conceive themselves annoyed by the presence of disagreeable persons or objects, which, with an expression of disgust, they request to be removed; sometimes they neither know their intimate acquaintance,

tance, nor hear the noise of conversation, nor even very loud sounds, (these last are alarming symptoms,): the tongue trembles in the effort to thrust it out, and cannot be pushed far outside the lips; the speech is tremulous, thick and indistinct; the tendons of the muscles are agitated with irregular contractions, particularly in the fore arm, which often makes it difficult to examine the pulse; the hands and the upper eyelids are disturbed with similar tremors; and, frequently, during sleep the lids are not closed completely, so that the whites of the eyes can be seen between them: the bowels are confined with a sense of weight, attended by a painful swelling, especially about the hypochondria and pit of the stomach, which cannot bear to be pressed; and it often happens that a scanty purging of foul slimy stools occurs, and yet neither removes nor diminishes this swelling: sometimes the pain stretches downwards to the bottom of the belly, and laterally to the loins; this pain commonly remains fixed, particularly towards one side of the belly, notwithstanding any purgatives which might be given for the purpose of clearing the bowels; and then we have reason to apprehend peritoneal inflammation, a complaint which, if unattended, to certainly proves fatal. The urine is of various colours, from a light whey to a deep porter colour, with a light cloud floating in it: in making water there

there is often heat and pain, it is passed in small quantity, and in some few instances there is a distressing strangury, which requires the use of the catheter. There is a remarkable smell in fever, compared to that of earth newly turned up (this smell is more striking in small pox) but in the progress of the disease, the smell, without great attention to ventilation and cleanliness, becomes extremely offensive and sickening. Restlessness and want of sleep encrease and exasperate all the other symptoms; but in some few instances the patients remain in a continued state of torpor, unwilling to be roused, and insensible to those excitements which operate briskly and sensibly in health.

The breathing becomes more hurried, the pulse quicker and more feeble, and often irregular.* Hæmorrhages, or discharges of blood, though rare, yet are met with in some cases: in the early part of the disease, when preceded by an encreased impetus of the circulation, in any part of the body, these discharges are favourable: thus, in great headache, flushed face, and pulsation of the temporal arteries; epistaxis, or a discharge of blood from the nose, will greatly relieve those distressing

* The pulse is commonly from 110 to 120 strokes in a minute, this frequency is not alarming: it often rises to 130 and in many cases to 140, and even more: this last is an alarming frequency in adults, and mostly fatal; but even from this, recoveries will happen.

ing symptoms, (this encreased action, however, often takes place in the vessels of the head, when the circulation in the rest of the system is feeble, as is manifest from the pulsation at the wrists,) but when the powers of life are much exhausted, and the leading symptoms are those of weakness and languor, discharges of blood are bad, as as they indicate great relaxation: in excessive weakness too, large evacuations of any sort are dangerous; but of all evacuations, loss of blood is the most wasteful and alarming: when hæmorrhagy comes on, it commonly issues from the nose, but it has been known to come from the anus, through the vessels of the skin, and even from the tops of the fingers, and its danger is greatest when it comes from the skin and fingers. The urine and stools are frequently passed in bed, without the controul, and often without the knowledge of the patient.

Such are the symptoms which generally attend the common fever of this country, during the second week. All of them may justly be called dangerous, but not desperate symptoms, or such symptoms as leave no hopes of recovery.

It may be properly observed, that the earlier this second class of symptoms appears, the danger is the greater: thus, if many of them set in before the end of the first week, so much worse is the

the disease, and the more numerous is the assemblage of them, the worse the disease also : on the other hand, the later they appear and the smaller their number, the greater the chance of recovery: this may be considered a very general rule; but there are exceptions; for, fevers are sometimes met with, which begin violently and severely, and which in a few days yield to medicines: in those instances however, in consequence of the alarming severity of the symptoms, medical aid is early resorted to, and by these means the disease is either cut short, before it is radically fixed in the system; or at least the force of it is broken, so that it entirely yields in a few days. On the other hand, there are many instances in which the patient is just not well for some days, becomes worse in the course of the second week, and towards the end of that, and in the progress of the third week, is attacked with the worst symptoms of fever; and thus, perhaps, falls a victim to a complaint, in the beginning of which there was hardly supposed to be danger. Here too it is material to observe, that in consequence of the great mildness of the symptoms at the beginning, little danger is apprehended for some days, and there are no remedies given until the malady takes root, and becomes so intimately incorporated with the system, as to baffle the most able and judicious efforts of the physician, efforts, of which a moderate part early exerted, might have soon restored the patient to perfect health.

From

From what I have already mentioned, it is obvious, that it is not intended to point out one class of symptoms as occurring only on the first, and then another class as occurring only on the second week; for in mild cases, some of those which are enumerated as symptoms of the first shall not appear until the second week; and in severe cases, some of those which are called symptoms of the second week, set in on the first: but their occurrence on the first and second week is such, in general, as is here pointed out: and it is hoped that this distinction may be useful, as it helps to shew the probable danger of the complaint, by enabling the practitioner to compare the severity of the symptoms with the period of the fever.

There is in a slight degree an increased severity of the symptoms, or an exacerbation towards evening, and a slight mitigation or remission in the morning, throughout the disease, unless interrupted by remedies. The remission begins early in the morning, and the exacerbation about four or five in the afternoon.

There are some symptoms more commonly met with in hot climates, but of which there have been instances also in this country: such are early and profuse sweats, without being critical: they are dangerous from the weakness which they

they induce.* In fever, the occurrence of jaundice is a dangerous symptom, especially when it sets in early, but in this country it very rarely occurs; it is more commonly a symptom of fever in hot climates.

A painful spasm of the neck is considered unfavourable; it is a symptom not unusual in hot, but seldom met with in cold climates: difference of colour in the skin in different parts of the body is an unfavourable symptom, and sometimes to be met with in this country: thus the complexion of the face, consists of red and pale patches, variously tinged; some spots appear a deep red, others pale, and others bilious; all irregularly circumscribed, and exhibiting a marbled appearance of the face: aphthæ about the mouth and fauces occurring in the advanced period of the fever are bad; they are apt to spread through the whole tract of the intestines.†

There

* Those destructive sweats were frequently caused by the old fatal custom of confining the unhappy patient within close curtains; of loading him with bed-cloths; of condemning him to the same foul linen, sheets, and cloths, throughout the whole course of the disease, charged as they were with feverish and putrid exhalations; of excluding every breath of fresh and reviving air, and of giving neither food nor drink but very hot. This fatal and preposterous fashion is not yet entirely exploded.

† Pustular eruptions about the lips, mouth, and cheeks have sometimes been observed in the commencement of fever

There are other symptoms met with in the progress of typhus, which in point of time, may be considered the third and last set of symptoms, such as the following:

Face shrunk and collapsed, so that the features, particularly the nose, become sharp; eyes hollow, torpid, sunk, and of a dirty colour, sometimes they are palsied so as to acquire an unusual squint; objects appear in some instances different from their real figure; the eyes get a glassy fixed look, and sometimes they lose the sight altogether; perpetual low delirium without remissions; patients lying constantly on their back, and sliding down towards the feet of the bed; the knees becoming bent and turned up towards the belly; the lower jaw falling down towards the breast; countenance so altered as to appear lengthened; tongue so palsied, as to make it impossible for the patient to thrust it out or to articulate distinctly; * speech totally lost; impossibility of swallowing; colliquative, black, fetid purging; (this often supervenes

this town, without being attended with danger, and in a fever which was comparatively mild; but those were different from aphthæ.

* This must be distinguished from that difficulty of articulating, which arises from a black foul crust formed upon the tongue and lips, and which is relieved by the removal of this crust.

venes where there has been long neglected costiveness), painful elastic swelling of the belly; urine of a dark porter colour, depositing a brown sediment, offensive in its smell; clammy, cold, and strong smelling sweats; respiration quick, noisy, laborious and performed by fits and starts, so that the expiration is rapid and succeeded by a pause, and attended by an heaving of the shoulders; respiration quick, in proportion to the pulse, viz. one respiration to every two pulsations; patient being felt uncommonly heavy by another person; dropsical swellings of the limbs; singultus or hiccup; a cadaverous or slaughter-house smell from the excretions; convulsive tremors; fainting; pulse compressible, indistinct, or irregular, and intermittent;* the extremities feeling cold; nails becoming livid and more curved or bent than natural; breathing performed with a disagreeable rattling noise, in consequence of mucus accumulated in the cells of the bronchiae, which the patient cannot expectorate, and which,

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* An intermittent pulse, however, is sometimes habitual and exists in sound health; and we meet frequently with persons whose pulse in health is regular, but always in sickness intermittent; of this, I met with a striking instance in a boy about fifteen years old, in a slight fever; his pulse was very intermittent, but upon enquiring of his father, who was an uncommonly intelligent man, I was informed that in the slightest complaints his pulse intermitted, but that there was no intermission of it when in health.

if not discharged by expectoration, soon suffocates: this is commonly called the rattles, and may exist in a moderate degree, without being fatal, viz. whilst the patient has still strength enough to throw up the mucus; large doses of very active purgatives retained, without having any effect on the bowels.

All the symptoms of the third class which I enumerated are dangerous in a high degree, and many of them mortal. In very bad cases of fever, they come on before the end of the second week.

FAVOURABLE TERMINATION AND PERIOD OF ITS OCCURRENCE.

The favourable terminations of typhus fever in this country sometimes take place on the seventh, but most commonly on the morning of the fourteenth day. There are some instances of recovery on the eleventh, and other intermediate days, between the seventh and fourteenth; and sometimes the fever is protracted to the end of the third week; and there are instances, though rare, of its passing into the fourth week. The critical termination on the fourteenth is the most complete and permanent of those which happen the first fortnight. Relapses more frequently occur in fevers which terminate more early, especially on the seventh day.

Some hours before the favourable termination, an high degree of exacerbation, or a great severity of the symptoms sets in, so as often to alarm the friends with the terrors of approaching death : after continuing for some time it is succeeded by a warm sweat, which begins about the chest and arms, and gradually spreads downwards, and soon covers the whole body. During the progress of this sweat, the pulse becomes slower, larger, and softer ; the surface of the tongue becomes soft, and the point and edges moist and clean ; the urine in a short time is yellow or whey-coloured, and very turbid, and in a few hours it deposits a sediment of a light branny consistence, after which it is somewhat transparent ; the sleep becomes sound and uninterrupted : all the symptoms which existed before begin to disappear, except weakness, which is now more sensibly felt by the patient, than it had been during the excitement of the fever.

PROGNOSIS.

The following are severe symptoms and always attended with danger : great despondency of mind and anxiety ; want of power to apply the mind ; a change in the countenance to a pale, languid, or to a red bloated appearance ; delirium permanent and uninterrupted ; great restlessness, and total want of sleep ; a thick black crust on
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the tongue and teeth, without thirst ; great noise in the ears ; subsultus tendinum, or irregular tremors of the tendons and muscles ; crowded and dark coloured petechiæ ; an elastic tense enlargement of the belly ; picking at the bed-cloths ; early and profuse sweats, without being attended with relief ; pain of the internal ear, as indicating internal inflammation ; whites of the eyes appearing between the eye-lids, during sleep ; abscesses, or sores difficult to heal, and consequently shewing great acrimony of the system ; a dirty squalid appearance of the skin ; singultus or hiccup, especially if connected with great debility ; stools or urine passed without the knowledge or controul of the patient ; breathing very quick ; drowsiness occurring late in the fever : these are bad symptoms, but not desperate. The following are still more alarming : spasms of the muscles of the neck, causing it be turned to one side ; a dull, uneasy, oppressive pain about the pit of the stomach ; swallowing becoming impossible ; the parts on which the patient presses most becoming gangrenous ;* blistered parts producing no discharge ; putrid diarrhoea ; discharges of blood, in great debility ; total loss of voice ; a factor of the breath ; blindness ; squinting ; a glassy fixed look ; the patient sliding down in the bed, with the knees contracted,

* I have met with some cases of fever, in which the parts most pressed upon, about the hips and haunches, sloughed away, and the patients recovered.

tracted; ulcers becoming livid and gangrenous; total prostration of strength; countenance lengthened, with the lower jaw falling down towards the breast; fingers and nails acquiring a livid hue; large and repeated doses of active purgatives retained, without producing any effect; rattles, without any power to expectorate. Most of those symptoms are fatal.

It cannot be too strongly impressed, that the greater the combination of bad symptoms, the more dangerous is the fever; that the earlier they set in, the more dangerous is the fever; and that the more they are pure and unmixed with favourable symptoms, the danger is greater also.

It will often require much discrimination in the physician, to be able to form a judgment of the probable termination of the fever, because a bad symptom is sometimes so tempered with others of a favourable nature, as to create much uncertainty: in such cases, it will be necessary to be circumspect and guarded in giving an opinion.

FAVOURABLE SYMPTOMS.

Delirium not coming on until after the first week, and the later, the more favourable; delirium interrupted by long intervals of reason, or occurring

only whilst the patient doses; sleep returning, even though accompanied by transient fits of delirium; deafness is favourable, perhaps because it shews the absence of that morbidly increased sensibility, which is a bad symptom; where there is increased determination of blood to the head, in the beginning of fever, early bleeding from the nose is a good sign; a spontaneous bilious purging often allays the distressing symptoms, even delirium and head-ache, and is favourable; urine becoming turbid, and then depositing a light coloured sediment; a thin warm sweat, which neither distresses nor fatigues, but rather refreshes the patient; these two symptoms are often critical, and are most desirable after the eleventh day, because a crisis beginning at that period is more permanent, than if it had commenced on an earlier day; the pulse becoming more slow is an excellent sign, indeed the best and surest of all favourable symptoms; præcordia not painful on pressure, nor tense; or, after being tense and painful, becoming soft, depressed and free from pain; the patient lying much on the side, and particularly during sleep; breathing becoming more slow, and less noisy; tongue softening and beginning to clean away about the point and sides, this symptom is connected with the state of the stomach, and is very favourable; where there are other favourable symptoms, it is desirable that the patient should have

have a sense of his own weakness, which, during the excitement of the fever, he had not; a desire for warm drink, or for more bed-cloths; the eye getting a more brilliant lively look; face looking more clean and natural, though still very pale; petechiæ becoming paler, or disappearing; return of venereal appetite; return of appetite for food;* the patient calling for, and relishing wine, is favourable, and points out the propriety of allowing it; pulse becoming slower than in health, is sometimes known in convalescence, and is a good sign. It is favourable, that the bad symptoms of every kind disappear. The dangerous symptoms, are those of topical affection, such as of the brain, stomach, intestines, lungs; those of great debility and relaxation; and those of putrescency. As the departure of any of them is favourable, in enumerating

* Hence, it has sometimes happened, that the restoration of health has been ascribed to some particular food with which the patient has been indulged, at the time of returning appetite, even though that food might have been of an improper or dangerous kind. Thus, salt herring has got the reputation of curing fever; bacon, and salt beef have been equally successful; and a cunning nurse has more than once stepped aside from the doctor's orders, and clandestinely cured the patient with a bit of some salt food, where the physician would not have allowed any thing more nourishing than flummery, gruel, a roasted apple, or at most, but a little light broth.

enumerating them, we will easily discover the negative circumstances which are good symptoms. Grown persons, between childhood and old age, are most subject to fever. It is, however, sometimes found before the age of puberty, and in advanced life. The persons least of all attacked by it, are very young children, and pregnant women; in pregnancy, when seldom it occurs, it is extremely dangerous, as in many instances they either miscarry or die of the fever; but sometimes they will recover without miscarriage.

CAUSES OF FEVER.

Great inanition; large evacuations; raw, spoiled, indigestible food: thus fever is more usual and severe in seasons when there is a scarcity of corn, and other food, and consequently when corn and other provisions are much damaged: foul, stagnant, corrupted air, as of dirty cellars and garrets; intense application of the mind; great distress of mind; despondency; want of sleep for a long time; sedentary life; great fatigue; cold and moisture; human effluvia; contagion. Two or more of these combined will cause fever with more certainty and danger than a smaller number. Thus, a goal fever is a bad fever, and spreads with great virulence; to produce this fever are united, confined foul air, an inactive sedentary life, and frequently great distress of mind;

mind; and such a fever spreading its contagion abroad will cause fevers of a very bad kind. It might, perhaps, be also true, that the quality of the disease being given, the sickness communicated will be bad in proportion as the contagion is concentrated and malignant; and mild, as the contagion happens to be diluted.

CURE OF FEVER.

The symptoms of incipient fever are in general easily understood. When an unusual loathing of food, particularly of animal food, is perceived, accompanied by lassitude; slight chilliness; and uneasiness or pain of the head; there is strong reason to apprehend a fever is beginning; the treatment is then simple, but in consequence of the changes which are constantly taking place in the different stages of fever, it is obvious that the method of cure must be very much modified by those varieties.

If called in early, that is, about the first or second, or even on the third day, an emetic is our best remedy. The emetic wine, No. 46, answers very well; when the stomach begins to sicken from the emetic, a teacup-ful of chamomile infusion may be given, and repeated once or twice; it quickens the operation of the emetic, and helps to evacuate the stomach completely. In robust constitutions

constitutions the tartar emetic, No. 47, may be given with advantage in place of the milder emetic, No. 46. It is more effectual in giving a greater shock to the system, and thereby destroying febrile action; in softening the skin and disposing it to a gentle moisture; and in opening the bowels more completely: but in delicate habits, and in females, we must be cautious in recommending tartar emetic, as being much too rough; and give a milder emetic, such as the preparation, No. 46. The patient about taking the emetic should retire to bed, and have the feet bathed. If the bowels should not be relieved by the emetic, or if the emetic operates but imperfectly, a purgative ought to be given on the following morning; the purgatives, No. 1, 2 or 3, are well calculated to open the bowels; if they produce no sensible effect for three or four hours, the purgative mixture, No. 48, might be taken, according to directions, until the bowels are freely opened.

This is the period at which the disease appears local, and when its fomes seems still confined to the stomach; hence probably the superior benefit of emetics at this time; a considerable portion of their benefit also arises from this circumstance, that they give a salutary shock to the system, and help to determine to the surface. At this early period, the treatment just mentioned would at once destroy the fever and preserve to the community

munity many valuable lives, which daily fall victims to this malady.

It is an unhappy opinion amongst the lower classes of society in this country, that fever, at its commencement, is a common cold, and therefore it is often suffered to run on until symptoms of alarming danger set in; the fever in spite of medicines will then run its regular course; and, especially amongst the higher ranks, not unfrequently prove fatal. Another unfortunate system of treating the commencement of fever is still more alarming: it is a resolution, as it is called, of shaking off, and not yielding to the complaint;* under this idea, the persons affected strive as long as possible to attend to their ordinary occupations, and by such vain efforts co-operate with the fever in breaking down their strength at an early period.

When the fever is of some days standing, emetics should not be administered, but with great caution, because they cannot then cure the disease, but rather by the exertion they create, encrease that debility, which is one of the worst symptoms of fever; a symptom to be guarded against by all possible means; for in general if the strength
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* This is one of the most pernicious delusions that ever sprang from human obstinacy, grafted upon human ignorance.

of the patient can be supported, the fever will waste itself out.*

The medicines necessary in fever consist of emetics, purgatives, enemata or glysters; diaphoretics; topical applications, viz. leeches, cupping, blisters, embrocations, ice, cold affusions; cool diluting aperient remedies; cool grateful drink; light digestible agreeable food; pure cool air; cleanliness; darkness; silence; antiseptics; and cordials. The season and use of emetics have been already mentioned.

Purgatives will be necessary at any period of the disease, in the event of costiveness; and if there be pain or tension of the præcordia, they will be more decisively necessary. But where the strength is much reduced, the pulse languid and accompanied with general symptoms of weakness, purgatives

* This in some degree explains why the poorer classes recover frequently from fever without medicines; and why the mortality amongst the poor in fever is much less, than amongst the higher ranks of life. The poor employed in long continued and assiduous labour, acquire a habit of enduring hardship and fatigue, without impairing their strength; though a few hours labour will fatigue a person in the higher ranks of life, not accustomed to labour; hence the poor man preserves some vigour for two or three weeks under the weakening and harassing progress of fever, until the complaint is worn out; but the strength of the rich man is broken down by it frequently in the course of the second week, notwithstanding the most judicious, tender, and skilful attention.

gatives are to be given with caution: in such cases glysters are to be preferred, which, without giving much distress to the patient, have the effect of gently opening the bowels, of clearing away sordes from the large intestines, of acting as a grateful fomentation to the belly, and often inducing sleep. But where the state of the strength permits, a good purgative by the mouth must be now and again administered, in order to dislodge excrementitious foulness from the upper part of the intestines, and thus to enable the glysters to act with due effect: these doses of purgatives may be given, at least, twice a week. Most of the neutral salts will disagree with the nauseating stomach of febrile patients; but by combining some acid with the solution of the neutral salt, it will make it much more palatable; such are the medicines, No. 48, and 49. The muriatic and sulphuric acids are useful in this way, and likewise the vegetable acids, as lemon-juice, tamarinds, vinegar, &c. The neutrals commonly employed, are sulphat of magnesia, sulphat of soda, soluble tartar, rochelle salts, phosphat of soda. The two latter may very conveniently be given, dissolved in weak broth, without the addition of an acid: the others dissolved in plain or medicated water, and to the solution an acid added so as to destroy the nauseous flavour of the neutral salt. Infusion of tamarinds, with the addition of some purgative tincture,

tincture, is a cooling and mild purgative; compound powder of jalap, and rhubarb combined with sal polychrest, are much used in fever, they form a mild and certain purgative; James's powder, and antimonial powder, are valuable purgatives in fever, especially at its commencement; where griping and pain of the belly exist, the best of all medicines is castor oil, preceded by a gentle calomel purge. The oil might be taken with white wine, with some agreeable water as peppermint water, with some purgative tincture, as tincture of senna, or made up into an emulsion, such as the formula, No. 50. When the tongue is very foul, and a sense of distress and tension felt at the præcordia, no purgative answers better than calomel; it is commonly combined with some other cathartic, in order more certainly to make it pass off by the bowels, such as scammony, jalap, rhubarb, aloë, gamboge, or cathartic extract, as in the formula, No. 1, 2, 3. These are most excellent remedies in carrying off putrid and foul excrements, and in correcting the morbid secretions of the liver; hence in the fevers of hot climates, they are the purgatives most certainly relied on. In great tension of the belly, a liberal portion of some grateful aromatic, as of Cayenne pepper, might be added: in the above formula, there is some of this spice combined with the purgative ingredients; should enemata be ordered in similar circumstances, an aromatic

aromatic might also be added. The patient should not be agitated with any rough medicine, on the day of taking a purgative; but after the purgative operates, a few doses of the saline mixture might be taken during the remainder of the day, and perhaps for the following day: this assists in carrying off, in a gentle and gradual way, what the purgative had begun to dislodge; it cools the tongue and mouth; helps to settle the stomach, and to determine to and soften the skin. When it is intended to act more decisively on the skin, a mixture made up with spiritus mendereri, and a few grains of prepared ammonia, as in No. 51, is more active.

Should sickness at stomach still continue, common ice or congealed water is very useful, it is extremely grateful to the mouth and stomach. In singultus or hiccup, æther mixtures, and burnt brandy, are found very valuable, but the ice even in such cases is often more effectual. Ice-cream is possessed of the same advantages, and is also nutritious. When head-ache and delirium continue, with an increased activity of the circulation about the head, leeches will often give sudden and great relief; but where the leeches cannot be procured, or where they will not be allowed, cupping and scarifying may be used with benefit in their stead. Should there be head-ache, without increased fulness in the
vessels

vessels of the head, or should the head-ache continue after the fulness is relieved by the leeches or cupping, the head should be shaved, and frequently washed with spirits, or spirituous embrocations; camphorated spirits of wine, with or without vinegar, are well adapted to this purpose. In many instances, they remove delirium and relieve head-ache; but where the embrocations fail, common ice, applied to the shaved head, will mostly succeed. The application of the ice is most useful where there is increased heat of the skin, but this is mostly the case in fever; the distress of the head will commonly yield very soon to this treatment, but sometimes return again; then the same remedies should be again resorted to, and that as often as the return of the symptoms shall make it necessary. Where the head-ache or delirium are obstinate, a blister laid over the part in pain, and of an extent sufficient to cover it entirely, will generally carry it off.

If the disease is the offspring of contagion; or if it be attended by the following symptoms, biting pungent heat of skin; a small quick pulse; hiccup or singultus; constant tendency to vomit; dark coloured crowded petechiæ; disagreeable fetor round the patient; suffused red eyes; a dirty squalid appearance of the skin;
L quick