

ity. The changes for the better are often as sudden, and unforeseen, as those for the worse. The last gasp alone should induce us to give over the patient. I have left a patient twenty times and more, little expecting to see him alive next day. Yet I did not lose courage, but ordered a bottle, or perhaps two, of generous wine to be given in the course of twenty-four hours; and that patient, to my great satisfaction, recovered, and enjoyed health for many years after.

CHAP. VIII.

MALIGNANT AND PUTRID, OR SPOTTED FEVER, (*Typhus gravior.*)

This fever, which takes its name from the malignancy of its nature, and the symptoms of putrefaction observed towards its close, may be called the *pestilential fever* of Europe, as in many of its symptoms it bears a great resemblance to that dreadful disease the plague. Persons of a lax habit, a melancholy disposition, and those whose vigour has been wasted by long fasting, watching, hard labour, excessive venery, frequent salivations, &c. are most liable to it.

CAUSES.—This fever is occasioned by foul air, from a number of people being confined in a narrow place, not properly ventilated; from putrid animal and vegetable effluvia, &c. Hence it prevails in camps, jails, hospitals, and infirmaries, especially where such places are too much crowded, and cleanliness is neglected.

A close constitution of the air, with long rainy or foggy weather, likewise occasions putrid fevers. They often succeed great inundations in low and marshy countries, especially when these are preceded or followed by a hot and sultry season.

Living too much upon animal food, without a proper mixture of vegetables, or eating fish or flesh that has been kept too long, are likewise apt to occasion this kind of fever. Hence sailors on long voyages, and the inhabitants of besieged cities, are very often visited with putrid fevers.

Corn that has been greatly damaged by rainy seasons, or long keeping, and water which has become putrid by stagnation, &c. may likewise occasion this fever.

Dead carcases tainting the air, especially in hot seasons, are very apt to occasion putrid diseases. Hence this kind of fever often prevails in countries which are the scenes of war and bloodshed. This shows the propriety of removing burying-grounds, slaughter-houses, &c. to a proper distance from great towns.

Want of cleanliness is a very general cause of putrid fevers. Hence they prevail amongst the poor inhabitants of large towns, who breathe a confined unwholesome air, and neglect cleanliness.

Such mechanics as carry on dirty employments, and are constantly confined within doors, are likewise very liable to this disease.

We shall only add, that putrid, malignant, or spotted fevers are highly infectious, and are therefore often communicated by contagion. For which reason all persons ought to keep at a distance from those affected with such diseases, unless their attendance is absolutely necessary.

SYMPTOMS.—The malignant fever is generally preceded by languor, a remarkable weakness, or loss of strength, without any apparent cause. This is sometimes so great, that the patient can scarcely walk, or even sit upright, without being in danger of fainting away. His mind, too, is greatly dejected; he sighs, and is full of dreadful apprehensions. There is a nausea, and sometimes a vomiting of bile; a violent pain of the head, with a strong pulsation or throbbing of the temporal arteries; the eyes often appear red and inflamed, with a pain at the bottom of the orbit; there is a noise in the ears, the breathing is laborious, and often interrupted with a sigh; the patient complains of a pain about the region of the stomach, and in his back and loins; his tongue is at first white, but afterwards it appears black and chapped; and his teeth are covered with a black crust. He sometimes passes worms both upwards and downwards, is affected with tremors or shaking, and often becomes delirious.

If blood be let, it appears dissolved, or with a very small degree of cohesion, and soon becomes putrid; the stools smell extremely fetid, and are sometimes of a greenish, black or reddish cast. Spots of a pale, purple, dun, or black colour, often appear upon the skin, and sometimes there are violent hæmorrhages or discharges of blood from the mouth, eyes, nose, &c.

Putrid fevers may be distinguished from the inflammatory, by the smallness of the pulse, the great dejection of mind, the dissolved state of the blood, the petechiæ or purple spots, and the putrid smell of the excrements. They may likewise be distinguished from the low or nervous fever, by the heat and thirst being greater, the urine of a higher colour, and the loss of strength, dejection of mind, and all the other symptoms more violent.

It sometimes happens, however, that the inflammatory, nervous, and putrid symptoms are so blended together, as to render it very difficult to determine to which class the fever belongs. In this case, the greatest caution and skill are requisite. Attention must be paid to those symptoms which are most prevalent, and both the regimen and medicines adapted to them.

Inflammatory and nervous fevers may be converted into malignant and putrid, by too hot a regimen, or improper medicines.

The duration of putrid fevers is extremely uncertain; sometimes they terminate between the seventh and fourteenth day, and at other times they are prolonged for five or six weeks. Their duration depends greatly upon the constitution of the patient, and the manner of treating the disease.

The most favourable symptoms are, a gentle looseness after the fourth or fifth day, with a warm mild sweat. These, when

continued for a considerable time, often carry off the fever, and should never be imprudently stopped. Small miliary pustules, appearing between the petechiæ or purple spots, are likewise favourable, as also hot scabby eruptions about the mouth and nose. It is a good sign when the pulse rises upon the use of wine, or other cordials, and the nervous symptoms abate; deafness coming on towards the decline of the fever, is likewise often a favourable symptom,* as are abscesses in the groin, or parotid glands.

Among the unfavourable symptoms may be reckoned an excessive looseness, with a hard swelled belly; large black or livid blotches breaking out upon the skin; apthæ in the mouth; cold clammy sweats; blindness; change of the voice; a wild staring of the eyes; difficulty of swallowing; inability to put out the tongue; and a constant inclination to uncover the breast. When the sweat and saliva are tinged with blood, and the urine is black, or deposits a black sooty sediment, the patient is in great danger. Starting of the tendons, and fœtid, ichorous, involuntary stools, attended with coldness of the extremities, are generally the forerunners of death.

DIET.—In the treatment of this disease, we ought to endeavour, as far as possible, to counteract the putrid tendency of the humours; to support the patient's strength and spirits; and to assist Nature in expelling the cause of this disease, by gently promoting perspiration and the other evacuations.

It has been observed, that putrid fevers are often occasioned by unwholesome air, and of course they must be aggravated by it. Care should, therefore, be taken to prevent the air from stagnating in the patient's chamber, to keep it cool, and renew it frequently, by opening the doors or windows of some adjacent apartment. The breath and perspiration of persons in perfect health soon render the air of a small apartment noxious; but this will sooner happen from the perspiration and breath of a person whose whole mass of humours are in a putrid state.

Besides the frequent admission of fresh air, we would recommend the use of vinegar, verjuice, juice of lemon, Seville orange, or any kind of vegetable acid that can be most readily obtained. These ought frequently to be sprinkled upon the floor, the bed, and every part of the room. They may also be evaporated with a hot iron, or by boiling, &c. The fresh skins of lemons or oranges ought likewise to be laid in different parts of the room, and they should be frequently held to the patient's nose. The use of acids in this manner would not only prove very refreshing to the patient, but would likewise tend to prevent the infection from spreading among those who attend him. Strong-scented herbs, as rue, tansy, rosemary, wormwood, &c. may likewise be laid in different parts of the house, and smelled to by those who go near the patient.

The patient must not only be kept cool, but likewise quiet and easy. The least noise will affect his head, and the smallest fatigue will be apt to make him faint.

* Deafness is not always a favourable symptom in this disease. Perhaps it is only so, when occasioned by abscesses formed within the ears.

Few things are of greater importance in this disease than acids, which ought to be mixed with all the patient's food as well as drink. Orange, lemon, or vinegar-whey, are all very proper, and may be drunk by turns according to the patient's inclination. They may be rendered cordial by the addition of wine in such quantity as the patient's strength seems to require. When he is very low, he may drink negus, with only one half water, and sharpened with the juice of bitter orange or lemon. In some cases a glass of wine may now and then be allowed. The most proper wine is Rhenish; but if the body be open, red port or claret is to be preferred.

When the body is bound, a tea-spoonful of the cream of tartar may be put into a cup of the patient's drink, as there is occasion; or he may drink a decoction of tamarinds, which will both quench his thirst, and promote a discharge by stool.

If camomile-tea will sit upon his stomach, it is a very proper drink in this disease. It may be sharpened by adding to every cup of tea, ten or fifteen drops of the elixir of vitriol.

The food must be light, as panado, or groat-gruel, to which a little wine may be added, if the patient be weak and low; and they ought all to be sharpened with the juice of orange, the jelly of currants, or the like. The patient ought likewise to eat freely of ripe fruits, as roasted apples, currant or gooseberry tarts, preserved cherries, or plums, &c.

Taking a little food or drink frequently, not only supports the spirits, but counteracts the putrid tendency of the humours; for which reason the patient ought frequently to be sipping small quantities of some of the acid liquors mentioned above, or any that may be more agreeable to his palate, or more readily obtained.

If he be delirious, his feet and hands ought to be frequently fomented with a strong infusion of camomile flowers. This, or an infusion of the bark, to such as can afford it, cannot fail to have a good effect. Fomentations of this kind not only relieve the head, by relaxing the vessels in the extremities, but as their contents are absorbed, and taken into the system, they must assist in preventing the putrescency of the humours.

MEDICAL TREATMENT.—If an emetic be given at the beginning of this fever, it will hardly fail to have a good effect; but if the fever has gone on for some days, and the symptoms are violent, vomits are not quite so safe. The body, however, is always to be kept gently open, by clysters, or mild laxative medicines.

Bleeding is seldom necessary in putrid fevers. If there be signs of an inflammation, it may sometimes be permitted at the first onset; but the repetition of it generally proves hurtful.

Blistering-plasters are never to be used unless in the greatest extremities. If the petechiæ or spots should suddenly disappear, the patient's pulse sink remarkably, and a delirium, with other bad symptoms, come on, blistering may be permitted. In this case the blistering plasters are to be applied to the head, and inside of the legs or thighs. But as they are sometimes apt to occasion a gangrene, we would rather recommend warm cataplasms,

or poultices of mustard and vinegar to be applied to the feet, having recourse to blisters only in the utmost extremities.

It is common in the beginning of this fever to give the emetic tartar in small doses, repeated every second or third hour, till it shall either vomit, purge, or throw the patient in a sweat. This practice is very proper, provided it be not pushed so far as to weaken the patient. Much benefit has been derived from the use of the compound spirit of ether.*

In the most dangerous species of this disease, when it is attended with purple, livid, or black spots, the Peruvian bark must be administered. I have seen it, when joined with acids, prove very successful, even in cases where the petechiæ had the most threatening aspect. But to answer this purpose, it must not only be given in large doses, but duly persisted in.

The best method of administering the bark is certainly in substance. An ounce of it in powder may be mixed with half an English pint of water, and the same quantity of red wine, and sharpened with the elixir or the spirit of vitriol, (sulphuric acid,) which will both make it sit easier on the stomach, and render it more beneficial. Two or three ounces of the syrup of lemon may be added; and two table-spoonfuls of the mixture taken every two hours, or oftener, if the stomach is able to bear it.

Those who cannot take the bark in substance, may infuse it in wine, as recommended in the preceding disease; or in any of the annexed forms.†

If there be a violent looseness, the bark must be boiled in red wine with a little cinnamon, and sharpened with the elixir of vitriol as above. Nothing can be more beneficial in this kind of looseness than plenty of acids, and such things as promote a gentle perspiration.

If the patient be troubled with vomiting, a drachm of the sub-carbonate of potash, dissolved in an ounce and a half of fresh lemon-juice, and made into a draught, with an ounce of simple cinnamon-water, and a bit of sugar, may be given and repeated as often as it is necessary.

If swellings of the glands appear, their suppuration is to be promoted by the application of poultices, ripening cataplasms, &c. and as soon as there is any appearance of matter in them, they ought to be laid open, and the poultices continued.

I have known large ulcerous sores break out in various parts of the body, in the decline of this fever, of a livid gangrenous appearance, and a most putrid cadaverous smell. These gradually healed, and the patient recovered, by a plentiful use of Peruvian bark and wine, sharpened with the vitriolic acid.

* Take Compound Spirit of Ether, 3 drs.
Strong Camphor mixture, 7 oz.
Make a mixture, and take three table spoonful every three hours.

† Take decoction of Bark, 1½ ounce.
Tincture of the same 1½ drachm.
Muriatic Acid 5 minims.
Syrup of Orange-peel, 1 drachm.

Make a draught.—To be taken every three or four hours, or oftener.

or
Take soft Extract of Bark, ½ scruple.
Decoct. of Bark, 1½ ounce.
Tinct. of the same, 2 drachms.
Muriatic Acid, 6 minims.
Syrup of Orange-peel, 1 drachm.
Make a draught.—To be taken as above.

A most material circumstance to be attended to both at the commencement of this fever, and during its whole course, is to cover the patient lightly with bed-clothes, and to keep his apartment cool and properly ventilated, by allowing a regular and free admission of fresh air into it; and in order to render it pleasant both to himself and attendants, it ought to be sprinkled several times a-day with warm vinegar and camphorated spirit. Fumigations* will also be advisable. Cleanliness, in the strictest sense of the word, is to be most carefully attended to: and, therefore, the bed and body linen should be frequently changed; and whenever the patient has a motion, it ought to be instantaneously removed.

For preventing putrid fevers, we would recommend a strict regard to cleanliness; a dry situation; sufficient exercise in the open air; wholesome food, and a moderate use of generous liquors. Infection ought, above all things, to be avoided. No constitution is proof against it. I have known persons seized with the putrid fever, by only making a single visit to a patient in it; others have caught it by lodging for one night in a town where it prevailed; and some by attending the funerals of such as died of it.†

When a putrid fever seizes any person in a family, the greatest attention is necessary to prevent the disease from spreading. The sick ought to be placed in a large apartment, as remote from the rest of the family as possible; he ought likewise to be kept extremely clean, and should have fresh air frequently let into his chamber; whatever comes from him should be immediately removed, his linen should be frequently changed, and those in health ought to avoid all unnecessary communication with him.

Any one who is apprehensive of having caught the infection, ought immediately to take an emetic, and to work it off by drinking plentifully of camomile tea. This may be repeated in a day or two, if the apprehensions still continue, or any unfavourable symptoms appear.

The person ought likewise to take an infusion of the bark and camomile flowers for his ordinary drink; and before he goes to bed, he may drink an English pint of pretty strong negus, or a few glasses of generous wine. I have been frequently obliged to

* The mineral acid gases used in the apartments of the sick, have been found to possess a powerful disinfecting agency. Either the nitric acid, or the muriatic, may be used with this intention, although the latter is thought to be more diffusible than the former. When the preference is given to it, it may be used in the following manner:—Put one pound of common salt into an earthen vessel, and pour over it, from time to time, a small quantity of sulphuric acid, till the whole salt is moistened. If the air be foul, and peculiarly offensive, apply a gentle heat under the vessel, to extricate a larger quantity of vapour; but, in general, the simple addition of the acid to the salt will be found sufficient, unless the apartment is very large.

Perhaps the most effectual way of fumigation, of all others, is the following: although it requires some nicety in the management of it. Take of manganese in powder two parts; one part of common salt, three of sulphuric acid, and one of water. Put an ounce of the mixed manganese and salt into a basin, add a large tea-spoonful of water, then drop in half a teaspoonful of sulphuric acid, and repeat this till you have used a tea-spoonful and a half of the acid. In this manner keep up a suitable extrication of the fumes. Ed.

† The late Sir John Pringle agreed with me, in thinking that a good doctor and a careful nurse were the only necessary attendants; and that all others not only endangered themselves, but generally, by their solicitude and ill-directed care, hurt the sick.

follow this course when malignant fevers prevailed, and have likewise recommended it to others with constant success.

Those who wait upon the sick in putrid fevers, ought always to have a piece of sponge or a handkerchief dipt in vinegar, or juice of lemon, to smell to while near the patient. They ought likewise to wash their hands, and if possible to change their clothes, before they go into company.*

When hemorrhages ensue, and purple or livid spots have appeared on the body of the patient, recourse must be had to the most powerful antiseptics, such as vegetable and mineral acids, carbonic acid in every form, liquors in a state of fermentation, oxygen gas, oxygenated muriates of potash,† aerated waters, wine, cold affusion, bark. Clysters,‡ also, of diluted vinegar, may be administered, &c.

If apthæ arise, the gargles recommended in putrid sore throats. In this disease as well as in the preceding, the application of cold to the head might probably be advantageously substituted for a blister in those cases where there prevails either coma or delirium, or where there is great pain in the head, with much anxiety and restlessness. Having shaved the head, a large towel, dipped in the coldest water, may be applied all over it, renewing this process frequently until the patient feel relieved, the heat less, and a disposition to tranquil sleep supervenes. This operation may be repeated at short intervals at first, and it will be desirable to do it with such quickness and perseverance as to produce some degree of shivering. In severe cases, the application of powdered ice enclosed in a bladder to the shaven scalp may be substituted.

The exhibition of fixed air has been recommended in this fever by the Rev. Dr. Cartwright, who, having read of the power of fixed air in preserving meat from putrefaction, was induced to make trial of it on a boy fourteen years of age, who had been ill several days of a putrid fever, for which bark and wine had been administered without any apparent advantage, and where there was but little hope of a recovery. He directed two table spoonfuls of yeast to be taken every three hours; the boy experienced almost immediate relief, and recovered very quickly. The reverend Doctor reports, that he exhibited the same remedy to about fifty patients in this fever without losing one of them.

* The above description and mode of treatment of the putrid fever are perfectly applicable to what is termed the Yellow Fever, &c. of the havoc made by which in our West India possessions during late years we have heard so much. The yellowness of the skin, although generally considered as a fatal symptom, is an adventitious circumstance, resulting from warmth of climate. In early stages of the yellow fever, smart purges of jalap and calomel, and cooling the surface of the body by ablation with sea-water, or common water mixed with vinegar, is the most efficacious mode of treatment. Keeping the body open and general temperance are the best preventives. *Ed.*

† Take Oxygenated Muriate of Potash,	Tinct. of Bark,	3 drachms.
1 scrup. to 1 drm.	Make a draught, to be taken as above.	
Tinct. of Orange-peel, 1 drachm.	‡ Take Common Vinegar,	3 drachms.
Cinnamon-water, 1½ ounce.	Infusion of Camomile,	5 ounces.
Syrup of Saffron, 1 drachm.	Mix for a clyster.	
Make a draught. To be taken every third hour.	or	
	Take Common Salt,	¼ ounce.
	Vinegar,	2 ounces.
Take Oxymuriatic Acid, 20 minims.	Infusion of Camomile,	6 ounces.
Decoction of Bark, 1½ ounce.	Make a clyster.	

In typhus, whatever may be the mode of action of yeast, it appears to be indisputable that fixed air takes off that extreme debility of the stomach, so conspicuously marked in disorders of this nature; and in proportion as that subsides, the pulse rises, becomes slower and fuller, the burning heat on the skin disappears, and a truce is gained for the reception of nutrition.

CHAP. IX.

MILIARY FEVER.

This fever takes its name from the small pustules or bladders which appear on the skin, resembling, in shape and size, the seeds of millet. The pustules are either red or white, and sometimes both are mixed together.

The whole body is sometimes covered with pustules; but they are generally more numerous where the sweat is most abundant, as on the breast, the back, &c. A gentle sweat, or moisture on the skin, greatly promotes the eruption; but when the skin is dry, the eruption is both more painful and dangerous.

Sometimes this is a primary disease; but it is much oftener only a symptom of some other malady, as the small-pox, measles, ardent, putrid, or nervous fever, &c. In all these cases it is generally the effect of too hot a regimen or medicines.

The military fever chiefly attacks the idle and the phlegmatic, or persons of a relaxed habit. The young and the aged are more liable to it than those in the vigour and prime of life. It is likewise more incident to women than men, especially the delicate and the indolent, who, neglecting exercise, keep continually within doors, and live upon weak watery diet. Such females are extremely liable to be seized with this disease in childbed, and often lose their lives by it.

CAUSES.—The military fever is sometimes occasioned by violent passions or affections of the mind; as excessive grief, anxiety, thoughtfulness, &c. It may likewise be occasioned by excessive watching, great evacuations, a weak watery diet, rainy seasons, eating too freely of cold, crude, unripe fruit, as plums, cherries, cucumbers, melons, &c. Impure waters, or provisions which have been spoiled by rainy seasons, long keeping, &c. may likewise cause military fevers. They may also be occasioned by the stoppage of any customary evacuation, as issues, setons, ulcers, the bleeding piles in men, or the menstrual flux in women, &c.

This disease in childbed-women is sometimes the effect of great costiveness during pregnancy; it may likewise be occasioned by their excessive use of green trash, and other unwholesome things, in which pregnant women are too apt to indulge. But its most general cause is indolence. Such women as lead a sedentary life, especially during pregnancy, and at the same time live grossly,