

CHAP. XIII.

PHTHISIS, OR PULMONARY CONSUMPTION.

(Phthisis pulmonalis.)

A CONSUMPTION is a wasting or decay of the whole body, from an ulcer, tubercles, or concretion of the lungs, an empyema, a nervous atrophy, or cachexy.

Dr. Arbuthnot observes, that in his time consumptions made up above one tenth part of the bills of mortality in and about London. There is reason to believe they have rather increased since; and we know from experience, that they are not less fatal in some other towns of England than in London.

Young persons, between the age of fifteen and thirty, of a slender make, long neck, high shoulders, and flat breasts, are most liable to this disease.

Consumptions prevail more in England than in any other part of the world, owing, perhaps, to the great use of animal food and malt liquors, the general application to sedentary employments, and the great quantity of pit-coal which is there burnt; to which we may add, the perpetual changes in the atmosphere, or variability of the weather.

CAUSES.—It has already been observed, that an inflammation of the breast often ends in an imposthume: consequently whatever disposes people to this disease must likewise be considered as a cause of consumption.

Other diseases, by vitiating the habit, may likewise occasion consumptions: as the scurvy, the scrophula, or king's-evil, the venereal disease, the asthma, small-pox, measles, &c.

As this disease is seldom cured, we shall endeavour the more particularly to point out its causes, in order that people may be enabled to avoid it. These are:

— Confined or unwholesome air; when this fluid is impregnated with the fumes of metals or minerals, it proves extremely hurtful to the lungs, and often corrodes the tender vessels of that necessary organ.

— Violent passions, exertions, or affections of the mind; as grief, disappointment, anxiety, or close application to the study of abstruse arts or sciences.

— Great evacuations; as sweating, diarrhœas, diabetes, excessive venery, the fluor-albus, over-discharge of the menstrual flux, giving suck too long, &c.

— The sudden stoppage of customary evacuations; as the bleeding piles, sweating of the feet, bleeding at the nose, the menses, issues, ulcers, or eruptions of any kind.

— Injuries done to the lungs, calculi, &c. I lately saw the symptoms of a phthisis occasioned by a small bone sticking in the bronchiz. It was afterwards vomited along with a considerable quantity of purulent matter, and the patient, by a proper regimen and the use of the Peruvian bark, recovered.

— Making a sudden transition from a hot to a very cold climate, change of apparel, or whatever greatly lessens the perspiration.

— Frequent and excessive debaucheries. Late watching, and drinking strong liquors, which generally go together, can hardly fail to destroy the lungs. Hence the *bon companion* generally falls a sacrifice to this disease.

— Infection. Consumptions are likewise caught by sleeping with the diseased; for which reason this should be carefully avoided. It cannot be of great benefit to the sick, and must hurt those in health.

— Occupations in life. Those artificers who sit much, and are constantly leaning forward, or pressing upon the stomach and breast, as cutlers, tailors, shoemakers, sempstresses, &c. often die of consumptions. They likewise prove fatal to singers, and all who have occasion to make frequent and violent exertions of the lungs.

— Cold. More consumptive patients date the beginning of their disorders from wet feet, damp beds, night air, wet clothes, or catching cold after the body has been heated, than from all other causes.

Sharp, saline, and aromatic aliments, which heat and inflame the blood, are likewise frequently the cause of consumptions.

We shall only add, that this disease is often owing to an hereditary taint, or a *scrophulous habit*; in which case it is generally incurable.

SYMPTOMS.—This disease generally begins with a dry cough, which often continues for some months. If a disposition to vomit after eating be excited by it, there is still greater reason to fear an approaching consumption. The patient complains of a more than usual degree of heat, a pain and oppression of the breast, especially after motion; his spittle is of a saltish taste, and sometimes mixed with blood. He is apt to be sad; his appetite is bad, and his thirst great. There is generally a quick, soft, small pulse; though sometimes the pulse is pretty full, and rather hard. These are the common symptoms of a beginning consumption.

Afterwards the patient begins to spit a greenish white, or bloody matter. His body is extenuated by the hectic fever and colliquative sweats, which mutually succeed one another, viz. the one towards night, and the other in the morning. A looseness, and an excessive discharge of urine, are often troublesome symptoms at this time, and greatly weaken the patient. There is a burning heat in the palms of the hands, and the face generally flushes after eating; the fingers become remarkably small, the nails are bent inwards, and the hairs fall off.

At last the swelling of the feet and legs, the total loss of strength, the sinking of the eyes, the difficulty of swallowing, and the coldness of the extremities, show the immediate approach of death, which, however, the patient seldom believes to be so near. Such is the usual progress of this fatal disease, which, if not early checked, commonly sets all medicine at defiance.

REGIMEN.—On the first appearance of a consumption, if the patient live in a large town, or any place where the air is confined, he ought immediately to quit it, and to make choice of a situation in the country, where the air is pure and free. Here he must not remain inactive, but take every day as much exercise as he can bear.

The best method of taking exercise is to ride on horseback, as this gives the body a great deal of motion without much fatigue. Such as cannot bear this kind of exercise, must make use of a carriage. A long journey, as it amuses the mind by a continual change of objects, is greatly preferable to riding the same ground over and over. Care, however, must be taken to avoid catching cold from wet clothes, damp beds, or the like. The patient ought always to finish his ride in the morning, or at least before dinner; otherwise it will oftener do harm than good.

It is pity those who attend the sick seldom recommend riding in this disease, till the patient is either unable to bear it, or the malady has become incurable. Patients are likewise apt to trifle with every thing that is in their own power. They cannot see how one of the common actions of life should prove a remedy in an obstinate disease, and therefore they reject it, while they greedily hunt after relief from medicine, merely because they do not understand it.

Those who have strength and courage to undertake a pretty long voyage, may expect great advantage from it. This to my knowledge has frequently cured a consumption after the patient was, to all appearance, far advanced in that disease, and where medicine had proved ineffectual. Hence it is reasonable to conclude, that if a voyage were undertaken in due time, it would seldom fail to perform a cure.*

Such as try this method of cure ought to carry as much fresh provisions along with them as will serve for the whole time they are at sea. As milk is not easily obtained in this situation, they ought to live upon fruits, and the broth of chickens, or other young animals which can be kept alive on board. It is scarcely necessary to add, that such voyages should be undertaken, if possible, in the mildest season, and that they ought to be towards a warmer climate.†

Those who have not courage for a long voyage may travel into a more southern climate, as the south of France, Spain, or Portugal; and if they find the air of these countries agree with them, they should continue there at least till their health be confirmed.

Next to proper air and exercise, we would recommend a due attention to diet. The patient should eat nothing that is either heating or hard of digestion, and his drink must be of a soft and

* Two things chiefly operate to prevent the benefits which would arise from sailing. The one is, that physicians seldom order it till the disease is too far advanced; and the other is, that they seldom order a voyage of a sufficient length. A patient may receive no benefit by crossing the channel, who, should he cross the Atlantic, might be completely cured. Indeed we have reason to believe, that a voyage of this kind, if taken in due time, would seldom fail to cure a consumption.

† Though I do not remember to have seen one instance of a genuine consumption of the lungs cured by medicine, yet I have known a West-India voyage work wonders in that dreadful disorder.

cooling nature. All the diet ought to be calculated to lessen the acrimony of the humours, and to nourish and support the patient. For this purpose he must keep chiefly to the use of vegetables and milk. Milk alone is of more value in this disease than the whole *materia medica*.

Asses' milk is commonly reckoned preferable to any other; but it cannot always be obtained; besides, it is generally taken in a very small quantity; whereas, to produce any effects, it ought to make a considerable part of the patient's diet. It is hardly to be expected, that a gill or two of asses' milk, drank in the space of twenty-four hours, should be able to produce any considerable change in the humours of an adult; and when people do not perceive its effects soon, they lose hope, and so leave it off. Hence it happens, that this medicine, however valuable, very seldom performs a cure. The reason is obvious; it is commonly used too late, is taken in too small quantities, and is not duly persisted in.

I have known very extraordinary effects from asses' milk in obstinate coughs, which threatened a consumption of the lungs; and do verily believe, if used at this period, that it would seldom fail; but if it be delayed till an ulcer is formed, which is generally the case, how can it be expected to succeed?

Asses' milk ought to be drunk, if possible, in its natural warmth, and, by a grown person, in the quantity of half an *English* pint at a time. Instead of taking this quantity *night* and morning only, the patient ought to take it *four times*, or at least *thrice a-day*, and to eat a little *light bread* along with it, so as to make it a kind of meal.

If the milk should happen to purge, it may be mixed with old conserve of roses. When that cannot be obtained, the powder of crabs' claws may be used in its stead. Asses' milk is usually ordered to be drunk warm in bed; but as it generally throws the patient into a sweat when taken in this way, it would perhaps be better to give it after he rises.

Some extraordinary cures in consumptive cases have been performed by women's milk. Could this be obtained in sufficient quantity, we would recommend it in preference to any other. It is better if the patient can suck it from the breast, than to drink it afterwards. I knew a man who was reduced to such a degree of weakness in a consumption, as not to be able to turn himself in bed. His wife was at that time giving suck, and the child happening to die, he sucked her breasts, not with a view to reap any advantage from the milk, but to make her easy. Finding himself, however, greatly benefited by it, he continued to suck her till he became perfectly well, and is at present a strong and healthy man.

Some prefer butter-milk to any other, and it is indeed a very valuable medicine, if the stomach be able to bear it. It does not agree with every person at first; and is, therefore, often laid aside without a sufficient trial. It should at first be taken sparingly, and the quantity gradually increased, until it comes to be almost the sole food. I never knew it succeed, unless where the patient almost lived upon it.

Cows' milk is most readily obtained of any, and though it be not

so easily digested as that of asses or mares, it may be rendered lighter, by adding it to an equal quantity of barley-water, or allowing it to stand for some hours, and afterwards taking off the cream. If it should, notwithstanding, prove heavy on the stomach, a small quantity of brandy or rum, with a little sugar, may be added, which will render it both more light and nourishing.*

It is not to be wondered, that milk should for some time disagree with a stomach that has not been accustomed to digest any thing but flesh and strong liquors, which is the case with many of those who fall into consumptions. We do not, however, advise those who have been accustomed to animal food and strong liquors, to leave them off all at once. This might be dangerous. It will be necessary for such to eat a little once a-day of the flesh of some young animal, or rather to use the broth made of chickens, veal, lamb, or such like. They ought likewise to drink a little wine made into negus, or diluted with twice or thrice its quantity of water, and to make it gradually weaker till they can leave it off altogether.

These must be used only as preparatives to a diet consisting chiefly of shell-fish, of milk and vegetables, which the sooner the patient can be brought to bear, the better. Rice and milk, or barley and milk, boiled with a little sugar, is very proper food. Ripe fruits, roasted, baked, or boiled, are likewise proper, as goose or currant-berry tarts, apples roasted, or boiled in milk, &c. The jellies, conserves, and preserves, &c. of ripe subacid fruits, ought to be eaten plentifully, as the jelly of currants, conserve of roses, preserved plums, cherries, &c.

Wholesome air, proper exercise, and a diet consisting chiefly of these and other vegetables, with milk, is the only course that can be depended on in a beginning consumption. If the patient has strength and sufficient resolution to persist in this course, he will seldom be disappointed of a cure.

In a populous town of England,† where consumptions are very common, I have frequently seen consumptive patients, who had been sent to the country with orders to ride and live upon milk and vegetables, return in a few months quite plump, and free from any complaint. This indeed was not always the case, especially when the disease was hereditary, or far advanced; but it was the only method in which success was to be expected; where it failed, I never knew medicine succeed.

If the patient's strength and spirits flag, he must be supported by strong broths, jellies, and such like. Some recommend shell-fish in this disorder, and with some reason, as they are nourishing and restorative.‡ All the food and drink ought, however, to be taken in small quantities, lest an overcharge of fresh chyle should oppress the lungs, and too much accelerate the circulation of the blood.

* In Russia, it is common for consumptive persons to migrate into Tartary, where, by living wholly on a fermented preparation of mares' milk, termed *koumiss*, they very generally recover even from the last stages of this disease.

† Sheffield.

‡ I have often known persons of a consumptive habit, where the symptoms were no violent, reap great benefit from the use of oysters. They generally ate them raw, and drank the juice along with them.

The patient's mind ought to be kept as easy and cheerful as possible. Consumptions are often occasioned, and always aggravated, by a melancholy cast of mind; for which reason, music, cheerful company, and every thing that inspires mirth, are highly beneficial. The patient ought seldom to be left alone, as brooding over his calamities is sure to render him worse.

MEDICINE.—Though the cure of this disease depends chiefly upon regimen and the patient's own endeavours, yet we shall mention a few things which may be of service in relieving some of the more violent symptoms.*

In the first stage of a consumption, the cough may sometimes be appeased by local and general purging and bleeding, which may be occasionally repeated; and the expectoration may be promoted by the following medicines; Take fresh squills, gum ammoniac, add powdered cardamom seeds, of each a quarter of an ounce; beat them together in a mortar, and if the mass prove too hard for pills, a little of any kind of syrup may be added to it. This may be formed into pills of a moderate size, and four or five of them taken twice or thrice a-day, according as the patient's stomach will bear them.

The mixture of *ammoniicum*, or milk of gum ammoniac, as it is called, is likewise a proper medicine in this stage of the disease. It may be used as directed in the pleurisy, or in the subjoined form, &c.†

A mixture made of equal parts of lemon-juice, fine honey, and syrup of poppies, may likewise be used. Four ounces of each of these may be simmered together in a sauce-pan, over a gentle fire, and a table spoonful of it taken at any time when the cough is troublesome.

It is common in this stage of the disease to load the patient's stomach with oily and balsamic medicines. These, instead of removing the cause of the disease, tend rather to increase it by heating the blood, while they pall the appetite, relax the solids, and prove every way hurtful to the patient. Whatever is used for removing the cough, besides riding and other proper regimen, ought to be medicines of a sharp and cleansing nature; as oxymel, syrup of lemon, &c.

Acids seem to have peculiarly good effects in this disease; they both tend to quench the patient's thirst and to cool the blood. The vegetable acids, as apples, oranges, lemons, &c. appear to be the most proper. I have known patients suck the juice of several lemons every day with manifest advantage, and would for this reason

* Take Submuriate of Mercury, 5 grains.

Confection of Roses, 5 grains.

Make a pill, to be taken immediately, with the following draught.

Take Tartrate of Potash, 1 drachm.

Infusion of Senna, 15 drachms.

Syrup of Oranges, 1 drachm.

Make a Draught.

† Take Mixture of Ammoniacum, 1 ounce.

Oxymel of Squills, 2 drachms.

Syrup of Tolu, 3 drachms.

Camphorated Tincture of Opium,

2 drachm.

Make a draught, of which the dose may be a table spoonful during the urgency of the cough.

or

Take Almond Mixture, 6 ounces.

Oxymel of Squills, 3 drachms.

Camphorated Tincture of Opium,

2 drachms.

Tincture of Foxglove, 20 minims.

Mix and take a table spoonful often.

recommend acid vegetables to be taken in as great quantity as the stomach will bear them.

During the first or inflammatory stage of the complaint, it will be advisable, in conformity with the antiphlogistic plan, to employ gentle laxatives, should the bowels be costive, with occasional gentle emetics, &c. When there is any febrile heat, with a cough or pain in the chest, diaphoretics may be given, such as a small dose (one eighth of a grain) of tartarized antimony, or the powder of antimony, two or three times a-day, together with the saline mixture and nitre, as recommended in peripneumony.

For the patient's drink, we would recommend demulcent drinks;* infusions of the bitter plants, as ground-ivy, the lesser centaury, camomile flowers, or water trefoil.† These infusions may be drank at pleasure. They strengthen the stomach, promote digestion, and at the same time answer all the purposes of dilution, and quench thirst much better than things that are luscious or sweet. But if the patient spit blood, he ought to use, for his ordinary drink, infusions or decoctions of the vulnerary roots, plants, &c.‡

There are many other mucilaginous plants and seeds, of a healing and agglutinating nature, from which decoctions or infusions may be prepared with the same intention; as the orches, the quince-seed, coltsfoot, linseed, sarsaparilla, &c. It is not necessary to mention the different ways in which these may be prepared. Simple infusion or boiling is all that is necessary, and the dose may be at discretion.

The confection of roses is here peculiarly proper. It may either be put into the decoction above prescribed, or eaten by itself. No benefit is to be expected from trifling doses of this medicine. I never knew it of any service, unless when three or four ounces at least were used daily for a considerable time. In this way I have seen it produce very happy effects, and would recommend it wherever there is a discharge of blood from the lungs.

Where a disposition to consumption arises in consequence of any enfeebling evacuation, such as a considerable abscess, fluor albus, or the like, without any inflammation of the lungs having yet taken place, cinchona will be serviceable, and may be given as advised below.§ After inflammation has come on, or ulceration has commenced, it would not fail to prove injurious, by increasing the cough with the tightness at the chest and oppressive breathing.

When it is evident that there are vomices or tubercles in the lungs, and the matter can neither be spit up nor carried off by absorption, the patient must endeavour to make it break inwardly,

* Take Decoction of Barley, 2 pints. Syrup of Lemons, 1½ ounce.
Gum Arabic, 3 drachms. Mix them for an ordinary drink.

† The decoction of lichen Islandicus may be used with great advantage as a drink; its bitterness strengthens the stomach, while the mucilage it contains, renders it highly nutritious. E.D.

‡ Take Decoction of Bark, 5 ounces. Decoction of Bark, 5 ounces.
Solution of acetated Ammonia, 1 ounce. Lemon Juice, 1 ounce.

Make a mixture. or Make a mixture; of which two table
spoonsful may be given two or three
times a-day.

Take Subcarbonate of Potash, 2 scruples.

by drawing in the steams of warm water or vinegar with his breath, coughing, laughing, or bawling aloud, &c. When it happens to burst within the lungs, the matter may be discharged by the mouth. Sometimes, indeed, the bursting of the vomicæ occasions immediate death, by suffocating the patient. When the quantity of matter is great, and the patient's strength exhausted, this is commonly the case. At any rate, the patient is ready to fall into a swoon, and should have volatile salts or spirits held to his nose. If the matter discharged be thick, and the cough and breathing become easier, there may be some hopes of a cure. The diet at this time ought to be light, but restorative, as chicken-broths, sago-gruel, rice-milk, &c., the drink, butter-milk or whey, sweetened with honey.

In the second, or tuberculated stage of the disease, the employment of emetics might be regularly persisted in every second or third morning; the sulphate of zinc is preferred; and the sulphate of copper is recommended by Senter, in the transactions of the college of Philadelphia, and by Adair, in the medical commentaries, in doses from seven to ten grains each, made into pills, &c.

As detergents, balsamics of different kinds have been much used in the ulcerated stage. Balsam of Copaiva, in the dose of twenty to thirty drops, twice or thrice a day, may be tried. Myrrh, however, is the medicine employed with the greatest success in those cases of hectic fever which are unattended by any great degree of heat or thirst, and which do not show manifest signs of inflammation. The preparation used by the late Dr. Moses Griffiths* seems to be preferable to all others. If at any time it should be thought too heating, the spirituous water may be omitted, as the solution may be made without it; although it is doubted whether it will agree so well with the stomach in general. A proper dose, (ten to fifteen drops of the tincture of foxglove,) may be added to each of the draughts, and to be given together.

If the vomicæ or tubercles should discharge themselves into the cavity of the breast, between the pleura and the lungs, there is no way of getting the matter out, but by an incision, as has already been observed. As this operation must always be performed by a surgeon, it is not necessary here to describe it. We shall only add, that it is not so dreadful as people are apt to imagine, and that it is the only chance the patient in this case has for his life.

With regard to the remedies usually employed in the treatment of phthisis, Dr. Ferriar has observed that the digitalis (fox-glove,) with the sulphate of iron, myrrh, bark, and other tonics, may be most proper in those cases of consumption which arise from scrophula; while the digitalis with opium, mucilaginous medicines, and diuretics, may be opposed to the florid consumption.

Dr. Crichton, of Petersburg, in the tuberculous or true scrophulous phthisis, has seen much benefit derived from the use of the tar fumigations.

* Take Myrrh, 1 drachm.
Dissolve in a mortar with
Spirit of Pimento, 6 drachms.
Distilled Water, 6½ drachms.
Then add,
Subcarbonate of Potash, ½ dr

Sulphate of Iron, 12 grains.
Syrup, 2 drachms.
Mix, and divide into four draughts, one of
which is to be taken every morning,
another at five in the evening, and an-
other at bed time

It would serve little purpose here to recapitulate the many articles recommended by various practitioners in the treatment of pulmonary consumptions, such as fixed airs, Prussic acid, conium, foxglove, uva, ursi, &c. It does not follow that any of them have any decided influence over the disease, and are more embarrassing to the practitioner than beneficial to the patient. If confirmed phthisis were to be cured, it must be effected principally, if not solely, by dietetic means and change of climate.

A NERVOUS CONSUMPTION, OR ATROPHY, is a wasting or decay of the whole body, without any considerable degree of fever, cough, or difficulty of breathing. It is attended with indigestion, weakness, want of appetite, &c.

Those who are of a fretful temper, who indulge in spirituous liquors, or who breathe an unwholesome air, are most liable to this disease.

We would chiefly recommend, for the cure of a nervous consumption, a light and nourishing diet, plenty of exercise in a free open air, and the use of such bitters as brace and strengthen the stomach; as the Peruvian bark, gentian-root, camomile, horehound, &c. These may be infused in water or wine, and a glass of it drank frequently.

It will greatly assist the digestion, and promote the cure of this disease, to take, twice a-day, twenty or thirty drops of the elixir of vitriol in a glass of wine or water.* The chalybeate wine is likewise an excellent medicine in this case; it strengthens the solids, and powerfully assists Nature in the preparation of good blood.

Agreeable amusements, cheerful company, and riding about, are, however, preferable to all medicines in this disease. For which reason, when the patient can afford it, we would recommend a long journey of pleasure, as the most likely means to restore his health.

What is called a *symptomatic consumption*, cannot be cured without first removing the disease by which it is occasioned. Thus when a consumption proceeds from the scrophula, or king's evil, from the scurvy, the asthma, the venereal disease, &c. a due attention must be paid to the malady from whence it arises, and the regimen and medicine directed accordingly.

When *excessive evacuations* of any kind occasion a consumption, they must not only be restrained, but the patient's strength must be restored by gentle exercise, nourishing diet, and generous cordials. Young and delicate mothers often fall into consumptions, by giving suck too long. As soon as they perceive their strength and appetite begin to fail, they ought immediately to wean the child, or provide another nurse, otherwise they cannot expect a cure.

Before we quit this subject, we would earnestly recommend it to all, as they wish to avoid consumptions, to take as much exercise without doors as they can, to avoid unwholesome air, and to study sobriety. Consumptions owe their present increase not a

* See Appendix, Chalybeate Wine.

little to the fashion of sitting up late, eating hot suppers, and spending every evening over a bowl of punch, or other strong liquors. These liquors, when too freely used, not only hurt the digestion, and spoil the appetite, but heat and inflame the blood, and set the whole constitution on fire.

In tracing the various causes of consumption, I entered into minute details, to put people more upon their guard, as the disease, when deeply seated, seldom admits of a cure. Not but there are plenty of persons in London who confidently undertake to perform cures in the most hopeless stages of the complaint, though physicians have not been so happy as to find out the art. Perhaps the only art which the others have discovered, or which they have ever studied, is the art of impudence and deception.

But to return to my former argument: as consumptions seldom admit of a cure, the utmost care should be exerted to avoid them. The best general caution I can give is to guard against catching cold, the fruitful mother of consumptions, and of many other disorders. How this is to be done, will be more fully explained when I come to treat of colds and coughs, the bane of this island, and the source of numberless diseases, especially among the young, gay, and thoughtless part of the community, who have no fear of any ill until it overtakes them, when it is generally too late to prevent the fatal consequences.

ON THE MEANS OF PREVENTING PULMONARY CONSUMPTION.

HUMAN beings are so constituted that they can exist but for a very short space of time without inhaling a fresh portion of atmospheric air. The uninterrupted repetition of this process, which is absolutely requisite for the support of life, implies a perpetual state of activity in the organs by means of which it is carried on. This alternate state of dilatation and contraction of the lungs necessarily forms a great impediment to the cure of any wound or ulceration taking place in their substance, by the same process employed by Nature to heal injuries in other parts of the living body, which admit of a temporary state of quietude and repose. The slightest degree of diseased action occurring in an organ so essentially important to the maintenance of existence, is sufficient to create alarm, which our melancholy experience of the inefficacy of the art of medicine to remove chronic affections of the organs of respiration has no tendency to diminish. A single opportunity of inspecting the state of the lungs of a person dead of pulmonary consumption, might, I have frequently thought, suffice to correct the pretensions of those who propose to cure the disease after it is confirmed, by the administration of medicine. But the impracticability of a cure ought to render us proportionably more attentive to the means of prevention, from which much may be expected, provided they are employed at a sufficiently early period.

Pulmonary consumption may be divided into two kinds, which it is of importance, even in a prophylactic point of view, to discriminate from each other.—The lungs may be injured by a blow, or pierced by a wound. Inflammation may take place in them from over-exertion, in consequence of the stoppage of some custom-

any evacuation, or from exposure to cold, giving rise to pleurisy or peripneumony; and these diseases may terminate in consumption in persons who have no natural predisposition to that complaint. This species of the disease may be termed symptomatic, and occasionally admits of being cured, by removing the cause from whence it originated. Sometimes, when an abscess is formed in the lungs, which is termed a vomica, and produces all the symptoms of phthisis, it will at length break either internally, when the matter is coughed up, or point externally, and admit of being opened; and, after its contents are evacuated, it will heal up, and the patient completely recover.

The other species of consumption may be denominated hereditary, as being derived either from a parent, or occasionally from some more distant relative. As we perceive children to resemble their parents in the features of their face, and in the disposition of their minds, so there can be no doubt but they also resemble them in the internal organization of the body, on the peculiar structure of which a predisposition to future disease must necessarily depend; and that children are, in fact, liable to the diseases of their parents, we have manifold and decisive proofs. How frequently do we see a person, at a certain time of life, so much resemble what a father was at the same period, that he seems to fill the identical place in society that the former occupied. In like manner, at certain periods of life, do children become liable to the diseases of their parents, and consumption, gout, or dropsy makes its appearance, the germs of which must have lain in the system from the earliest period of existence, although they did not disclose themselves till their due season. Not only do we see that children are peculiarly prone to the diseases of that parent to whom they bear the greatest personal similarity, but as we occasionally perceive the resemblance of some more remote ancestor break forth, as it were, in a family, so we shall find the constitution and diseases of that child differ from those of its immediate parents, and partake rather of the nature of the progenitor whom it most resembles.

These circumstances are thus particularly noted, because it is only in cases where the predisposition to this disease is suspected at a very early period of life, that the means of prevention can be employed with any reasonable prospect of success. For the same reason, also, I am desirous of attracting the attention to a point of similarity between parents and children which has not hitherto been sufficiently attended to. The form and structure of the nails of both extremities afford an excellent criterion to enable us to judge which of the parents the offspring most resembles in constitution. I have known the peculiar structure of a toe-nail designate certain individuals of a family for several successive generations. Although these parts of the human body do not make their appearance earlier than about the sixth month of the foetal age, they indicate very decidedly the predominant influence of the parent whom the child most resembles in constitution. It is also a curious fact that the horns of animals, which often do not appear till several months after birth, afford the best criterion for distinguishing the peculiar breed or race, to those who are conversant with such subjects.

But certain peculiarities in the structure of the nails afford also a strong indication of the propensity to phthisis. In forming an opinion concerning the probable future occurrence of this disease, the nails ought always to be carefully examined, and compared with those of the parents. If these parts of the body are large, of an oblong shape, of a smooth texture, and a pink colour, curling over the tips of the fingers, the last joint of which is commonly somewhat enlarged, there is much reason to suspect a phthisical tendency. If, moreover, we find a slender conformation of the body, fine skin and hair, a shrill voice easily rendered hoarse, hollowness of the temples, sound teeth, and an expanded pupil of the eye, there is little doubt but a person so constituted will, at some future period of life, become the victim of pulmonary consumption.

The aggregate of these appearances constitute what is termed delicacy of constitution. This habit of body is frequently accompanied by superior powers of mind. Individuals, indeed, who seem almost to approach the perfection of our species, are peculiarly marked as the victims of pulmonary consumptions. This fact not only furnishes a strong motive for endeavouring to prevent the first attack of affections of the lungs, but affords also some grounds to encourage the expectation of success. Soundness of teeth, a marked concomitant of the phthisical habit, is commonly considered as one of the surest signs of a sound constitution. A variety of examples might also be adduced of persons who, after having subdued, by regimen and medicine, phthisical symptoms with which they were threatened in their youth, have protracted existence to a very advanced period of life. As the propensity to this disease must necessarily be the result of a certain combination of habits, continued, perhaps, from one generation to another, combined with the peculiar circumstances in which the individual is placed, it is reasonable to suppose that, by altering the former, and counteracting the latter, the general constitution might be changed.

Pulmonary consumption is a disease almost peculiar to a certain zone of northern latitude, in which the British Isles are included. A little farther to the north, or to the south, the ravages of these complaints are comparatively trifling. The only natural cause to which this can with propriety be attributed, is the fluctuation of our atmospheric temperature between the confines of heat and cold. The increased frequency of pulmonic complaints, which has accompanied the more general diffusion of wealth, and consequent habits of luxurious living in this country, affords, I think, sufficient proof that tender and indulgent treatment is not the best means of obviating them. What are the classes of mankind most susceptible of, and most injured by the impressions of heat and cold? Precisely those who are least exposed to their influence. Sedentary artificers, who necessarily pass their days in close and heated chambers, are swept off in unaccountable numbers by pulmonary consumption; while sailors, ploughmen, butchers, and all persons whose occupations lead them to be much in the open air, enjoy a comparative immunity from the attack of this disease. Among the native inhabitants of America, Doctor Rush informs us, that pul-

monary consumption is unknown; but in proportion as they adopt the arts and manners of civilized life, do they become liable to the fatal influence of this complaint.

When a wealthy parent sees a delicate child shiver at the freshness of the breeze, a natural tenderness leads him to avert this unpleasant feeling by the means he can most readily command, close apartments and warm clothing. But he thus augments that very delicacy of constitution he should endeavour to counteract. The variations of atmospheric temperature are most sensibly felt by those who are cased in the thickest clothing; as plants reared in the hot-house are least able to bear the blasts of winter. Contrast the leaden-coloured visage, and the chillblain toes and fingers of the puny schoolboy, shivering and crawling along the street in a winter's day, with the appearance of the country lad of equal years employed all day in following the plough; the surface of his body, in place of being chilled by the cold, is roused to a state of increased vascular action, his countenance glows with the genuine hue of health, and his whole frame bespeaks elasticity and vigour.

Surely from this example we might be taught the most effectual method of averting delicacy of constitution, being careful to modify the means according to the object we have to operate upon. Let the child whose wealth can command, and whose future existence is of sufficient importance to justify such attention, reside in a part of the country where the soil is chalk or limestone, and the air pure. Let him be abroad all day, and during every kind of weather, provided he is employed in active exercise; let him be guarded against suddenly approaching, or sitting much over the fire, even in winter. Let the habit of retiring early to bed, and leaving it early in the morning, be strictly enforced. Let him wear no more clothes than are requisite to guard against cold, and plunge into the sea, or a river, for a moment, daily, during the three warmest months of summer. The phthisical habit is, in general, attended by a precocity of intellect, which it is of more importance to check than to encourage. In such instances the improvement of the mind should be considered as a secondary object, and may well be postponed till a certain share of robustness of constitution has been ensured. This kind of corporeal education is obviously incompatible with the usual discipline of schools, whether private or public, and can only be advisable where the importance of the object justifies the various sacrifices that must be made in order to attain it.

I very recently had occasion to see the success of this plan completely exemplified. Every possible attention was paid to the health of a delicate child by its anxious parents. He lived in spacious apartments in an open and airy part of London; was carried abroad several times every day when it did not rain; and the diet was regulated with every attention to propriety. Notwithstanding all this care the flesh of this child was flabby, he was averse to exercise, the belly became prominent, and the glands on each side of the neck were very considerably enlarged. In this state the child was removed the beginning of last summer to a dry and healthy situation in the neighbourhood of the sea. There it ran about and bathed along with other children of a similar age,

No particular attention was paid to dress or diet. In the course of a few months the tumid abdomen subsided, the swellings of the neck disappeared, the flesh became firm, and this child, whose life had been despaired of, and was sent from home as on a forlorn hope, returned vigorous, active, and healthy.

But precautions against this insidious disease are rarely had recourse to at so early a period of life. The buoyant spirits and active propensities of its destined victims rarely excite suspicion either in themselves or their friends of the approaching mischief. As the age of puberty approaches, other indications of the propensity to phthisis are developed. The narrow and elongated form of the chest becomes more apparent, and is chiefly indicated by the prominence of the shoulders, which stand out from it on each side somewhat like wings. A broad deep chest, the transverse section of which approaches the circle, affords the best criterion of a healthy and vigorous conformation of the body, not only in man but in all kinds of quadrupeds which are subservient to his wants. For the support of life it is necessary that nearly one half of the blood should circulate through the lungs in the same time that the remainder passes through the rest of the body. But if the lungs are prevented from expanding to their proper magnitude in consequence of being confined within the limits of a narrow thorax, their proper blood-vessels must be proportionally diminished in number as well as in dimensions, and on any sudden push of blood, their coats, already over-distended, must be prone to rupture. At this period of life, too, there is evidently an effort of the constitution endeavouring to expand every part to a state of full perfection. This is evinced by frequent discharges of blood from the nose. The vessels of that part readily heal, but an accident of the same kind taking place in the lungs, not unfrequently lays the foundation of consumption.

This temporary fulness of blood should be counteracted, by strictly adhering to a diet of the farinacea and ripe fruits. Animal food and fermented liquors ought to be rigidly prohibited. Even milk often proves too nutritious. Exercise should be regular but gentle. Sudden and violent exertions are extremely hazardous. Riding on horseback is preferable to any other kind of exercise. Such efforts of the voice as are required in singing or playing on any wind-instrument of music, frequently produce discharges of blood from the lungs; but the practice of reading or reciting for some time together in a moderate tone of voice, tends to strengthen these organs, and to diminish the danger of pulmonary hemorrhage from any sudden exertion.

During the circulation of the blood through the lungs, a principle necessary to the support of life is absorbed from the air; and various matters, the longer continuance of which in the body would be noxious, are also discharged in the form of vapour or gas. That there is, besides, no inconsiderable quantity of aqueous fluid secreted and discharged from the lungs, every person must be convinced, who has attended to the deposition of watery particles that takes place from the breath in a frosty day. Of the whole quantity of perspirable matter discharged from the surface of the body in any given portion of time, that exhaled from the surface of the

lungs may be estimated as amounting to one-third. The skin and the lungs being both secreting surfaces, must also be considered as organs mutually compensating or balancing each other. If the skin be suddenly chilled, a larger share of perspirable matter will endeavour to escape by the lungs, as being an internal, and therefore a warmer surface. It is not surprising that this effort should in a delicate organ be productive of derangement and disease, and accordingly we daily hear people dating their first attack of pulmonary complaints from sitting in a cold place after having been over-heated, from being thoroughly soaked with rain, or from cold-bathing in an improper state of the system.

The purpose of these observations is to enforce the propriety of maintaining cutaneous perspiration, and endeavouring to render the surface of the body less susceptible of atmospheric variations. In persons of a phthisical habit the skin is in general either dry and scabrous, or clammy, both of which conditions betoken deficient perspiration. The most effectual means of removing this morbid state of the surface of the body is the sedulous use of cutaneous friction. Why a practice, on which the ancient physicians placed so much dependence not only for the cure of many diseases, but in a pre-eminent manner for the preservation of health, should have in modern times fallen so completely into neglect, it is not perhaps easy to account; although at present nothing seems to be considered as medicine except what is taken into the stomach; as if the due regulation of air and exercise did not furnish means of recovery, at least as efficacious as drugs.

Cutaneous friction is most advantageously performed by means of a flesh-brush. To be of any essential use, this instrument ought to be of a much harder texture than those commonly offered for sale. The most favourable season for this practice is not immediately on getting out of bed. There exists a sensibility of the skin at that time which renders the application of the brush painful and unpleasant. After the customary diurnal evacuation of the bowels has taken place, the person should strip, and applying this instrument to various parts of the body in succession, commencing with the chest, continue the friction until an universal redness and glow takes place over the whole surface of the body. The temporary exposure of the naked body to the air of the chamber during this operation, accustoms the skin to a certain variety of temperature, while any danger of taking cold is completely obviated by the exercise, as a person ought always, if his strength permit, to rub himself. Though somewhat painful and irksome at first, this operation, like all the rest of our active habits, gradually becomes pleasant, and at length necessary, so that a person accustomed to it feels himself uncomfortable if he has omitted for a day his usual exercise.

From regularly persevering for some length of time in this practice I have observed a very obvious alteration produced in the texture of the skin. It appears to acquire thickness, and to become mellow and pliable, a condition very different from that of persons disposed to phthisis, whose skin is commonly thin and harsh. The muscles also seem to derive firmness from this practice. The brush will also be found daily to remove no small quantity of fur-

furaceous matter, which, whether it be inspissated perspiration adhering to the surface, or particles of decaying cuticle, is certainly better away. This practice also removes every kind of roughness and asperity from the surface of the skin, which becomes beautifully smooth and polished, so that even as a cosmetic, having no tendency to impair health, cutaneous friction may be advantageously employed. After exposure to wet, to strip and rub the surface of the body till it glows, is unquestionably the best means to prevent taking cold.

I do not presume so strenuously to recommend friction of the skin as a means of supporting the healthy action of the external surface of the body, and of promoting cutaneous perspiration, without having witnessed remarkable changes for the better produced in the constitution by adopting and persevering in this practice. Indeed I am disposed to attribute much of the benefit derived from exercise on horseback, as well as the good effects of a sea-voyage towards a mild climate, to the increase of perspiration produced by these modes of gestation.

Every person suspicious of predisposition to pulmonary consumption ought at all times, but especially in cold weather, to wear a quantity of woollen clothing sufficient to obviate any approach to the perception of chillness; independently however of the actual presence of obstinate hoarseness or cough, I am disposed to think that the requisite quantity of flannel is more advantageously worn over the usual shirt, than in immediate contact with the skin.

The possibility of communicating this disease by contagion is a point that has been much agitated. As a measure of precaution, the delicate ought to decide this question for themselves in the affirmative. Exhalation from the lungs is the mode by which infectious diseases are most generally propagated; and from analogy we might infer that air impregnated with the effluvia of these organs in a state of ulceration, would have a tendency to excite diseased action of a similar kind if received into the lungs of a person previously disposed to this complaint. I have seen more than one instance of a husband who appeared to have no previous disposition to consumption, being affected with a distressing cough, which continued to harass him for months while his wife was lingering under that disease. On one melancholy occasion I witnessed the successive deaths of three young ladies, two of whom, in my opinion, decidedly caught the disease in consequence of their sedulous attention, during the progress of the indisposition, to her who was first affected, who evidently was of a phthisical habit, which was not apparent in either of the others.

If the presence of the symptoms which have been already described as characterising this disease renders its existence no longer equivocal, the person so affected ought without delay to migrate towards a warmer climate. Should circumstances render this expedient impracticable, the next best plan a phthisical person can adopt is to remove into a low and rather damp situation. The fatal event of pulmonary consumption is uniformly accelerated by residing in an elevated region. There are even instances on record of phthisis making its appearance in families,

previously unaffected by it, on changing their place of residence from a level to a hilly country. While on the contrary the inhabitants of extensive districts in Lincolnshire and in Essex enjoy a complete immunity from this disease. In Holland, pulmonary consumption is a disease of comparatively rare occurrence. The same situations that predispose to ague are unfavourable to the attack of phthisis, as if these two states of the constitution were incompatible with each other. The physicians of ancient Rome were accustomed to send their consumptive patients to the low and marshy land of Egypt. Cicero, the celebrated orator, who, in his youth, was threatened with consumption, as the hollow temples and sharp features of his remaining busts abundantly testify, travelled into Egypt for the recovery of his health. In this country the choice of situation is not sufficiently attended to; although every practitioner of medicine must have remarked that even the soft breezes of Brompton and Chelsea have benefited invalids who were injured by the keener air of Highgate and Hampstead.*

In the incipient stages of phthisis pulmonalis the dry vomit taken in a morning, fasting, I have known occasionally to be of use. Keeping up a copious discharge from the surface of the chest by the savin ointment subsequent to the application of a blistering-plaster, sometimes appears to arrest the progress of the disease.

When symptoms of incipient phthisis have been accompanied by tumours commencing at the clavicle and extending upwards towards the ear, I have seen much benefit from the administration of calomel combined with steel.

When recovery is despaired of, a diet consisting of buttermilk and the lighter farinacea, prolongs existence, and mitigates the distress of the cough more effectually than the use of opium. From a medicine, which of late years has been much extolled, as diminishing the frequency of the pulse, (*digitalis*) I am sorry to say, I have seen no permanent benefit produced in this disease; and notwithstanding the boast of empiricism, a remedy that will heal ulceration or resolve tubercles, I believe yet remains to be discovered.

CHAP. XIV.

SMALL POX, (*Variola*.)

THIS disease, which originally came from Arabia, is, since the discovery of vaccination, not so general as heretofore; nor does it appear to be of so malignant a type. It is, nevertheless, a most contagious malady; and for many years proved the scourge of civilized as well as uncivilized nations. It generally makes its ap-

* In the islands of Guernsey and Jersey, where the climate is so loaded with moist ure, that common salt deliquesces if exposed to the air, I am informed that coughs are very rare, and pulmonary consumptions almost unknown. Of course these islands must be an excellent situation for persons of a phthisical temperament.