

It may be taken in the dose of fifteen or twenty drops, twice or thrice a-day, in a glass of wine or water. Habitual vomitings are sometimes alleviated by making oysters a principal part of diet.

A vomiting which proceeds from acidities in the stomach, is relieved by alkaline purges. The best medicine of this kind is the *magnesia alba*, a teaspoonful of which may be taken in a dish of tea, or a little milk, three or four times a-day, or oftener if necessary, to keep the body open, or any of the cretaceous mixtures recommended in diarrhœa.

When vomiting proceeds from violent passions, or affections of the mind, all evacuants must be carefully avoided, especially vomits. These are exceedingly dangerous. The patient in this case ought to be kept perfectly easy and quiet, to have the mind soothed, and to take some gentle cordial, as *negus*, or a little brandy and water, to which a few drops of *laudanum* may occasionally be added.

When vomiting proceeds from spasmodic affections of the stomach, musk, castor, and other antispasmodic medicines are of use. Warm and aromatic plasters have likewise a good effect. Aromatic medicines may likewise be taken inwardly, as cinnamon or mint-tea, wine with spiceries boiled in it, &c. The region of the stomach may be rubbed with æther, or if that cannot be had, with strong brandy, or other spirits. The belly should be fomented with warm water, or the patient immersed up to the breast in a warm bath.

I have always found the saline draughts, taken in the act of effervescence, of singular use in stopping a vomiting, from whatever cause it proceeded. These may be prepared by dissolving a drachm of the subcarbonate of potash, in an ounce and a half of fresh lemon-juice, and adding to it an ounce of peppermint-water, the same quantity of simple cinnamon-water, and a little white sugar. This draught must be swallowed before the effervescence is quite over, and may be repeated every two hours, or oftener, if the vomiting be violent. A violent vomiting has sometimes been stopped by cupping on the region of the stomach, after all other means had failed.

As the least motion will often bring on the vomiting again, even after it has been stopped, the patient must avoid all manner of action. The diet must be so regulated as to sit easy upon the stomach, and nothing should be taken that is hard of digestion. We do not, however, mean that the patient should live entirely upon slops. Solid food, in this case, often sits easier on the stomach than liquids.

CHAP. XXIV.

DIABETES, AND OTHER DISORDERS OF THE URINARY ORGANS.

THE diabetes is a frequent and excessive discharge of urine. It is seldom to be met with among young people: but often attacks persons in the decline of life, especially those who follow the more violent employments, or have been hard drinkers in their youth.

CAUSES.—A diabetes is often the consequence of acute diseases, as fevers, fluxes, &c., where the patient has suffered by excessive evacuations; it may also be occasioned by great fatigue, as riding long journeys upon a hard-trotting horse, carrying heavy burdens, running, &c. It may be brought on by hard drinking, or the use of strong stimulating diuretic medicines, as tincture of cantharides, spirits of turpentine, and such like. It is often the effect of drinking too great quantities of mineral waters. Many imagine that these will do them no service unless they be drank in great quantities, by which mistake it often happens that they occasion worse diseases than those they were intended to cure. In a word, this disease may either proceed from too great a laxity of the organs which secrete the urine, from something that stimulates the kidneys too much, or from a thin dissolved state of the blood, which makes too great a quantity of it run off by the urinary passages.

SYMPTOMS.—In a diabetes, the urine generally exceeds in quantity all the liquid food which the patient takes. It is thin and pale, of a sweetish taste, and an agreeable smell. The patient has a continual thirst, with some degree of fever; his mouth is dry, and he spits frequently a frothy spittle. The strength fails, the appetite decays, and the flesh wastes away till the patient is reduced to skin and bone. There is a heat of the bowels; and frequently the loins, testicles, and feet, are swelled.

It has been remarked, that diabetes is often preceded or accompanied with an affection of the lungs; and Dr. Bardsley informs us that he does not recollect an instance of the disease which was not attended with some affection of the chest.

This disease may generally be cured at the beginning: but after it has continued long, the cure becomes very difficult. In drunkards, and very old people, a perfect cure is not to be expected.

REGIMEN.—Every thing that stimulates the urinary passages, or tends to relax the habit, must be avoided. For this reason, the patient should live chiefly on solid food. His thirst may be quenched with acids; as sorrel, juice of lemon, or vinegar. The mucilaginous vegetables, as rice, sago, and salop, with milk, are the most proper food. Of animal substances, shell-fish are to be preferred; as oysters, crabs, &c.

The Bristol Hot-well waters, when drank at the fountain head, have long been celebrated for their good effects in this disease. When that cannot be obtained, lime-water, in which a due proportion of oak-bark has been macerated, may be used.

The patient ought daily to take exercise, but it should be so gentle as not to fatigue him. He should lie upon a hard bed or mattress. Nothing hurts the kidneys more than lying too soft. A warm dry air, the use of the flesh-brush, and every thing that promotes perspiration, is of service. For this reason, the patient ought to wear flannel next his skin. A large strengthening-plaster may be applied to the back; or, what will answer better, a great part of the body may be wrapped in plaster.

MEDICINE.—Gentle purges, if the patient be not too much weakened by the disease, have a good effect. They may consist of

rhubarb, with cardamom-seeds, or any other spiceries, infused in wine, and may be taken in such quantities as to keep the body gently open.

The patient must next have recourse to astringents and corroborants. Half a drachm of powder made of equal parts of alum and the inspissated juice, commonly called *Terra Japonica*, may be taken four times a-day, or oftener, if the stomach will bear it. The alum must first be melted in a crucible; afterwards they may both be pounded together. Along with every dose of this powder, the patient may take a tea-cupful of the tincture of roses.*

If the patient's stomach cannot bear the alum in substance, whey may be made of it, and taken in the dose of a tea-cupful three or four times a-day. The alum-whey is prepared by boiling two English quarts of milk over a slow fire, with three drachms of alum, till the curd separates.

Opiates are of service in this disease, even though the patient rests well. They take off spasm and irritation, and at the same time lessen the force of the circulation. Ten or twelve drops of liquid laudanum may be taken in a cup of the patient's drink three or four times a-day.

The best corroborants which we know, are the Peruvian bark and wine. A drachm of bark may be taken in a glass of red port or claret three times a-day. The medicine will be both more efficacious and less disagreeable, if fifteen or twenty drops of the acid elixir of vitriol be added to each dose. Such as cannot take the bark in substance, may use the decoction, mixed with an equal quantity of red wine, and sharpened as above.

There is a disease incident to labouring people in the decline of life, called an *INCONTINENCY of Urine*. But this is very different from a diabetes, as the water passes off involuntarily by drops, and does not exceed the usual quantity. This disease is rather troublesome than dangerous. It is owing to a relaxation of the sphincter of the bladder, and is often the effect of a palsy. Sometimes it proceeds from hurts, or injuries occasioned by blows, bruises, preternatural labours, &c. Sometimes it is the effect of a fever. It may likewise be occasioned by a long use of strong diuretics, or of stimulating medicines injected into the bladder.

This disease may be mitigated by the use of astringent and corroborating medicines, such as have been mentioned above; but we do not remember ever to have seen it cured.†

* See Appendix, *Tincture of Roses*.

† Dr. Ferriar informs us that he has cured three confirmed cases of this disease by a combination of cinchona, uva ursi, and opium, taken three times a-day, in the proportion of a scruple of each of the former to half a grain of the latter; and that, from the great success he had met with from this medicine, he found it unnecessary to try Dr. Rollo's plan, which is said to have performed a cure under very unpromising circumstances.

The indications to be attended to, Dr. Rollo supposes to be, to destroy the saccharine process going on in the stomach; to promote a healthy assimilation; to prevent a supposed increased absorption by the surface; to diminish the increased action; and to change the imagined derangement of the kidneys. To answer these indications, Dr. Rollo enjoins a diet consisting wholly of animal food, rigid abstinence from every kind of vegetable substance from which sugar may be produced. He likewise enjoins hepatized ammonia, and the subcarbonate of ammonia when this cannot be obtained; the skin to be anointed with prepared lard; exercise to be avoided; antimonial wine

In an incontinency of urine, from whatever cause, a piece of sponge ought to be worn, or a bladder applied in such a manner as to prevent the urine from galling and excoriating the parts.*

SUPPRESSION OF URINE.

It has already been observed, that a suppression of urine may proceed from various causes; as an inflammation of the kidneys, or bladder; small stones or gravel lodging in the urinary passages, hard *faeces* lying in the *rectum*, pregnancy, a spasm or contraction of the neck of the bladder, clotted blood in the bladder itself, a swelling of the hæmorrhoidal veins, &c.

Some of these cases require the catheter, both to remove the obstructing matter, and to draw off the urine; but as this instrument can only be managed with safety by persons skilled in surgery, we shall say nothing further of its use. A bougee may be used by any cautious hand, and will often succeed better than the catheter.

We would chiefly recommend, in all obstructions of urine, fomentations and evacuants. Bleeding, as far as the patient's strength will permit, is necessary, especially where there are symptoms of topical inflammation. Bleeding in this case not only abates the fever, by lessening the force of the circulation, but, by relaxing the solids, it takes off the spasm or stricture upon the vessels, which occasioned the obstruction.

After bleeding, fomentations must be used. These may either consist of warm water alone, or of decoctions of mild vegetables; as mallows, camomile flowers, &c. Cloths dipped in these may either be applied to the part affected, or a large bladder filled with the decoction may be kept continually upon it. Some put the herbs themselves into a flannel bag, and apply them to the part, which is far from being a bad method. These continue longer warm than cloths dipped in the decoction, and at the same time keep the part equally moist.

In all obstructions of urine the body ought to be kept open. This is not, however, to be attempted by strong purgatives, but by emollient clysters, or gentle infusions of senna and manna. Clysters in this case not only open the body, but answer the purpose of an internal fomentation, and greatly assist in removing the spasms of the bladder and parts adjacent.

The food must be light, and taken in small quantities. The drink may be weak broth, or decoctions and infusions of mucilaginous vegetables, as marsh-mallow roots, lime-tree buds, &c. A teaspoonful of the sweet spirits of nitre, or a drachm of Castile

with opium to be taken at night; an ulceration of about the size of a half-crown to be kept open opposite each kidney; and the bowels to be kept open by aloes and soap.

At first Dr. Rollo was in the habit of using the sulphuret of potash; for which, however, he was induced to substitute the hepatized ammonia, under the supposition that the alkali of the former had an improper effect on the kidneys: e. g.

Take Sulphuret of Potash, 10 grs.

Confection of Roses, q. s.

To be made into a bolus, to be taken

three times a-day.

or

Take Sulphuret of Potash, 10 grs.

Mint Water, 1½ oz.

Syrup of Ginger, 1 drm.

Make a draught to be taken three times

a-day. Ed.

* A bottle made of the India rubber, and properly applied, answers this purpose best

soap, may be frequently put into the patient's drink ; and, if there be no inflammation, he may drink small gin-punch.

Persons subject to a suppression of urine ought to live very temperate. Their diet should be light, and their liquor diluting. They should avoid all acid and austere wines, should take sufficient exercise, lie hard, and avoid study and sedentary occupations.*

GRAVEL AND STONE. (*Lithiasis.*)

These diseases are the consequence of a peculiar disposition of the fluids, and more particularly the secretion of the kidneys to form a calculous matter, and have been supposed to be owing to the presence of an acid principle in them, called the uric acid ; an opinion which seems to be confirmed by the benefit derived from a course of alkaline medicines.

When small stones are lodged in the kidneys, or discharged along with the urine, the patient is said to be afflicted with the gravel. If one of these stones happen to make a lodgment in the bladder for some time, it accumulates fresh matter, and at length becomes too large to pass off with the urine. In this case the patient is said to have the stone.

CAUSES.—The stone and gravel may be occasioned by high living ; the use of astringent wines ; a sedentary life : lying too hot, soft, or too much on the back ; the constant use of water impregnated with earthy or stony particles ; aliments of an astringent or windy nature, &c. It may likewise proceed from an hereditary disposition. Persons in the decline of life, and those who have been much afflicted with the gout or rheumatism, are most liable to it.

SYMPTOMS.—Small stones or gravel in the kidneys occasion fixed pain in the loins, sickness, vomiting, and sometimes bloody urine, and not unfrequently with a slight suppression of urine. When the stone descends into the *ureter*, and is too large to pass along with ease, all the above symptoms are increased ; the pain extends towards the bladder ; the thigh and leg of the affected side are benumbed ; the testicles are drawn upwards, and the urine is obstructed.

A stone in the bladder is known from the pain at the time, as well as before and after making water ; from the frequent inclination to void the urine ; from the urine coming away by drops, or stopping suddenly when it was running in a full stream ; by a violent pain in the neck of the bladder upon motion, especially on horseback, or in a carriage on a rough road ; or from a white, thick, copious, stinking, mucous sediment in the urine ; from an itching at the top of the *penis* ; from bloody urine ; from an inclination to go to stool during the discharge of urine ; from the

* Rubbing the abdomen and inside of the thighs with the volatile liniment, composed of equal parts of spirits of hartshorn and oil, will sometimes relieve a suppression of urine ; or ten drops of the tincture of the muriate of iron, given every ten minutes, in a wine-glassful of water, will frequently produce the same effect, if the suppression be a consequence of spasm of the neck of the bladder. ED.

patient's passing his urine more easily when lying than in an erect posture; from a kind of convulsive motion occasioned by the sharp pain in discharging the last drops of the urine; and lastly, from sounding or searching with the sound, which is the only symptom to be depended upon.

When gravel has once formed in the pelvis of the kidneys, or elsewhere, it continues to increase by receiving on its surface new layers of uric acid successively precipitated, of which any one may be convinced by cutting the concretions transversely, which enables us to perceive that they are almost entirely composed of concentric layers.

REGIMEN.—Persons afflicted with the gravel or stone should avoid aliments of a windy or heating nature, as salt meats, sour fruits, &c. Their diet ought chiefly to consist of such things as tend to promote the secretion of urine, and to keep the body open. Artichokes, asparagus, spinnage, lettuce, parsley, succory, purslane, turnips, potatoes, carrots, and radishes, may be safely eaten. Onions, leeks, and celery are, in this case, reckoned medicinal. The most proper drinks are whey, butter-milk, milk and water, barley-water; decoctions or infusions of the roots of marsh-mallows, parsley, liquorice, or of other mild mucilaginous vegetables, as linseed, lime-tree buds or leaves, &c. If the patient has been accustomed to generous liquors, he may drink gin and water not too strong.

Gentle exercise is proper; but violent motion is apt to occasion bloody urine. We would, therefore, advise that it should be taken in moderation. Persons afflicted with the gravel often pass a great number of stones after riding on horseback, or in a carriage; but those who have a stone in the bladder are seldom able to bear these kinds of exercise. Where there is a hereditary tendency to this disease, a sedentary life ought never to be indulged. Were people careful, upon the first symptoms of gravel, to observe a proper regimen of diet and to take sufficient exercise, it might often be carried off, or at least prevented from increasing; but if the same course which occasioned the disease is persisted in, it must be aggravated.

MEDICINE.—In what is called a fit of the gravel, which is commonly occasioned by a stone sticking in the *ureter*, or some part of the urinary passages, the patient must be bled; warm fomentations should likewise be applied to the part affected, emollient clysters administered, and diluting mucilaginous liquors drank, &c. The treatment of this case has been fully pointed out under the articles *Inflammation of the Kidneys and Bladder*, to which we refer.

When the preference is given to a palliative mode of treatment of stone in the bladder, in males, instead of resorting to the operation of lithotomy, lithontriptics, which retard or prevent the farther accumulation of calculous matter, may be had recourse to, for example, the fixed alkali, which is not only the most powerful, but

the one most generally employed, and which may be used both in its caustic* and mild state.†

The aerated potash is a preparation somewhat similar in its nature to the aerated alkaline water, and is now used at St. Bartholomew's hospital, and given in the dose of two drachms dissolved in a pint of distilled water, twice a-day. It consists of half an ounce of the subcarbonate of potash, five drachms of distilled water, and one drachm of subcarbonate of ammonia. The potash being dissolved in a water-bath, the ammonia is to be added; and when the effervescence is at an end, the mixture is set aside to chrystallize.

Dr. Whyte advises patients who are subject to frequent fits of gravel in the kidneys, but have no stone in the bladder, to drink every morning, two or three hours before breakfast, an English pint of oyster or cockle-shell lime-water. The Doctor very justly observes that though this quantity might be too small to have any sensible effect in dissolving a stone in the bladder, yet it may very probably prevent its growth.

When a stone is formed in the bladder, the Doctor recommends Spanish soap,‡ and oyster or cockle-shell lime-water, to be taken in the following manner: the patient must swallow every day, in any form that is least disagreeable, an ounce of the internal part of Alicant soap, and drink three or four English pints of oyster or cockle-shell lime-water: the soap is to be divided into three doses; the largest to be taken fasting in the morning early, the second at noon, and the third at seven in the evening, drinking above each dose a large draught of the lime-water, the remainder of which he may take any time betwixt dinner and supper, instead of other liquors.

The patient should begin with a smaller quantity of the lime-water and soap than that mentioned above; at first an English pint of the former, and three drachms of the latter, may be taken daily. This quantity, however, he may increase by degrees, and ought to persevere in the use of these medicines, especially if he finds any abatement of his complaints, for several months; nay, if the stone be very large, for years. It may likewise be proper for the patient, if he be severely pained, not only to begin with the soap and lime-water in small quantities, but to take the second or third lime-water instead of the first. However, after he has been for some time accustomed to these medicines, he may not only take the first water, but if he finds he can easily bear it, heighten its dissolving power still more by pouring it a second time on fresh calcined shells.

Though the caustic alkali and soap-lees, and lime-water, are the most powerful medicines which have hitherto been discovered for the stone, yet there are some things of a more simple nature, which

* Take Solution of Potash, 20 to 30 drops, three times a-day, in a tea-cupful of veal broth, gradually increasing the dose.

Take Lime Water, 1 pint a-day, mixed with milk.

or
Take Soda Water, $\frac{1}{2}$ pint, two or three times a-day.

† Take Carbonate of Soda, from 1 scruple to half a drachm three times a-day.

‡ Take Soap Pills, ten grains, for a dose morning and night.

in certain cases are found to be beneficial, and therefore deserve a trial. An infusion of the seeds of *daucus sylvestris*, or wild carrot, sweetened with honey, has been found to give considerable ease in cases where the stomach could not bear any thing of an acrid nature. A decoction of raw coffee-berries taken morning and evening, to the quantity of eight or ten ounces, with ten drops of sweet spirit of nitre, has likewise been found very efficacious in bringing away large quantities of earthy matter in flakes. Honey is likewise found to be of considerable service, and may be taken in gruel, or in any other form that is more agreeable.

It is the opinion of Dr. Duncan that a solution of the subcarbonate of soda in pure water (in the proportion of a scruple to a pint) is preferable to the aerated soda water, on account of the carbonic acid gas not being disengaged on exposure to the atmosphere. On the addition of a small quantity of lemon-juice, or acid of tartar, a very agreeable effervescence is produced. The carbonate of soda, by being combined with an excess of carbonic acid gas in this preparation, is rendered not only more pleasant to the taste, but less liable to offend the stomach; and Dr. Duncan is of opinion that it is the only form in which the soda can be exhibited in sufficient doses, and for a length of time, so as to derive any benefit from its use.

Muriatic acid (particularly in what is called the phosphatic* diathesis) given in doses of twenty or thirty drops, three or four times a-day, diluted with water, has been found, in several cases where gravel was expelled from the bladder, to afford considerable benefit, and to appease the pain in micturition; and is found, moreover, to be a powerful lithontriptic.

The only other medicine which we shall mention is the *uva ursi*. It has been greatly extolled of late, both for the gravel and stone. It seems, however, to be in all respects inferior to the soap and lime-water; but it is less disagreeable, and has frequently, to my knowledge, relieved gravelly complaints. It is generally taken in powder, from half a drachm to a whole drachm, two or three times a-day. It may, however, be taken to the quantity of seven or eight drachms a-day, with great safety and good effect.

The consistence of such stones varies so much, that there is reason to fear no medicine will ever be found sufficiently strong to dissolve the hardest of them, without destroying the bladder. Yet experiments on this subject ought not to be discontinued, as the object is great, and some hard substances are known to be soluble in seemingly mild ones.

I have known several instances where stones, after getting into the urethra, were brought away by means of a bent probe, but how to get them there is the difficulty. It can only happen while they are small, though I have seen flattish stones brought away in this manner, which measured two inches round. I have sometimes thought that riding on a hard-trotting horse, or in a carriage on a rough road, might tend to bring down a small stone.

Most people troubled with the stone are guilty of one great

* For an account of four species of calculus noticed by Dr. Wellaston and Dr. G. Pearson, see Medical and Chirurgical Review, Vol. iv. p. 486. Vol. v. p. 306. Ep.

error; they put off the operation too long. When it is certainly known that there is a stone in the bladder, and that it is too large to get along the urethra, no time ought to be lost in having it cut out, before the patient's habit becomes too irritable, or the stone is so far increased in size, that it cannot be extracted without a laceration of the parts.*

CHAP. XXV.

INVOLUNTARY DISCHARGES OF BLOOD.

(*Hæmorrhagiæ.*)

SPONTANEOUS or involuntary discharges of blood often happen from various parts of the body. These, however, are so far from being always dangerous, that they often prove salutary. When such discharges are critical, which is frequently the case in fevers, they ought not to be stopped. Nor, indeed, is it proper, at any time, to stop them, unless they be so great as to endanger the patient's life. Most people, afraid of the smallest discharge of blood from any part of the body, fly immediately to the use of styptic and astringent medicines, by which means an inflammation of the brain, or some other fatal disease, is occasioned, which, had the discharge been allowed to go on, might have been prevented.

Periodical discharges of blood, from whatever part of the body they proceed, must not be stopped. They are always the efforts of Nature to relieve herself; and fatal diseases have often been the consequence of obstructing them. It may, indeed, be sometimes necessary to check the violence of such discharges; but even this requires the greatest caution. Instances might be given where the stopping of a small periodical flux of blood from one of the fingers has proved fatal to the health.

In the early period of life, bleeding at the nose is very common. Those who are farther advanced in years are more liable to hæmoptoe, or discharge of blood from the lungs. After the middle period of life, hæmorrhoidal fluxes are most common, and, in the decline of life, discharges of blood from the urinary passages.

Involuntary fluxes of blood may proceed from very different, and often from quite opposite causes. Sometimes they are owing to a particular construction of the body, as a sanguine temperament, laxity of the vessels, plethoric habit, &c. At other times they proceed from a determination of the blood towards one particular part, as the head, the hæmorrhoidal veins, &c. They may likewise proceed from an inflammatory disposition of the blood, in which case there is generally some degree of fever: this likewise happens when the flux is occasioned by an obstructed perspiration, or a stricture upon the skin, the bowels, or any particular part of the system.

But a dissolved state of the blood will likewise occasion hæmor-

* A tea-spoonful of pure magnesia taken two or three times a-day has of late been discovered to be a most effectual preventive of the gravel and stone, and is of service where alkalia fail to relieve the increased secretion of uric acid, and to prevent its forming calculi in the kidneys; it also agrees better with the stomach.