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[John Anderson].**

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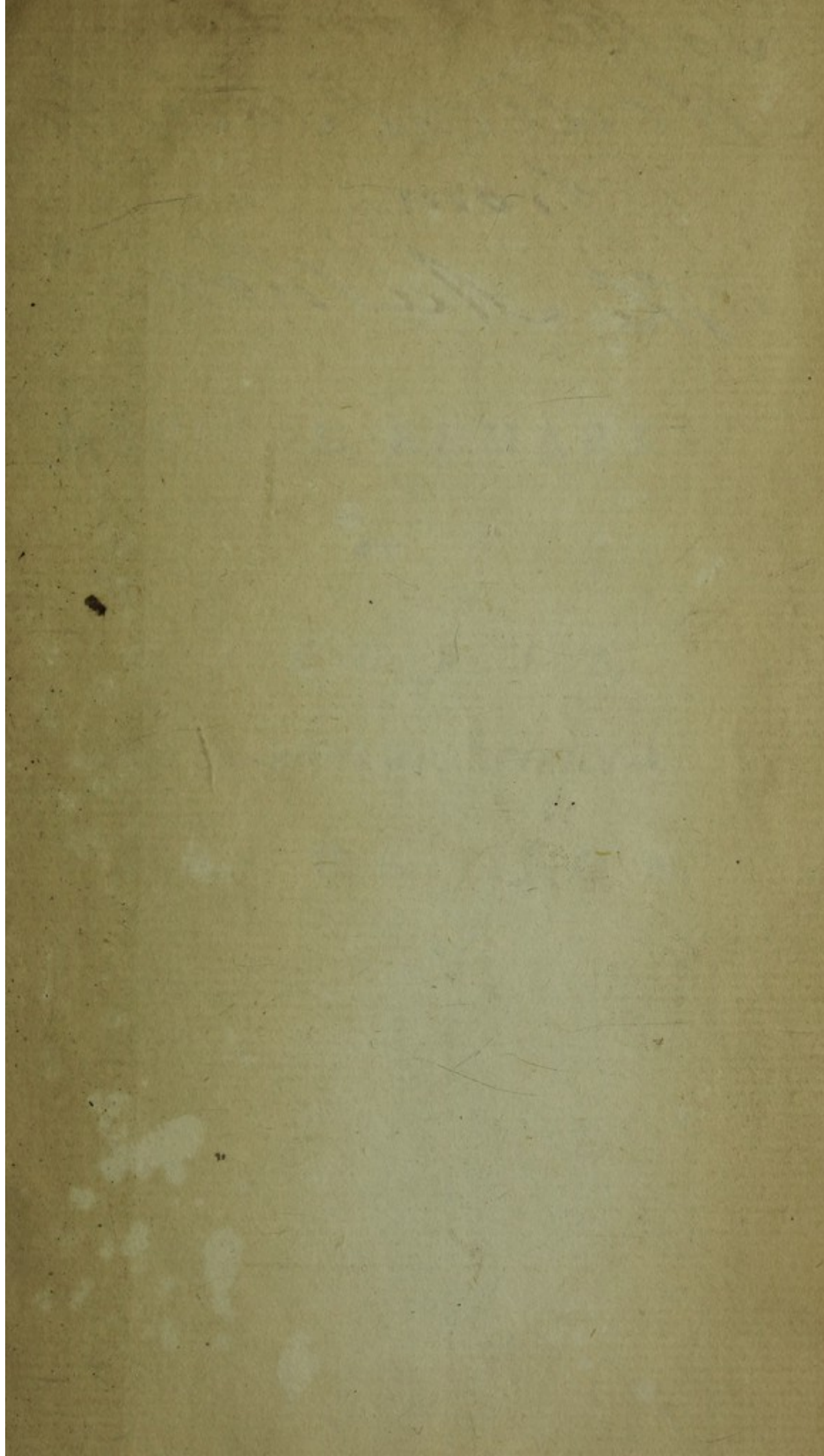
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from
The Author.

MEDICAL REMARKS

ON

N A T U R A L,

SPONTANEOUS and ARTIFICIAL

E V A C U A T I O N.

MEDICAL REMARKS

ON

MEDICAL REMARKS

EVALUATION

ON

JOHN ANDERSON

EVALUATION

THE SECOND EDITION

LONDON

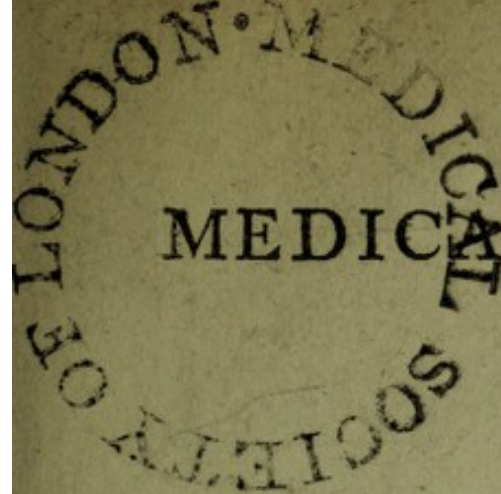
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J. JOHNSON, ST. PAUL'S CHURCH-YARD

MDCCLXXIII



MEDICAL REMARKS

ON

N A T U R A L,

SPONTANEOUS *and* ARTIFICIAL

E V A C U A T I O N.

B Y

J O H N A N D E R S O N,

M. D. F. S. A.

THE SECOND EDITION.

L O N D O N:

PRINTED FOR THE AUTHOR,
AND SOLD BY J. MURRAY, FLEET-STREET;

AND

J. JOHNSON, ST. PAUL'S CHURCH-YARD.

M D C C L X X X V I I I.

TO
the WORSHIPFUL the
B A I L I F F S,
H I G H - S T E W A R D,
R E C O R D E R,

A N D

The other Members of the Corporation

O F

KINGSTON UPON THAMES,

this HUMBLE IMITATION of

Their exemplary Zeal

to promote the Happiness of Mankind,

I S,

with *all due Gratitude* for

he indulgent Partiality with which They have
ever been pleased to honour him,

most respectfully inscribed by

Their very much obliged, and
devoted humble Servant,

23 May, 1787. JOHN ANDERSON.

P R E F A C E

THOUGH Artificial Evacuation
 be, in many cases, necessary to pre-
 vent disease; for, to precede the use of
 other remedies, for a successful cure;
 yet a too general and unphilosophical
 with that practice is highly improper;
 and it is well known, that some, by car-
 tionally endeavouring to avoid this error,
 have run into the contrary, which is no
 less prejudicial. We therefore hope that
 the observations contained in the follow-
 ing pages, will prevent the abuse
 and improve the use of EVACUANTS,
 and thus promoting the most beneficial
 purposes of the benevolent part of the
 FACULTY, may not be thought entire-
 ly unworthy of their attention in par-
 ticular, and that of the Public in general;
 for every thing here advanced is deduced
 from observation and experience.

Upon

P R E F A C E.

THOUGH Artificial Evacuation be, in many cases, necessary to prevent disease; or, to precede the use of other remedies, for a successful cure; yet a too general and implicit compliance with that practice is highly improper: and it is well known, that some, by cautiously endeavouring to avoid this error, have run into the contrary, which is no less prejudicial. We therefore hope that the observations contained in the following pages, for PREVENTING the ABUSE and IMPROVING the USE of EVACUANTS, and thus promoting the most beneficial purposes of the benevolent part of the FACULTY, may not be thought entirely unworthy of THEIR ATTENTION in particular, and that of the PUBLIC in general; for every thing here advanced is deduced from observation and experience.

Upon

Upon the same principle for which the liberal Literati of all ages have commended those who hazard a supposed claim to the good opinion of the Public ... the principle of being useful to society and to themselves ... the Author of this Essay now hazards that reputation, which has hitherto been confined to the sphere of his practice : and, as health and longevity are blessings to which we are permitted to lay a claim, he therefore presumes to think that this attempt to render the attainment of those blessings more certain, and as easy as we can, will be favoured with the indulgence of his Readers, and gratify his ambition to be honoured with their esteem.

Kingston, 23d May, 1787.

THE Author has now the happiness to acknowledge, that the expectations of his most sanguine hopes have been exceeded

ceeded by the very uncommon portion he has received of public praise; from the Faculty, the Medical and Philosophical Societies, in particular; and from many of the most Learned, Inquisitive and Reflective among Society at large.

With this encouragement, the Author has revised and enlarged this still little work, by the most respectful attention to every friendly observation on the former Edition; and by corroborating the whole with an addition to the evidence of well known practical facts.

As some suggestions have occasioned doubts about the particular School, or Theory, to which the Author may seem to be attached by his observations; he begs leave to remark, that, as he received the rudiments of his education in some of the most eminent Schools in Europe, he hopes he may be so far grateful to all, as to acknowledge, he flatters himself he has received so much instruction from each, as to have no particular dislike

like to the theories of either; nor a flavish adherence to the dogmas of any theories whatever. Reason has directed that practice which the Experience here alluded to has successfully confirmed*.—On the whole, he may justly say, as Candour, he hopes, will now admit, he has been guided by that immortal ornament of the human species, that universal genius, VERULAM; who, in his beautiful Essay on Study, gives this most excellent advice: “Read
“not to contradict and confute; nor
“to believe and take for granted; nor
“to find talk and discourse; but—to
“weigh and consider.”

Margate, 23d April, 1788.

* Verum est ad ipsam curandi rationem nihil plus conferre quam experientiam. CELSUS.

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On Evacuation

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MEDICAL REMARKS.

C H A P. I.

On Evacuation in general.

THE indication to evacuation of any kind, implies a necessity of removing something that exists in the habit, which, by its quantity or quality, is, or may become, prejudicial to health. It is not, however, the mere evacuation, but the action of the specific stimulus on the excretory organs which promotes it, that gives partial or universal sympathy, encreases secretion, excretion and absorption, and thereby restores the oscillatory motion of the fibrous system.

Medicines, whether applied externally or internally, act primarily by organical motion ; and then on the fluids in a ratio proportionate to the texture and velocity of the blood, the temper of the solids, and the natural inherent power of the medicine in its peculiar sphere of action.

2 *MEDICAL REMARKS.*

It is difficult to explain the *modus operandi*, and specific action of a medicine or natural substance, on moveable matter, without having recourse to the various but uniform laws of attraction and repulsion ; from which is derived cohesion, expansion, nutrition, digestion, secretion, excretion, fermentation, rarification, and solution of animal, vegetable, and mineral bodies, and all chemical operations whatever, so far as their effects and motion extend.

For exciting evacuations, the learned and attentive Proficient will not only adapt the kind of stimulus, and quantity of the evacuation, to the sex, age, temperament and constitution of his patient, but also to the season of the climate in which he prescribes. I have seen ten grains of ipecacuanha operate as forcibly in summer on a patient at Gibraltar in the latitude thirty-six degrees, as thirty did on the same habit in winter at Edinburgh in the latitude fifty-seven degrees *.

* “ *Differunt pro natura locorum, genera medicinæ ; & aliud opus esse Romæ, aliud in Egypto, aliud in Gallia.*” Celsus.

The mode of living has also its particular effects. The seafaring man, who is accustomed to live on saline, hard, and flatulent food, is not easily moved: and the rustic may live on milk, till the intestines can scarcely feel the effect of any stimulant*.

The remarkable peculiarities of different constitutions, the accidents of life and their effects, are likewise so many and so various as totally to preclude a possibility of reducing them to any established rule: and it is so obvious to every one, that it seems almost superfluous to observe on, the necessity of being well acquainted with the particular virtues, and different effects, of the same medicine in its various preparations.—
Asarum, an emetic in its primary influence on the stomach, becomes a diuretic when taken in a weak decoction; ipecacuanha, by

* “ Les montagnards qui ne vivent presque que de lait, ont des fibres si peu sensibles, qu’il faut pour les purger, des doses qui tueroient tous les payfans de la plaine. Il y a dans les montagnes du Valais, des hommes qui prennent tout à la fois jusqu’à vingt, & même vingt quatre grains de verre d’antimoine, dont un grain ou deux suffiroient pour empoisonner des personnes ordinaires.” Tissot, Avis au Peuple. Des Purgations, sect. 551, p. 519.

4 *MEDICAL REMARKS.*

strong decoction, loses its emetic, but retains its diuretic quality: nicotiana, by boiling, loses much of its acrimonious emetic quality; and therefore it is, that, in the syrup, we have a safe purgative, diuretic and pectoral medicine. Its narcotic quality is retained. Jalap, by coction, loses much of its virulent inflaming acrimony, but retains its purgative quality. Between the raw and roasted, or boiled onion, there is also much difference: in its raw state it is hot, acrimonious, stimulating and expectorant; but, when boiled or roasted, it is remarkably mild, cooling, nutritious, demulcent, aperient, diuretic and somniferous. Senna, on the contrary, by boiling, becomes drastic: the infusion is much milder. By distillation, flammula, crow-foot, smallage, are deprived of their vesicatory property: citron loses its acidity; water-pepper, its acrimony; and that bitter plant, wormwood, becomes sweet. Antimonial wine, when taken in sufficient quantity, vomits, and that powerfully: diaphoretic antimony only sweats, and that but gently; and yet both are insipid to the taste. In the selection of drugs, we must not only attend to the apparent discrimination

tion of their native excellence, but to the place where they grew and the time they have been gathered. To obtain the intended benefit of these, we must attend to the operations of nature, and carefully avoid an abrupt obtrusion when she means to be her own physician; lest, instead of assisting, we drive her into confusion, perplexity and embarrassment. We, however, must be equally cautious of not depending on her for too much; for, in the catalogue of human miseries, there are some diseases that will not bear to be trifled with, or for a moment neglected; pleurisy, phthisis, lues-venerea, scrofula, leprosy, scurvy, cancer, yaws, could never be cured by the mere efforts of nature, which the stroke of an apoplexy would instantly subdue, if these efforts of nature were not instantly assisted by the efforts of art. It therefore is obvious, that great efforts of judgment are frequently wanted to select and apply such assistance as hath been given us for the preservation of health; and more especially so in determining the proper evacuations, on which that event of successful practice so exceedingly much depends. But, in determining

on those proper evacuations, it is to be cautiously observed, that the natural powers of action must never be brought so low as not to be capable of some resistance to the approaches of disease.

It has often been questioned, whether medicines are possessed of specific elective attraction. Though we cannot affirm, from demonstrative proof, that they select or act on the morbid particles only, yet we observe that all simples have a power of acting, more or less, upon this or that organ, and of accelerating the motion of the fluids through their emissary vessels; and of inviting an influx of other fluids from remote parts to be discharged along with them. Thus, rhubarb, cellery, asparagus, onions, nutmeg, mace, turpentine, cantharides, act, as it were, specifically and uniformly on the renal organs; ipecacuanha on the stomach; jalap on the intestines; mercury on the salival; and antimony on the miliary glands; as if there were specific alliances between certain medicinal substances and secreting organs, which never deviate, unless, when, by accident or management, they are made to exert their force indirectly by other secretions.

tions. For this reason it is, that medicines have not been arranged according to their sensible or secondary qualities, but according to their operative powers. All bitters, for example, do not act alike; some being emetic, some cathartic, and some stomachic. Diseases have but little to do with sensible qualities. Though each simple possesses a power peculiarly inherent in itself, yet that is not to be explained upon mechanical or numerical principles.

Artificial evacuations, if not very soon successful, become prejudicial. Cathartics, and indeed all other medicines, have most effect on their first exhibition; but, by becoming familiar, the habit will require a gradual increase of the dose to maintain, as at first, their effect; or, sometimes, to refrain from taking them at all; which is almost equal to a change of the medicine, or an increase of the dose: from whence it is evident, that no medicine should be too frequently used, even in the smallest dose, lest it should pall the stomach, vitiate the nutrimental juices, defile the blood, induce debility, and increase the disease, it, by this means, perhaps, is deprived of power to cure. There
is

is nothing worthy the name of medicine that is not capable of doing harm, and which also often does, when rashly and indiscriminately used upon empirical, rather than upon rational dogmatical principles.

C H A P. II.

On Evacuation by the Stomach.

THE preternatural motion of vomiting may be variously excited.

First, *symptomatically*; when, on receiving contagious infection, the stomach is early affected by nausea, and even vomiting.

In petechial, or purple spotted fevers, immediately before the eruption, this nauseating symptom is common; but it ceases when the pustules appear, though it returns when they recede.

Immediately before the paroxysm of remitting, intermitting and putrid malignant fevers, spasms in the primæ viæ are accompanied by vomiting of bilious fœces. But, as this is an effort of nature to throw off the noxious particles, it ought to be assisted.

On

On an approaching fit of the gout, patients, in general, nauseate and loath their food; some are so sick as to vomit, especially in a morning before breakfast.

The black bile discharged from the stomach, as in the morbus niger of Hippocrates, is an evident symptom of the depraved state of the blood and bile.

The puking of infants is, for the most part, occasioned by sweetmeats, by acceſſent food, or by a repletion of the milk on the stomach becoming acid and offensive; when nature, by this simple effort, gets rid of the noxious aliment, which, if distributed thro' the circulating fluids, would pervert her operations and prejudice the constitution. This effort is best assisted by small quantities of ipecacuanha wine; for that strengthens the stomach and intestines, which might lose their proper tone if the puking continued; and dangerous symptoms, such as nervous spasms or convulsions, diarrhœa, or hectic, would ensue.

If the stomach be furcharged with indigestible matter, the process of digestion is rendered slow, laborious and painful; and the chyle produced is crude, and unfit for
assimilating

affimilating with the blood. The most innocent meal, if permitted to lie long on the stomach, turns to acid, acrid, or bitter recrement, which occasions nausea and offensive eructations, and a troublesome sense of fullness indicating the necessity of a gentle emetic.

When adults vomit spontaneously, it is necessary to explore and find out the primary inciting cause before any attempt is made to repress or encourage it. For instance, if in the irritable nervous hysteric patient, it is suddenly repressed by opium or astringents, anxiety, oppression, convulsions of the limbs, will come on, and the sickness return with greater violence.

If the emotion should happen to be occasioned by a discharge of the catamenia from the mouth, to stop it hastily would pervert nature, and check her salutary design; perhaps throw it on the brain; and, as I have several times seen, produce mania. But in hæmoptysis, or casting up of blood, attended with inflammation or fever, the stimulus of an emetic would only enrage the symptoms, which refrigerants and cooling restringents might diminish.

On

On the proper tone, contractile power and warmth of the stomach, depend the harmony and energy of the system : atony, weakness and frigidity, produce its discord. As the stomach is the primary seat and center of many of the motions in remote parts of the system, it consequently should be the first part attended to. The matter ejected from it determines the practice ; and may also, in a great measure, predict the event.

2. *Sympathetically.* A remarkable sympathy is maintained between the stomach and brain. If the stomach is surcharged, the head is disordered also ; and, if the brain be injured, nausea and vomiting immediately succeed. There is also a great sympathy between the brain and the heart : the energy of the one depends upon the propelling force of the other.

Sympathetic vomiting in the first months of conception, is occasioned by a regurgitation of the blood to the superior parts from the retained menses. Venæsection, rest and tranquillity subdue it ; it however, may be necessary to add the assistance of some spoonfuls of barley-cinnamon-water, spearmint tea, or saline julep, with some extract.

cicutæ.

cicutæ. Cold spring-water is the best drink. For the same reason, similar nauseating symptoms afflict those who have no menstrual discharge; and that particularly after eating or drinking.

Sympathetic vomiting is also occasioned by stone in the pelvis of the kidneys, or in the gall-bladder, which is quieted by sedatives and antispasmodics. Though the action of an emetic sometimes impels forward biliary stones and gravelly matter into the intestinum duodenum; and, sometimes, from the pelvis of the kidneys, into the vesica urinaria; yet, if it propels them no farther than the biliary ducts or the ureters, a jaundice will proceed from the one, and suppression of urine from the other. Cholic, iliac passion, and spasms in the viscera, will also occasion a sympathetic vomiting.

Sudden surprises, or violent emotions, whether by joy or grief, have great effect upon the stomach, digestions, excretory organs, and nervous system; as is evident by the nausea, deliquium animi, cold partial sweats, tremor, debility, that so frequently affects the delicate, feeble, irritable habit.

The

The vertiginous motion of sea-sickness occasions nausea and vomiting; on which occasions the remarkable discharge of bile from the mouth, demonstrates how greatly the biliary organs are operated upon, and thereby points out the efficacy of the stimulating emetic in biliary obstructions from crude viscid bile.

3. *Antipathetically.* The antipathy, or aversion, that some persons have inherently to certain things, is so great as to make them swoon, vomit or purge, at the sight or even smell of the thing that is abhorred. Whatever is disgusting to the sight, offensive to the smell, or nauseous to the taste, raises abhorrence, and excites vomiting.

4. *Critically.* If vomiting be critical, it becomes a cure of the reigning disorder, by anticipating it in the beginning, or by separating the noxious parts from the purer juices in the advanced stage. An imperfect crisis leaves so much of the morbid principle in the habit, as is with great difficulty, if ever, overcome.

5. *Artificially.* The artificial emetic is an excellent imitation of the critical spontaneous vomit; and often produces the most

important effects. The emetic not only cleanses the stomach of crude indigestible matter, but sympathetically influences the remotest parts of the system to a discharge of their contents, and thereby purifies the body of morbid or noxious particles. Nothing, therefore, is so effectual as the emetic for relieving a cough, or difficult respiration; for it opens obstructed secretions, promotes expectoration, encreases transpiration, and takes off the oppletion, or fulness, from the vesicles of the lungs, head, faucial, and miliar glands; and thereby admits of a free and regular circulation through the extreme capillary vessels.

Ipecacuanha and antimony are the first of the vegetable and mineral emetics. Ipecacuanha, as being a safe and certain one, is in most general use; but antimony, for certain indications, is much more effectual: such as in the stubborn chronic disease, that requires the very active, diffusive and lasting medicine. Sal vitrioli is a more efficacious emetic than ipecacuanha in dysentery, though deemed its specific. Squill emetics are better adapted for pectoral stuffings. Either mustard or horse-radish are a good emetic for gout in the stomach;

stomach; for while they evacuate they invigorate and warm the frigid stomach; and prevent languor by only operating for a moment. Whole white-mustard seed being aperient, diuretic and diaphoretic, is excellent for keeping the gouty habit equal and soluble.

With respect to the power and efficacy of emetics; in the nervous irritable habit, the very active stimulant increases the irritability, by accelerating the motion of the fluids, until atony in the vascular system is induced: the lesser stimulant, on the contrary, invigorates and, like moderate exercise, gives strength and elasticity to the solid fibre, which by too much exertion is debilitated. The full emetic operates briskly, unless the patient's stomach be too hastily drenched with water, which weakens the fibres of the stomach, and has been known to destroy its contractile power.

The very gentle emetic is apt to pass off by the intestines; but even then it is beneficial, especially in fevers, by taking off the restriction of the excretories. The dry emetic, that merely causes nausea, or little more, is very serviceable when exhibited

on the accession of fever, and in atony of the stomach. An emetic in the beginning of a contagious malignant disease, often prevents its increase; but if it should not have that effect, it nevertheless fits and prepares the stomach for the reception of those remedies which are most likely to produce that salutary end. It lessens the cold and hastens the hot fit of agues; and brings the paroxysms to regular periods, for administering with safety, and good effect, its highly extolled specific, the Peruvian bark. Indeed, without emetics, agues are neither safe, soon, nor completely cured by any tonic. It is one thing to remove a paroxysm of an ague, stone, cholic or gout; but another to cure the disease.

However useful and necessary emetics are in various cases, circumstances and situations; yet, if very frequently employed, they, by becoming habitual to the stomach, will require such repetitions, as must debilitate that organ, and thereby render it unable to perform its functions. The emetic that operates too violently, may be counteracted by acids, and its force thereby diverted from the stomach to the intestines.

Many

Many are the circumstances that indicate and contra-indicate the emetic. For these I refer to the respectable therapeutic writers, and more especially to the ingenious Doctor Andrew Duncan's accurate performance on the elements of that branch.

C H A P. III.

On Evacuations by the Intestines.

PRETERNATURAL alvine discharges may be produced by various causes. Those discharges which are promoted by purgatives in imitation of the spontaneous solution of the febrile diseases by stool*, are very considerable: for the stimulus of the medicine, not only by promoting the peristaltic motion, sends forth the accumulated fecal contents, but extends its influence to the remote parts of the body, and derives an afflux of fluids from the different secreting organs by the many excretories that termi-

C 3 nate

* Una alvi spontanea solutio atque perturbatio continuam fibrem tutò ac perfectè judicat.

nate in the various circumvolutions of the intestinal canal, the receptacle and drain for their purification. But, though it must be allowed that purgatives are very important and often necessary medicines; yet it also must be admitted, that the pernicious effects, which arise in consequence of their abuse, are seldom attended to.

Purgative evacuants are two-fold; lenient and drastic. They both act, more or less, universally on the system, as well as particularly on the stomach and bowels. That some of the finer particles of medicines are taken into the habit, and mix with the blood, where they act a new part, is manifest from the subsequent symptoms, and phenomena of the fluid excretions.

Manna is considered as the most mild and safe purge: few, however, know what it is. Donatus Antonius Ab Altomari, more than two hundred and twenty years ago, said it was a concreted saccharine exudation of a species of ash in Calabria; and not, as then imagined, a honey-dew hardened by the heat of the sun. A French writer of considerable note, describes it thus, “ Pour la manne elle n’est fort suspecte en cette rencontre

contre (in dolore capiti fatroci) & presque toujours ; car nous en avons, qu'on nous apporte d'Italie, n'est autre chose que du sucre, & du miel mêlés ensemble avec un peu de scammonée." And, of the second sort, which we have imported from Marseilles, and made at Briançon, a town in the Upper Dauphiny, he says, " Dans la manne de Briançon il y a du suc de tithymale & d'espurge."

The ruffling refinous scammoniate and aloetic liquating purges, very frequently repeated, debilitate the stomach and intestines, excite spasms, stimulate the arterial and nervous systems, and thereby increase the progressive motion of the blood, even to the febrile inflammatory degree, and determine it in unusual proportion from the superior parts, by the meseraic vessels, which are relaxed and their orifices expanded ; the glandular juices likewise, by their emissaries, flow into the cavity of the intestines and renal passages, where there is a depletion of the inferior vessels and a diminution of their resistance. To these succeed languor and debility, the small, sharp and hoarse voice, ghastly countenance, dejected mind, disturbed

turbed sleep, convulsive motions and stricture of the præcordia; which again run into dysentery, or dropfy, hypochondria, or palsy; and, by the nutritious parts of the aliment being prevented entering the lacteal absorbents, a marasmus, or extreme wasting, with all the tribe of hectic symptoms, ensue. The vessels collapse, and their juices corrupt. On dissection the membranes of the stomach and small intestines are found abraded, inflamed, and marked with red and variegated spots; so that severe purgation is almost equal in its pernicious consequence to the corrosive effects of real poison. Erasistratus was of opinion, that scammony changes the blood into bile; the flowers of brass, into water; and grana cnidia, and carthamus, into phlegm.

Though milk, oil, fat, calf's-foot jelly, broth, mucilages, obtund acrimonious particles in general, yet the deleterious force of certain bodies are counteracted more directly by their own peculiar correctorium: thus, mercury is corrected by sulphur; sulphur, by nitre: jalap, by cream of tartar; colocintida, by ol. tartar. perdeliquium; scammony, and all other resinous bodies, by
salt

salt of tartar ; aconitum, and the other narcotic plants, by the stinging nettle. Corrosive sublimate dissolves in water, and its force is thereby overcome. Arsenic will not dissolve in water, but does in oil. Water does not subdue the acrimony of sulphurous or metallic bodies ; but water and vinegar thrown into the stomach has blunted the point of a needle so much as to prevent its doing any material injury.

The drastic purge is most commonly used in obstinate constipation, where there is inactivity of the muscular fibres of the intestines, and the juices are slow in advancing to lubricate, disengage and stimulate to a protrusion, the pent up indurated fœces ; but that being once obtained, the stimulating forcer is then to be relinquished, lest, by a hypercatharsis, or excessive purgation, the natural crasis of the blood be broken down, the alimentary fluid defrauded, perspiration lessened, and vital heat extinguished.

Obstinate constipation demands the most sedulous attention ; as, by the irritation and increased debilitating action of the indurated fœces retained in the intestines, many alarming symptoms are brought on : such as heat, thirst, cough, head-ach, indigestion, flatulency,

lency, foetor of the breath, hiccup, habitual constipation, or lost tone of the intestines, iliac passion, *mortification*.

In some fevers it is better to be costive than lax. Diemerbroek, when speaking of the plague, in his Prognostics, says, "If the patient was costive and so continued till the declension of the disease, it was a good sign, and afforded hopes of his recovery: but a diarrhœa was a dangerous symptom, and usually terminated in death."

Whatever be the occasional cause of the constriction of the excretory ducts that open into the intestines, or that retards the juices from coming forward, or the peristaltic motion from stimulating them to action, the proximate or immediate cause must be attended to; which is affected, in the first instance, by medicine; and, in the second, by diet, regimen and exercise.

In obstinate constipation, I have sometimes succeeded by the lenient when the drastic had been rejected by the debile stomach, and even when it remained there. This, I apprehend, was occasioned by the stomach and intestines being brought into a state of tension by the stimulus of the drastic, which prevented excretion; but the lenient, by
operating

operating more kindly, prevented that resistance, and therefore was effectual. The purging medicine, however, whether lenient or drastic, does not act at all times alike on the same person: when it meets with sharp humours, or is untimely administered, as during the course of some critical or periodical discharge, it will, at such time, act with great violence. When the cathartic is unembarrassed with foreign or crude matter, it acts more pleasantly: wherefore it is that a purge operates best upon an empty stomach, and passes on to the intestines; whereas, the emetic operates with most certainty when the stomach is full. If the intestines are emptied by a clyster in the evening, the purge taken next morning will be quick in its operation.

As cathartics determine the fluids from the surface to the intestines, they cannot have any farther effect in the cure of a fever, than as they are prophylactic, and thereby carry off the recrementitious matter that is become a fomes morbi; but this must be done early, or immediately after the disease has passed its acmè or height. Such accumulated matter should also be carried off immediately
after

after a paroxysm; for a separation hath then taken place in the secreted fluids, though the crisis be but an imperfect one.

The drastic purge, for a moment, may delay the gouty paroxysm; but, by thus weakening the stomach and bowels, and diminishing native heat, the disease will gain strength to return with redoubled force and new acquired symptoms: this medicine should therefore be considered as an occasional cause that gives force to the principles of that disease.

But, though drastic physick be objectionable, as improper in this disease, yet lenient and cardiac is often necessary and proper; for it helps to lessen the force of the fits and lengthen the intervals. When nature is performing the work of depuration, as in the paroxysm of fever, gout, or feminine monthly purgations, or other spontaneous or critical discharges, she is not to be disturbed, it being better to wait an indication than force one unseasonably. However, a patient, under either of these circumstances, must not be suffered to endure a preternatural retention of fœces, which may be removed by a lenient purge. The stomach
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and intestines must be evacuated before an attempt be made to expel the gout from a visceral part to the extremities. An occasional discharge of thin bilious stools obviates a paroxysm. Turbid, thick urine, of a pale red colour, does the same, and rather more, for it shews the paroxysm is over. To stop this or, indeed, any other flux prematurely by styptics; that is, before the inciting particles are obtunded, destroyed, and evacuated, is dangerous; and by obstinately attempting to carry it off too hastily by purgatives, there is a danger of heightening the irritation, and debilitating the tone of the intestines. Rhubarb and myrobalans will do it the least, because they bind as well as loosen.

A Lady of Kingston, upwards of 50, of a bilious complexion, who had been affected with the gout from her cradle, and, by a want of sufficient strength to throw it out in regular fits on the extremities, was frequently attacked with imperfect ones. She had frequent bilious motions which always lessened the force of the fits. Sometimes she was constipated, during which she would complain of great uneasiness and impatient anxiety. When I was first called in to this lady's assist-

ance, she was exceedingly ill indeed, and constipated; but her sagacious Apothecary, who had attended her for many years, made me thoroughly well acquainted with her constitution, at once, by saying, that three grains of rhubarb, when the fits were off, were sufficient to procure her several motions. Cautioned by this fact, I was instantly enabled to proceed with success; and, by a little occasional help, she lived ten years after. This case I give to show how cautious we ought to be in prescribing for such delicate constitutions. An emollient and aperient clyster, repeated twice or thrice, gave effectual relief. When this disease attacks the head, or other noble part, it is necessary to make a revulsion to the extremities by blisters, clysters, pediluvia, lenient purges, &c. but the hasty application of external repellents, has not unfrequently proved fatal, by throwing the morbid matter on the brain.

Gentle purging, with rhubarb and magnesia, is almost always necessary for the cure of a diarrhœa. Opium is of no use in this complaint, as the stools discharged are equally liquid, not fewer but more foetid.

Both purging and vomiting are indispensable

fible for the cure of an ague before its great antidote the peruvian bark is administered. The primæ viæ must be cleansed, or the bracing power of the tonic, by giving too great force and resistance to the organical fibres for excretion, will increase the inflammatory diathesis in the blood, and thereby raise more grievous symptoms than it was at first designed to subdue. Thus opiate restringents are pernicious, in a looseness, when thrown in prematurely before the stimulating cause is carried off. One large dose of laudanum that was given to a child, of a year old, for a cough, accompanied with a diarrhœa, stopped respiration, checked expectoration, and diminished the power of the chest, so as to prevent the effect of the strongest emetics, and consequently to be fatal. Such instances point out the necessity of tending to the natural powers, operations and effects of medicinal substances, for alleviating vitiated conditions and unnatural motions in animal bodies.

Purging is also necessary to carry off worms. We however should consider, that, though their place of residence be local, their influence is universal : as evidently appears by

the nervous symptoms and remitting fever which they occasion. But, though these symptoms arise from worms and congestion of foul sabburra in the first passages, which seem to indicate purging, yet drastic physick is very improper, because the worms which live on the natural juices that should have nourished the body, having thereby left the intestines abraded and defenceless; the stimulus given by drastic physick would add to the injury already done to the nervous power.

A few years ago, a young Gentleman about ten, of delicate make, was seized with a fever in London, and was so far carried through it by an eminent Physician, as to be thought able to bear removal to his father's seat at Wickham in Kent, where his fever increased, and I found it to be remittent. During the exacerbation, he talked incoherently, and his belly swelled immensely, but subsided again on the paroxysm going off. In the remissions, his senses were clear, and his appetite keen. He slept with his eyes open, and frequently would scratch his nose, and grind his teeth. The symptoms convinced me his disorder was occasioned by worms. I there-
fore

fore added vermifuges to his febrifuges in my prescription. But the parents, who were of the medical-wise tribe, on hearing my opinion, chose to neglect my prescription, and gave him a favourite purging medicine of their own, though they did not know what it was, which he took three or four times at short intervals. This purged him drastically. The stools were variegated, slimy and foetid, with many small live and dead ascarides worms : which was so far well ; but it unfortunately went farther : he was before so much reduced by the fever, that strong physick was improper : it weakened him more, particularly his optic nerves so much that he went blind. I was now sent for in all haste, and immediately put him on a strengthening course of peruvian and eleutherian bark, virginian snake-root, wild valerian, &c. and gradually brought him from the gentle tepid to bear the cold bath ; by which, and light nutritive diet, in a few weeks his eyesight was perfectly restored, and he has enjoyed a fine state of health ever since.

Though lenient physic obviates and relieves in a venereal gonorrhœa, yet superpurgation is still more detrimental to the

constitution than even the malignity of the virus itself. By it, and the disease, youth are rapidly incumbered with the infirmities of age, and prematurely surrendered to the oblivion of a grave, unless the disease of the parent should be entailed on a progeny that may be a pest from their birth, and as loathsome to society as miserable to themselves.

Acrid physic not only inflames the intestinum rectum, but extends its inflammatory stimulus to the urethra, and is improper in every stage of the complaint.

The faculty have much difficulty in satisfying venereal patients, who have been long on a course of purging medicines. Their perceptions are so much quickened by nervous irritation, as to impose on their deluded imaginations, and afflict them with all the horrors and torments of supposed real symptoms, which are merely ideal, or, at most, but symptoms of debility. Such impatience, however, I believe, in general, is exceedingly reprehensible; for I have never, in the course of my practice, seen the blood so corrupted, the secretions so vitiated, the nocturnal pains so vehement, the ulcers so malignant, or the bones so foul, by this disorder,

order, as not to be curable by the slow but sure alterative, such as the pills and decoction I have particularized below.*

The judicious and truly wise will always seek the permanent, though slow acting cure†.

Nothing hath yet been discovered to equal mercury for lues venerea; but the best things may be abused. The ptyalism raised by mercury, is a discharge, it is true, of morbid serosity from the blood, in imitation of the spontaneous and critical discharge by the salivary glands in some putrescent dis-

* ℞ sulphur. antimon. præcipitat. ℥ij.

Calomel. ppt. ℥i. Terantur simul diu in mortorio vitreo. Postea add.

Resin. Guajac. pulverizat. ℥i.

Camphor. ℥ij.

Extract. cicutæ.

—— Hyosciami a a ℥ss.

Balsam. Canadens. vel copaib. q. s. f. massa. E singulis scrupulis pilul. No. vi. formand. quarum ij. iij. iv. vel vi. nocte maneque, super bibendo haustum (unc. sex saltem) decoct. lignorum secundum pharmacop. Edinburgensis, vel decoct. rad. sarsaparill. bardan. glycyrrhiz. vel ex lign. juniper.

† Sed fere periculosa esse nimium & festinatio & voluptas curet. CELSUS.

eases,

eases, such as small-pox ; yet my experience does not enable me to speak very highly in favour of this artificial drain. In short, the effects I have seen in consequence of it, forbid my ever salivating another patient. I can, indeed, speak boldly of the utility of mercury, not only in this, but in other inveterate complaints, when given in small doses, and at such proper distances of time, as not to salivate, but as an universal deobstruent and aperient. I have, often, for instance, cured dropfy in the incipient stage, by a course of one-grain doses of calomel to four of camphor, and two of extract. hyosciami. I ordered a dose every night ; and, after every fifth or sixth night, a gentle dose of physic ; such as six or seven grains of pulv. jalap. with ten of cremor. tartar. During this course I also ordered a decoction of dandelion-root, or juniper-berry tea ; and, some days, a cupful of white horehound tea.

Attention was paid to the non-naturals. I never confined my thirsty hydropic patient wholly to dry food, as has been recommended by some : it is cruel, and only hastens the putrid process. As vegetable
acids

acids are anteputrescent, and, by their stimulus in the mouth, increase the secretion of saliva, allay thirst, sharpen the appetite and promote a flow of urine; I never forbid their use in moderation. The fossil acid, vegetable acerb, and astringent, lessen nervous sensation. They are, however, useful for certain indications. I have cured dysentery by the acid of vitriol after sundry other things had failed; and, in warm climates, by the acid of lemon, in barley-water and olive-oil, I have checked putridity, suppressed exalted bile, and thereby cured diarrhoea, cholera morbus, &c. In dropsy, where there is obstruction, defect of absorption, secretion and excretion, tepid relaxing liquids in great quantities must be hurtful. Where it is otherwise, the redundant quantity quickly passes off and leaves the viscid fluids less tenacious.

By the above-mentioned mode, the mercury pervaded the whole body, and fused and increased the impetus of the fluids, and capacity of the secretory orifices; that is, it was deobstruent; while the camphor excited genial warmth in the blood, and the extract assisted not only to make the operation

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tion of the mercury easy, but to correct the vitiated fluids, and promote evacuation through the cuticular and renal emunctories.

Thus alterants are not wholly distinct from evacuants; indeed, I know no disease that is perfectly cured without evacuation by some outlet or other.

It is difficult to mature or resolve the schirrus venereal bubo, which is in want of heat and vibration to liquify and resist the inspissation, and spur on the stagnating lymph in the cells of the glands. Indeed, cold indurated tumefactions of any kind are tedious, and are never safely nor completely resolved without universals, which destroy the cementing principle, and discharge insensibly as well as sensibly the noxious particles. I have sometimes been so fortunate as to succeed in these cases by the alterative pills and decoction particularised in page 31.

The warm mineral springs and tepid seawater bathing do much towards resolving and dispersing the stony schirrus, before it degenerates into the painful corrosive cancer.—Mineral waters are so exquisitely well mixed by the chemical process of nature,

ture, as to be highly deobstruent; and, by accelerating the languid circulation, they are exceedingly efficacious in conquering the obstinate chronic disease; especially if drank at the spring before its volatility and native heat are extinguished, when the concrete matter will subside.

Strong purging has been recommended, by some eminent men, for dropfies; but for what reason is not sufficiently evident to me, as the cacochymic and leucophlegmatic habit is brought on by nothing so soon as by it. It is true, that much water is thereby carried off; but the solids are left in a more debilitated state, and, consequently, the water, by meeting with but small resistance, and sweat and urine being diminished, again accumulates faster. I have had many dropfical patients in all its stages; but, though I will not pretend to say I have been so fortunate as to cure them all, nor the one half, yet experience authorises me to assert, I have succeeded with a considerable number by the lenient method—with none by the drastic*. The lenient physic operating

* Hydrapicis alvum moliri cibo melius est quam medicamento. CELSUS.

kindly, it expanded the excretory orifices, and allowed the obstructed fluids to pass off gradually without occasioning languor, inertia, debility, or deliquium animi, which generally attends drastic purgation, or the operation of the paracentesis.

If dropfies proceed from such a laxity of the fibres, as to be deprived of power to impel forward the influent fluids, surely it becomes necessary to restore the vascular system to its natural elastic state, by roborants, stimulants, exercise, nutrients, and, occasionally, gentle aperients, rather than weaken it farther by debilitating drastic cathartics, which carry off the very nutritious particles that would restore the relaxed fibres to their due tone, and thereby effect it. The action of the body depends on the elasticity, strength, and configuration of the solids; and these, on the quantity and quality of the contained fluids. The evacuation of the water by paracentesis does not remove the cause; but, as the force and energy of diet and medicine is much clogged and impaired, and the vesicles of the lungs incumbered, as well as the diaphragm impeded in its descension in inspiration, by the load of stagnating water;

water, cures have sometimes been performed by thus drawing off the water, before the solids had lost their contractile power.

Purging the belly takes off the rigor of the brain, and promotes a revulsion. I happened to relieve in two instances of recent mania, by ordering a course of laxative pills, composed of extract. rudi, pilul rufi, extract. cicutæ & calomel. The patients took a dose of these pills every other day for two or three weeks. One of these cases was occasioned by a sudden suppression of the menses.

Paralytic persons have frequent large collections of fœces, which, though softish, require the stimulus of a purge to evacuate them. Draftic physic will give present relief, but progressively will weaken the intestines, till they establish an habitual constipation. Whole white mustard seed, as an aperient, and tonics, as mineral water, peruvian, eleutherian barks, &c. intermediately, are very efficacious in these cases.

In melancholia, lenient physic, and such as evacuate bile, suit best.

In leprosy, scrofula, and scurvy, draftic physic is inadmissible, the blood and secreted

juices being too much impoverished. Mercury, in particular, is to be used sparingly in these constitutions, as in them its action is so quickly shown on the glands of the mouth.

For *volvulus*, or *iliac passion*, *argentum vivum*, to the quantity of several ounces, has been commended for widening the contraction, and forcing down the inversion of the colon; but, I apprehend, if this very ponderous body does not quickly pass the sigmoid flexure of the colon; it must do immense mischief. Indeed, nothing but the utmost extremity of danger can warrant the practice.

From retention of lymph, arises head-ach, tooth-ach, rheumatism, catarrh, corrhiza, pectoral stuffings, quincy, apoplexy, lethargy, nervous affections, languor, dulness, dropfy, &c. In scrofula, the lymph becomes so viscous and inspissated as neither to be absorbed or exhaled; it consequently stagnates in the lymphatic glands until the vessels can no longer restrain it from issuing forth: the thinner part oozes through the skin. The meseraic glands of some become schirrus; and, as sufficient nourishment cannot

cannot be received to support the body, atrophy, or extreme wasting, ensues.

By the power of sudorifics and external warmth, the thin lymph is expelled in the form of sweat; and, by means of the drastic purge, it is brought from all parts of the system into the emptied vessels in the intestines; whence it is excreted in the form of liquid stools. Indeed there is nothing but what may be expelled by the intestines, until the body is reduced to a mere skeleton.

No well-meaning person will give drastic physic during pregnancy; because it would affect the membranes of the intestines and nervous system so strongly, as to be productive of violent spasms, and stimulate the uterus to an expulsion of the foetus, at the risque of the mother's life.

After delivery, at the full time, it is expedient to give some lenient physic to promote the lochial discharges, to clear the habit of fordes accumulated during gestation, and to prevent purpureal fever.

Though, in hot uterine affections, relief is obtained by repeated refrigerant purgations, and the tepid-bath, yet I have known an hysterical woman, who, after delivery, had,

from repeated large doses of drastic purging salts, a dangerous increase of her symptoms*.

For flushing heats and fiery eruptions on the skin, purging salts, or sea-water draughts, are commonly recommended ; and, in many cases, if well-timed, they are of infinite use†. These are termed coolers ; but, whatever be their effect, post operationem, no medicines can properly be said to be coolers, which, during their operation, induce heat and thirst, even to the febrile degree : for which very reason it is, that sea water draughts are efficacious in the cold chronic disease, but not in the acute or inflammatory.

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* Je ne conseillerois jamais de trop insister à ces sortes de sels purgatifs, parce qu'ils donnent toujours trop de mouvement au sang, et qu'ils produisent souvent chaleurs d'entrailles brulantes. A Monsieur Deidier.

† There is a great difference in the quality, though not in the appearance of some purging salts, as between the true and factitious Glauber's salts; the latter is more nauseous, disagreeable and ruffling in its effects than the genuine. To discover the cheat, add to their clear solution, some salt of tartar, or other alkaline salt ; and, if no change happens, and the mixture continues transparent, they are the true : if turbid and milky, and the powder subsides, they are the counterfeit.

The operation of sea-water is quick and easy, and is the proper physic during a course of sea-bathing. The only danger is in the excess; for, though it quickly passes the primæ viæ and carries off with it many of its own saline particles; yet, if it is taken in very large quantities, and long persisted in, it will contaminate the nutritive juices, impoverish the blood, and induce a pernicious intemperies, even those very diseases, the scurvy and leprosy, which it is so remarkably famous for curing.

An Officer in the East-India service, on his passage home to England, happened to have some hot pimples come out on his face; for which he was advised to drink sea-water. This, at first, he thought did him good, and improperly continued drinking it, day after day, till it so far impoverished his blood, that, when he arrived in London, his face had an appearance of leprosy. He then had recourse to Norton's mercurial drops; which, instead of curing his disorder, still thinned his blood more, and exasperated his symptoms. In that state, he applied for my advice. I ordered him to drink a draught of sweet-wort every morning; to live regularly

on plain and unseasoned food, and to drink some generous red Port wine at dinner; by which, and the use of daily exercise, on horse-back, he perfectly recovered in a short time.

Sea-bathing, however, is very efficacious in a variety of disorders; such as glandular obstructions, chronic rheumatism, scurvy, leprosy, depression of spirits, palsy, epilepsy, St. Vitus's dance, hysteric and hypochondriac affections, and in nervous complaints in general: in fluor albus, gleet, or seminal weakness, diabetes, sprains, rickets, and in almost all complaints arising from relaxation of the solids; in profuse and in suppressed menses from debility, and not from inflammation or plethora.

Sea-bathing has also been recommended by Boerhaave for the bite of a mad dog before symptoms of hydrophobia appear. When that dreadful symptom comes on, I apprehend it cannot be supposed that the infection acts any longer in a slow and occult manner; but, that, by a ferocious quickness, it forces through the system to destroy the vital principle; and therefore, that the most speedy and most powerful opposition that
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can be devised, both internally and externally, should immediately be made to obviate its effects. As the hydrophobia is a nervous spasmodic symptom, antispasmodics may be supposed to be particularly efficacious; the power of these, however, is very inadequate to the strength of the virus. Venæsection does no good. Mercurial alterants and local evacuations from the wound, by scarification and cupping-glasses over it, and keeping the part open a long time, for the virus to run off; besides other evacuations, by sweat and urine, are most to be depended on: but no specific is yet discovered that has power to subdue animal poison, when once it has entered the circulation. Dipping in the sea, has, at least, one good effect, if it appeases the mind. *Miserrimum est genus morbi.* I am afraid an implicit faith in nostrums has often been productive of much mischief.

However congenial sea-bathing is to human nature, even in cases so very opposite in their causes, as suppressed and profuse menses, yet it is no universal panacea: for, if it relieves some complaints, it nevertheless exasperates others; such as gout, which it
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is apt to throw on the brain ; inflammatory complaints ; febrile heats ; phthisis pulmonalis, or consumption of the lungs, and other diseased viscera ; and where there is danger of hæmorrhage from plenitude or excessive distention of the blood-vessels ; which is proof of the heating quality of sea-water, whether used internally or externally.

Sea-bathing softens and cleanses the foul indurated skin, promotes the insensible discharges, and prevents the approaches of disease. Those seamen who bathe in the sea, are the most healthy and most active men in the ship.

The preferable seasons for sea-bathing, are early in the Summer, and towards the end of the Autumn ; that is, those seasons when the weather is neither too hot and relaxing, nor too cold and inclement. The efficacy of the water depends on the temperature of the weather as well as on the specific properties of its principles. Our Summer, however, is seldom so hot as to render bathing improper.

If, on immersion, the stimulation and restriction of the heart and arteries should
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so far increase the momentum and velocity of the blood through the extreme vessels, as to produce a pleasant glowing warmth on the surface of the body, an elevation of spirits, activity and an appetite for food, the bather may rest assured, that it is giving additional tone and force to the debile languid system: a reverse sensation is proof of the reverse effect. Long continuance in the water, weakens. The efficacy of the water is sometimes prevented by a patient's antipathy to bathing. But, by the soothing attention of an humane, judicious and encouraging guide, that unreasonable antipathy is almost always overcome.

Though I have long attended to the effects of sea-air, sea-water, and sea-bathing, on the healthy as well as on the diseased, yet, being anxious for more full information on these subjects, I went to Margate last season, 1786, where my former opinions were confirmed by the many opportunities I sought to make fresh observations, and by the very useful information I received from that ingenious and successful practitioner Mr. George Slater.

The

The first case presented, was that of a Mr. Willis from London, a Gentleman about sixty years of age, whose legs had been in one continued scorbutic ulcer, from the knee down the anterior part of the tibia to the foot, and which had long resisted the skill of the Faculty. With the idea of its being almost a lost case, he went to Margate a few months before the time I met him, when his legs were compleatly healed; and he was, not only in that, but in every other respect, in perfect health. He alternately drank the water one morning and bathed the next.

A Gentleman from London, between fifty and sixty, had been seized with a hemiplegia, or palsy of one side, attended with the loss of speech, and difficult deglutition. He had been for some months under the care of the Faculty, and twice at Bath; the first time, for the space of ten weeks; the second for seven; but receiving no relief, he had got to Margate, where for some months he had bathed every other morning and intermediately drank the water, when I met him at Philpot's. He had then regained his speech and power of swallowing, could walk and
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get into his carriage with a very little help, and was also daily gaining strength in his side.

When I went to Margate, in the autumn of last year, after publishing the first edition of these few remarks, I there had the pleasure of meeting again this gentleman, who could walk surprisngly well, without help ; which is a still farther proof of the sea-bathing being stimulating, warming, and reviving to the cold and languid solids ; and, that it increases the mobility of the interrupted nervous power in a debile part. Although the Bath-waters were not of such sensible benefit as the sea-bathing to this patient, yet, I have no doubt, but they were an excellent preparative for the sea-bath.

A young Lady about twelve, who had been two years afflicted with St. Vitus's dance, was also there ; and, by bathing through the season, and occasionally drinking the water, she received a perfect cure.

The following cases were given me by two careful and attentive Proprietors of the principal bathing houses.

1. A Lady, from the irregularity of her menses, had a large indurated swelling on both

both sides of her neck, extending from ear to ear, and attended with symptoms of great debility; but by bathing in the sea for about six weeks, and intermediately drinking the water, the monthly visitation became regular; the swelling totally disappeared; and, in a word, she was restored to perfect health.

2. Two infant brothers were overspread with running sores, so very foetid as, whenever they were bathed, to render it necessary for the doors of the machine to stand open, to ventilate it before others could go into it: but after they had drank the sea-water occasionally, and been dipped daily for four months, during the first fortnight of which time the discharges increased and then gradually diminished, the children were thereby restored to perfect health, and continued so three years after their cure, when I received the above account of them.

3. A Lady, after delivery, went to Margate in so very feeble a state, as to require, for some time, to be seated in a chair, and let down from the machine into the sea. However, after staying at Margate for a few months, she left it in good health and spirits.

I re-

I recommended a rheumatic patient, who had been long subject to the complaint, and attended by other Gentlemen, to try the force of sea-bathing. He went to Bright-helmstone; where, after frequently bathing in the sea, and finding himself chilly on coming out, and his inflammatory symptoms increase, his Apothecary judiciously directed him to try the warm sea-water bath. After bathing in it three or four times, he found himself relieved of all his obstinate symptoms, and returned home in ten days to his family.

The tepid sea-water bath is not only more pleasant, but, where bathing is necessary to take off inflammatory spasm, it is better than the cold sea-water bath.

Though I have now observed on all the principal leading morbid affections in which sea-bathing is experienced to be efficacious; and on some, at certain times, and under certain circumstances, in which it is hurtful, and shewn some instances of almost incredible cures which have been made by it; and, though many thousands more might be given of its great salutary power; yet, I would advise none to enter rashly upon a

course of sea or other bathing, without the special advice of some intelligent medical Practitioner: it being a received maxim with Physicians, that what is capable at one time of doing good, is capable at another of doing harm.

It is not the sea-water only that is beneficial, but the salubrity of the very air has a wonderful effect in exalting the spirits, creating appetite, promoting digestion, secretion and excretion, and exciting rest.

When sea-bathing has been necessary, but by distance impracticable, I have substituted a strong solution of bay-salt in soft water. I have also successfully used an embrocation of common brine with friction for rheumatic, scorbutic, paralytic, leprous, tetterous and strumous affections. Hippocrates recommends sea-water for bathing the ulcerated legs of fishermen, and those who live near low, sea-marshy places, to forward exfoliation and incarnation, and for stimulating and strenthening the weak fibres. Sea-water, however, is but a slow antiseptic.

Mild aperient land-springs act beneficially as alterants, and suit in many cases where stronger impregnations, such as sea or Jes-sop's

fop's well water, would be improper : they soften the tense fibre, assist the appetite, and promote digestion. But, however useful they may be in a variety of disorders, the perseverance of the patient must always be proportioned to the strength of the constitution and the power of the water ; for the nature of waters, as of diseases and constitutions, are various.

Where the great and lasting change is to be made by the alterant spring, it must not only be used for a considerable time, but also in the proper seasons.

We must always be attentive to nature, consider her power, and be guided by its effects. For extracting the virtue of whatever is intended to nourish, to strengthen, or to relieve, no process is equal to that of the stomach itself, upon animal and vegetable substances. For instance, if a dram of rhubarb be taken in powder, it will have as much effect as a dram and a half in any preparation whatever. Some stomachs in health, can dissolve bones ; and most stomachs, in sickness, will receive and accommodate themselves to medicines they would recoil at in health. Mineral and

fossil substances are not so reducible as the animal or vegetable to the capacity of the stomach without chemical preparation, nor even then, though many such preparations, when properly corrected and judiciously administered, are exceedingly useful. Even arsenic itself, the most powerful mineral poison, may be rendered safe and efficacious; for many of the most potent salutary virtues are lodged in the most virulent poisons. Arsenic, when guarded and applied externally, is said to possess the power of curing that deadly corroder the cancer; and some have avowed its internal efficacy in the ague*. The most violent cathartics have their correctors, and the most virulent poisons their antidotes. Sulphur powerfully counteracts the stimulus of mercury, as a salivant, without suspending its effect as an alterant; but

* For its special action and effect, when given internally, see the late ingenious Mr. Justamond's account of the methods pursued in the treatment of cancers and schirrous disorders.—“*Externe nil magis ulcera cancrofa curat; & in cancro ulcerato fit remedium ex rad. ari ppt. arsenico sublimat. dulc. & pauc. fulig. optime autem tollitur ejus acrimonia fixando cum nitri p. iij. in crucibulo simul fufis, vel abstrahendo spir. nitri ter.*”

but it cannot be supposed that this can be done without its entering the circulation; though some of high note say, that *Æthiop's* mineral, a combination of mercury and sulphur, is inert, and does not go farther than the first passages; while we observe it to be excellent in clearing the skin of foul defecations, and, of course, correcting the fluids. Sulphur taken internally renders the silver in the pocket black, and emits a stench from the pores that no perfume can disguise. Sulphur is aperient: but, if taken very frequently, will cause heat and pain in the urinary passages. Sulphur not only counteracts the salivating power of mercury, but is supposed, and is said, to be a specific against that of arsenic*.

After violent purgation, Hippocrates advises, as quoted by *Ætius*, to put the patient into a warm bath, and to give him a gene-

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rous

* Sulphur united with any of the metals probably destroys their solubility in the juices, or at least their effects in the circulation; none of the cinnabars act either as sulphur, or mercury. Crude antimony, which is regulus of antimony and sulphur, has no effect. Arsenic when joined with sulphur has no effect, nor has iron. Hunter's Treatise on the Lues Venerea.

rous yellow white wine, before and after bathing. The stimulus and commotion may be quelled by a few drops of thebaic tincture; but much better by some grains of the extract. cicutæ, which is an excellent and safe corrector of the resinous cathartic, without lessening its purgative quality.

There are various methods of promoting evacuation from the intestinal canal when constipated, or when the stomach is incapable of receiving, and the throat of swallowing.

1. *By clysters*; which are of two kinds; moist and dry; and these again are varied according to the intention and nature of the complaint.

Clysters of simple water, administered once in twenty four hours, promote perspiration, dilute the blood, abate thirst, and remove spasm; they consequently are useful in febrile complaints.

The next in simplicity are sea-water, milk-and-water, whey, or bran-water clysters. I have often prescribed these, or chamomile tea, and a little common salt, and procured motions when stronger purging clysters failed.

failed. New-milk and oil clysters admirably qualify the corrosive parts of a medicine, and arm the intestines for making a defence against these and sharp particles in the juices which occasion spasms and gripes. As whey does not congeal, as the serum of the blood does by heat, it is a safe cleanser and diluter.

Laxative clysters will quickly exonerate the intestines; but a very frequent use of them, or, indeed, of other relaxing and deterging ones, at first sight, would appear to be injurious: they carry off the nutritious with the recrementitious parts, lessen the tension of the fibres, and render them unable to perform their animal functions. On the other hand, however, there are many instances of life being supported and maintained, for a considerable time, by nourishing clysters. Hildanus tells us, that Aubery, a Physician, fed a woman of quality six weeks with clysters of fowl-broth and yolks of eggs, administered twice a day.

This nourishing power of clysters is not easily conceived, as all the nutritious materials seem to undergo a necessary previous pre-

preparation in the stomach for being converted into chyle ; and yet certain it is, that I have not only supported patients by these for days, but even effected their cure by medicinal clysters. Asclepiades, and some others of the ancients, were of opinion that clysters were sufficient in most distempers. They influence the mass of blood, for they quicken the pulse, and facilitate the secretions of sweat and urine. Therefore every thing foul or incongenite should be as carefully withheld from the intestines as from the stomach.

Clysters are admissible at any stage of a fever. They alleviate the pain of the stone-cholic and hæmorrhoides ; and are serviceable in bilious, remitting and intermitting fevers, dysentery, lientery, tenesmus, suppression of urine, cephalalgia or head-ach, lethargies, apoplexies, deliria, &c. Aperient clysters, in the time of labour, assist the birth and expulsion of the secundines. Opiate clysters have the same sleepy effect as opiates taken by the mouth ; and, if they check diarrhœa, it is by suspending the peristaltic motion, not by removing the cause.

Opium does not remove the cause of any disorder whatever ; it only procures a truce,
not

not a peace. It suspends the crisis of gout, rheumatism, hysteria, &c. and prevents a discovery of their true type; and does not act favourably to the expulsion of the morbid matter. It is not possessed of antiseptic power; for it rather promotes putridity. Evacuation should always precede its use. It almost always does mischief. I have several times seen, and often had too much reason to believe, that infants have been thrown into an endless sleep by this poisonous drug, which stops the motion of the heart, and diminishes the power of the sensorium commune of the brain. We are told, a dram of animal poison, received into the stomach, had not such violent effect as an hundredth part of a grain of opium transfused immediately into the blood. It seems to act two different ways; for while it stupifies the sense and suspends the action of the solids, it also expands and rarifies the blood. Prosper Alpinus tells us, that those who have been in the habit of taking opium in Asia, fall into the most lamentable melancholy and lowness of spirits, from which they often relieve themselves by a halter.

Aven-

Avenzoar is said to have been the first who proposed clysters: and, that he took the hint from the bird ibis, or stork, which, by means of its beak, or bill, when nature indicates the necessity of a motion, conveys salt-water up its anus*.

The *dry clyster*, such as the active volatile smoke of tobacco, has succeeded by its stimulating and contracting power in obstinate constipation; and is of use in cholic, apoplexy, lethargy, prolapsio intestinum, strangulated hernia, &c. and when blown up the vagina into the uterus in a suffocation of that organ, which is attended with difficulty of breathing, straightness of the præcordia, syncope, &c. it has produced instantaneous relief. And, I have no doubt, with professor Cullen that, if thrown up the vagina, it would likewise relieve the obstructed menses. Sydenham prescribed it in iliac passion: but he was, by no means, the first who thus applied it. In some cases I have preferred an
injection

* Quæ rosto clystere, velut, sibi proluit alvum
Ibis, Niliacis cognita littoribus.

Emblema LXXXVII. Andriæ Alcati.

injection of the essential smoke of cephalic herbs.

When the embotum, or instrument for conveying the smoke of tobacco was not at hand, I have, as a substitute, ordered an infusion of the leaves of tobacco (that is, two drams of tobacco to eight ounces of water) to be injected. As this is a very active stimulant, it must be cautiously used in the irritable nervous habit, lest it bring on tremors, spasms, sickness and vomiting; which it is apt to do, especially, if made very strong.

2. *By suppositories or medicated cones.* These have procured a motion when the indurated fœces or flatus prevented the admission of a clyster.

The suppository has this peculiar advantage; it occasions no flatulent distention: the great operation, however, is not to be expected from the effect of the mere dry stimulus on the sphincter ani.

3. *By dashing, or throwing cold water on the thighs and abdomen.* This is recommended by some for stimulating the bowels to an expulsion of their fœcal contents; and, in hot climates, it may possibly be sometimes successful.

4. *By*

4. *By electricity.* Electrifying the region of the abdomen powerfully, occasions an intestinal discharge, by promoting the peristaltic motion, and secretion of mucus. I have, several times, in long and obstinate constipation, relieved by electricity, when many other means were ineffectual.

5. *By the application of medicines to the external superficies of the skin.* Aloes or coloquintida, applied to the umbilical region, will purge. A decoction of hellebore, used as a bath for the feet, has a similar effect. When cataplasms of garlick are applied to the soles of the feet, the scent is discovered in the breath. A cataplasm of tobacco-leaves on the stomach or feet, excites vomiting. Toasted parsley applied to the umbilical region of a child, has provoked urine; and by applying toasted sorrel-leaves, to hard deep-seated tumours, I have brought them in a few hours to maturation; and, the more indolent tumours of the parotid glands to resolve and disperse in a few days. The latter application was made morning and evening. If the tumour was disposed to mature, it gave some little pain. But the influence of medicine topically applied to the superficies of the skin, is not merely an evacuation

evacuation. Galen relates, that an opiate plaister applied to the head of a gladiator, by a stratagem of the enemy, killed him. Geoffroy says, "*Capitis futuris applicatum non*
nunquam interimit : nervos relaxat, stu-
porem & paralyfin inducit." Again, "if
 opium is externally applied to the eyes or
 ears, it will destroy the functions of these
 organs." On the other hand, I have repeatedly allayed singultus or hiccup by sedatives ; as, by a cataplasm of theriaca andromachi on the region of the stomach ; and, by virtue of the bitter vermifuge on the umbilical region, dislodged worms from the intestinal canal. By the tonic and sedative application to the abdomen, the dysenteric tormina has been quieted, and a check given to the flux, when the common internal remedies were ineffectual : by a similar application of the Peruvian bark, moistened with spirit of wine, I have often cured agues in children ; and relieved the head of delirium in fever by a cataplasm of salt-herring to the soles of the feet. I have also given relief in dysenteric tormina and tenesmus, by exposing the patient to the steam of turpentine upon live coals, in a chaffing-dish,

placed in a close-stool; and, in like manner, the hæmorrhoides by sulphur. The simple application of a large slice of toasted bread dipped in claret, in which some cinnamon was boiled, and repeatedly applied to the umbilical region, stopped flooding, and preserved life when almost exhausted. The relief is notorious that is obtained, in visceral parts, by the application of fomentations, baths, oily, and spiritous liniments, cataplasms, &c.

Infectious aerial miasma, and vegetable and animal poison, are received by the inhaling absorbents, wherever there is a secreting surface, as well as by inspiration and deglutition; and, by the antidote applied externally; such as mercury in lues venerea, many infections are subdued. There are instances of indurations of the liver in dropy, being resolved by the application of mercurial ointment to its region.

It cannot be supposed, that the gross and hard substances of cataplasms, or plaisters, are taken up substantially by the absorbent system, as they are neither diminished in their bulk, nor weight, when taken off; for, as they are then inert and inactive, it is evident, that, while in their full and active state,

state, there was either an influence of a specific stimulant, or a specific sedative, and also an absorption of their fine essential and active parts, to effect a consent of that which is remote with that which is near.

C H A P. IV.

On Evacuation by Perspiration.

PERSPIRATION is either natural, symptomatic, critical, or artificial; which are again two-fold: viz. *sensible* and *insensible*.

Sensible perspiration, commonly called sweat, by its subtle volatility, quickly evaporates and leaves the skin dry. In hot climates, the saline particles thus excerned, are seen condensed upon the superficies of the skin and the cloaths

That gentle perspiration, which is absolutely necessary for purifying the blood and secreted fluids, can only be preserved by due exercise, temperate air, comfortable warmth, and cherishing diet. These give strength to the body and alacrity to the mind.

The profuse perspiration that arises from

increased circulation, by moderate heat, or easy motion, is occasioned by a repletion of blood, with a large quantity of aqueous parts. Strong, firm, and elastic bodies sweat least, but insensibly perspire most. Sweat, in common, is most obvious in those who are remarkably plump and fat; for the profusion of their fluids relaxes the cuticular passages, and thereby over-balances that equipoise, which the solids would preserve.

When there is laxity of the sudorific ducts, there is also that of the whole system. To rectify the error of the former, attention must be paid to the whole; that is, by diet, drink, the cold bath, exercise, and such things as give elastic tone and contractility to the solids, and due consistence to the fluids. Sweat caused by an error in the non-naturals is always hurtful. An accidental sweat is often beneficial.

Partial desudations on the face, neck, and thorax, are symptomatical; for, as they always come on before disease has attained its height, or concoction is performed, they are productive of no advantage: on the contrary, if they do not prove fatal, they indicate, at least, a great debility, and long continuance
of

of the disease. Cold clammy sweats, either profuse or partial, if of short duration, portend a more speedy though not less fatal event.

If acute diseases are succeeded by acid sweats, and an alkalescent disposition prevails, that symptom is salutary.

When native alimentary moisture is evacuated by the perspiration that is excited from a daily return of febrile hectic heats, colliquation and emaciation succeed. Colliquative sweats extinguish the natural heat; those which are critical, extinguish the febrile.

The weakness of the natural faculties, and strength of the enfeebling disease, is shewn by nothing so much as by imperfect sweats attended with a coldness of the extreme parts.

The copious sweat that arises on the feet, and diffuses itself gradually over the body, towards the acme or height of fever, is critical; and is not only so in fever but in other diseases: it shews the vital faculty is strong. The blood, by such sweat, is relieved of arthritic impurities. *Dum pedes perspirant nulla podagra.* While flannel can

preserve perspiration on the region of the stomach, the gout will not attack it.

Those whose skins are soft and pores lax, may, it is true, have the gout; but they have it by no means so regular, or so severe, as those who have a constricted dry skin. Exercise, friction and baths, by giving elastic tone, contraction, concussion and vibration to the fibræ matrices, promote the circulation, perspiratio retenta, and other matter left upon the habit that oppresses it. The blood which, by indolence, receives no accession to its acceleration, is changed, like the stagnating pool, to the putrid or depraved state, according to the predisposition of the habit, or, as it occasionally happens, by inattention to the non-naturals. Indolence is so great a predisposing cause of scurvy, that nothing, without the concurrence of exercise, will cure it. Exercise braces the animal fibres, promotes digestion and assimilation of the chyle: rest, or a defect of motion, has the reverse effect: that is, it relaxes and retards digestion.

The sweat of the febrile patient, by a high exaltation of the saline principle, becomes foetid and offensive. It is better that
it

it flow from than remain in the habit; for, like constitutional sweatings, if precipitately checked, it will create disease: such as cough, catarrh, rheumatism, gout, dropfy: if it fall on the intestines, a diarrhoea ensues; if on the renal organs, a diuresis, or large discharge of urine; if on the pleura, a pleurisy; if on the lungs, a peripneumonia notha, or a dyspnoea; if on the joints, a rheumatism, or gout; if on the loins, a sciatica; and so of other parts.

The sweat that succeeds the febrile paroxysm is rather symptomatical than critical. The stronger the paroxysm, whether febrile, hysteric, or epileptic, the nearer and more certain is the cure. I never knew them terminate kindly to the constitution by a gradual declension, and by small sweats.

Physicians order artificial sweats, in imitation of the genial spontaneous and critical sweats: they seldom fail of doing good, when opportunely raised.

Lochial fever, which so soon becomes putrid, may be speedily suppressed by a long and well supported diaphoresis. Out of a considerable number of such patients
for

for whom I have prescribed, and never lost one, I select the following pointed case.

In 1784, A Lady, about thirty, soon after delivery of her first child, had *after-pains*, which, by next day, were very violent. She was then attended by that humane and judicious Accoucheur, Mr. Welshman of Newington-Butts, who, soon after delivery, gave her the following draught* to compose her, and keep up a gentle perspiration. Though she repeatedly took that draught, her pains were not in the least mitigated. The mammae were also much pained and distended; the pulse quickened, and other febrile symptoms appeared. She had no motion on that or the next day, when he gave her an aperient draught†; and for her breasts an embrocation‡.

On

* R Pulv. contrayv. comp. ℥i.

Elixir paregoric. ℥ss.

Syr. balsamic. ℥i.

Aq. Puleg. ℥xiv. m. f. haustus 6tis. horis sumendus.

† R Infus. fennæ ℥xiv.

Tinct. fennæ.

Tartar. salubil. a a ℥ij. f. haustus statim sumendus.

‡ R Acet. distillat.

ol. amygd. duli.

Spir. viu. ter.

}

a a ℥i. m. f. embrocatio.

On the third day, when the after-pains were highly increased, and attended with additional cholicky pains, and still without motion, I was consulted by letter, and sent her a prescription*. I also ordered her to sit over the steam of warm water. By mistake of the nurse, she took the whole of one julep at twice: in five minutes after taking the first part, she was considerably easier, and it produced a gentle perspiration. In half an hour, she took the remainder. After that, she was perfectly at ease. The diaphoresis increased and lasted till next morning, when she found herself in perfect health, and her pains returned no more. Her breasts subsided, and she was otherwise relieved without the aid of physic.

At the same time, her infant had violent griping pains, for which I also then prescribed

- * ℞ Aq. menth. piper. simpl.
— cinnamom. ten. a a ℥iij.
Tinct. castor. ℥iij.
Pulv. contrayerv. comp. ℥ij.
Extract. cicutæ ℥i.
Syr. e corticib. aurantior. ℥i. f. julepum; cujus
capiat cochliar. ij. quaque hora donec remiserit
dolor. —

scribed†. The child, after taking a few tea-spoonfuls, slept five hours, and awaked perfectly easy and quiet.

Laudanum, unfortunately, is in too general use, but long experience and humanity urges me to say that, in every respect, ample and decided proofs have been given me of the superior excellence of cicuta.

The *artificial sweat* does not flow kindly without the aid of external heat. It however, must be observed, that the excessive heat does not rarify, subtilize, or separate; but, like ardent spirit, burns and condenses. It is the moderate and genial heat that expands

℞ Emuls. commun. ℥iij.

Mannæ calabriæ ℥ss.

Tartar. solubil. ℥ij.

Aq. nuc. moschatae ℥iij. f. haustus statim sumendus.

† ℞ Rad. rhubarb. opt. rasur,

— valerian. sylvestr. a a ℥ss.

Sem. coriandr. contus. ℥i.

Aq. Bullient. ℥iij. stent simul per horas xij. Coloraturæ turbid. add

Aq. juniper. comp. ℥i.

Extract. cicutæ. gr. vi.

Syr. Balsamic. ℥iij.

— c meconia ℥ij. f. mistura: Detur cochlear minimum (a tea-spoonful) sæpe in die.

pands the cuticular passages, attenuates the fluids, and clears the habit: the blood, however, must be disposed for this effect, before it is too much forced; which is seldom the case, unless the previous evacuations have been made, and more especially if the phlogistic feverish diathesis prevails. When the signs of concoction appear after this, that is the best time for increasing the action of the vessels, and giving motion to the fluids in their separation*. Sudorifics may be considered as possessed of a threefold power. They are attenuant, resolvent, and deobstruent: they also are inspissant, condensing, and obstructing; for that which remains of the mass of blood after the latex or thinner part is dissipated, is in so dense and coagulated a state, as hardly to be resolved by art.

The means used to raise sweat are various, and adapted to the nature of the disease, and to the state of the patient's constitution. Some are raised by external means, as by the vapour or fumigating bath, which is not only the most pleasant, but the most effectual, either

* *Natura enim semper intendit mundificari sanguinem, dum separat quod officit.* CELSUS.

either for an incipient or long standing disease.

Although the alkaline sudorific and antiacid diet most readily attenuate and break asunder increased cohesion of the animal fluids, even if continued to the loose putrid degree, yet none but Homberg and Lemery have imagined they discovered an acid existed formally in the blood; and probably their experiments were made on diseased blood. That an acid, as well as an alkaline acrimony sometimes is present, I imagine is generally allowed. “Some,” says the illustrious professor Cullen, in his *Materia Medica*, “have entered with great subtilty in their enquiries into the different kinds of acrimony; but it appears to me, that we are only acquainted with two species which are the source of the rest; viz. the acid and the alkaline. Most part of our fluids are formed either originally, or have a tendency to become acid in the stomach; and therefore, we may suppose an acid acrimony even sometimes to enter the system and to prevail there.” Again, “It is found to be the constant effect of the œconomy to convert the acid into an opposite
“acri-

“acrimony.” “Some,” he says, “affirm
“that this is a perfect alkali; but all agree
“it is of an alkaline nature.”

As acid is so opposite in its nature to milk, chyle, or blood, that it occasions them to coagulate; it therefore is evident, that the too liberal use of acid is improper, as it does not make the mixture uniform.

The gouty habit is much annoyed by acridities in the *primæ viæ*; and persons who drink acid liquors soon find them productive of pains in the joints and extremities, similar to those of the gout and rheumatism; which disorder being remarkably frequent in cyder counties, and in countries where sharp, acid, and austere wines are in common use, these, and all acid liquors, have therefore been generally suspected as promoters of such complaints.

Some, as Doctor John Armstrong, suspect a subacid acrimony to be lurking in the gout. It is of consequence to know this, as it would give a key to the treatment of the disease.

The volatile alkaline sudorific, before the accession of the autumnal febrile quartan, or tertian paroxysm, by increasing the

action of the solids, gives motion to the fluids, and promotes sufficient heat for obviating the cold fit; but during the inflammatory spasm, when the circulation is increased, it cannot be given with advantage. The tonic astringent and volatile alkaline in the intermission, after the primæ viæ has been cleansed, and perspiration restored, shew their roborating, antispasmodic, and antiseptic power. But these two very important medicines, are still more dangerous during the paroxysm of the vernal intermittent, because that has more of the inflammatory diathesis. In this fever I have generally used the neutral saline mixture, with some extract. cicutæ and camphor, and found them antispasmodic, diaphoretic and antefebriile; for they either obviated or lessened the force of the fit.

The volatile alkaline cures a cough, and is serviceable in catarrh, diabetes, dropsy, rheumatism, dysentery, and lientry, by diverting the acrid stimulating serosities that, by a constriction of the surface, might fall back on the intestines or other internal parts, and debilitate their tone. Upon this principle it is, that emetics and diaphoretics
are

are of such sovereign use in these complaints.

Although sudorifics relieve diseased habits, support natural warmth, and are more safe and more certain in their operation than purgatives, yet, if the blood is very often excited by hot stimulating and inflammatory medicines, they will confound the natural motions, affect the brain, and depress the mind: instead of tempering acrimony and allaying spasm, they will not only increase these, but deprave the blood; as may be perceived by the saliva and the urine acquiring a putrid foetor. Nothing changes the type of an intermittent to a continued fever, or renders it more fixed, so soon or so certain as the immaturity forced sweat.

To force a sweat in the beginning of a miliary fever, is prejudicial; for it encourages the eruption, and thereby increases the putrid ferment. The inflammatory changes its type to the low, nervous, putrid fever, by heightening the impulse of the heart and arteries, which fixes the inflammation on the brain. The heart being thus deprived of its enlivening principle, the pulse sinks, the mind becomes anxiously despondent, the

mass divides, and the thinner parts exude in partial sweats.

Insensible perspiration, though natural, is very different from *the sensible*. It is the most putrid discharge from the body, and the most fugitive; and exceeds the whole of all the other secretions. It issues from every part of the body. According to Sanctorius, the discharge of this subtle matter is equal to five eighths of the food. When the urine is eight ounces, and the fæces four, insensible perspiration is at least forty. Astonishing!——Be that, however, as it may, this, we know, is certain; whenever that insensible fluid is suppressed or impeded, it is taken up by the absorbent lymphatics, and mixes with the blood; in which it increases the septic ferment, and thereby loads the habit with such discordant particles, as lay the foundation for the most grievous disorders; such as gout, scurvy, and dropfy; which are again alleviated by increased insensible perspiration. The quantity of this discharge is proportioned to the habit, the season and climate.

C H A P. V.

On Evacuation by Expectoration.

THE *modus operandi* of those things which promote expectoration, or an increased discharge of secreted mucus from the bronchia of the lungs, is not sufficiently understood. Many stimuli, termed *pectorals*, are employed to give impulse and motion to the organs of deglutition and respiration, for effecting this excretion; though few of them have a right to the title of *pulmonics*; nay, they rather increase inflammation, cloy the stomach, and make the symptoms more grievous, by their acrid and oleaginous principle.

Fume or vapour on the palate and fauces relaxes the excretories and separates the phlegm; but cannot possibly be of the least service towards promoting expectoration from the glandular emunctories of the lungs, because every thing grosser than the natural

air that enters the trachea and bronchia of the lungs, creates vehement disturbance, till it is thrown off again by the force of coughing. Hence the difficulty of conveying absterging and vulnerary remedies directly to exulcerated lungs. There is but small analogy between the healing of ulcers upon the external surface of the body, and those in the lungs; in which last, there is always a fever and inflammation. The softening mucilaginous and oleaginous bodies, allay coughing by obtunding the acrimony of the serosity separated in the glands; and the gums, such as ammoniac, asafoetida, myrrh, &c. succeed by their antispasmodic power and virtue. We cannot suppose that these bodies reach the lungs in their substantial form, nor can we suppose they would be so received by the circulation of the reflux blood. We then have no other resource but to remote application: such as the vapour-bath impregnated with medicinal herbs, and applied externally to the pulmonary region; which is very efficacious; for it relaxes the vessels, renders the matter moveable, and stimulates to an excretory motion. There is nothing that so soon or so effectually relieves partial or
universal

universal complaints, occasioned by suppressed perspiration.

A young married Lady, by imprudently walking in the cold night-air, from an assembly, where she had overheated herself by dancing, occasioned such a sudden check to perspiration, before her blood was permitted to cool, that, next morning, her legs, thighs, and abdomen were much swelled. She was also oppressed with a difficulty of breathing. The third day, when I was consulted, the symptoms were considerably increased, and there was all the appearance of an incipient dropfy. After she had taken a gentle dose of jalap and cremor tartar, I ordered her to be sweated by the vapour-bath, she had bathed but five or six times, when she came to thank me for being perfectly recovered.

If a cough, that natural stimulus to expectoration, be excited before the matter is detached from the blood and while the pulse is yet strong, and the heat intense, as in the beginning of phthisis, hæmoptysis, pleurisy, or peripneumony, instead of relieving, rather tends to augment the congestion of blood; it increases the cough and difficulty of

of breathing. Stimulating expectorants, for the same reason, however necessary, must not be used too soon.

The natural crisis of cough, pleurisy, peripneumony, or pleuro-peripneumony, and some putrid fevers, is expectoration. This excretion is promoted artificially by external as well as by internal means. Sailing under gentle motion, or riding slow on horseback, in proper air, produces almost always very favourable events: it gives uncommon alacrity, increases perspiration, excites appetite, and promotes digestion and expectoration, to the great relief of the lungs and chest. Hence the passive exercise of sailing, and gentle riding, has been so strongly recommended as particularly beneficial in phthisis pulmonalis—a disease which, by the bye, I am far from thinking incurable, provided the patient enjoyed a previous good state of health; that the disease was not originally inherent, but occasionally acquired, and opposed in due time; that is, before the affection has advanced to vomica*; or tubercles† or concretions were formed in the

* An encysted humour in the lungs.

† A viscid impacted matter in a peculiar membrane forming knobs or swellings.

the bronchia of the lungs ; or empyema in the chest*. While the disease, I say, is in its primary stage, and the inflammation has reached no farther than the surface of the lungs, or but a small part of them is ulcerated, and the matter benign, it is more susceptible of cure than is generally imagined: for I have succeeded in the cure of several, and know that other Physicians have also been successful. Wherefore it is truly unfortunate for that patient whose relations and attendants, from a vulgar opinion of the disease, in any stage, being incurable, neglect to consult the Physician until medicine, diet and regimen can, in reality, do no more than merely palliate the severity of its symptoms for the remains of a short existence.

* Empyema, or purulent collection, within the cavity of the thorax, succeeds an inflammation of the lungs that has not been resolved by expurgation, expectoration, revulsion, or crisis. The distending matter being too fizy for absorption, and having no immediate vent by excretion, stagnates, becomes putrid and acrimonious; inflames the adjacent parts; and destroys quickly: absorption and evacuation must therefore be procured as soon as possible, by vomiting, purgation, expectoration, urine, and paracentesis.

existence.—“ But when,” as that elegant writer, the ingenious Dr. Hurd, emphatically declaims, “ the taper of life waxes dim, and the spirit just disembodying itself, stands hovering upon the brink of futurity, then is the Doctor called in with hue and cry : but what is his proper office, or how is he to conduct himself in so deplorable a scene ? The poor sufferer has exiled himself from the laws of medicine, and the arts of *Æsculapius* are all in vain ! Well, he is to grace the ceremony ; and, as the common, though true, expression runs, to give a formal sanction to the unhappy creature’s exit : and it is well if, after all, he does not bear a load of censure for not being able to effect a miraculous cure.”

Phthisis or consumption, whether pulmonary, renal, dorsal, mesenteric, uterine, or nervous, though the exercise, diet, and regimen be nearly the same in every hectic, yet their different causes must be attended to ; as must also the different stages of the complaint ; for the inflammatory, the colliquative and purulent, require very different modes of treatment. By a due attention to air, diet, exercise and regimen, with the
occa-

occasional assistance of a little well-adapted medicine and proper evacuations, it is, that hectic symptoms have a chance of being subdued. But, if these are permitted to advance till the disease is confirmed, no Physician, I believe, will be so delusive as to promise beyond the palliative cure. Principiis obsta.—It is easier to prevent than cure. Signal advantage is always obtained by a sedulous attention to the general rules of prevention.

C H A P. VI.

On Evacuation by Urine.

THE component parts of this lixivium of the blood is in proportion to the natural or preternatural state of the habit, circumstances of season, situation, mode of living, and exercise.

† On examining the urine, we attend to the quantity, colour, consistence, smell, and taste. If we want to investigate it farther, we do it chemically by evaporation, distillation, precipitation, putrefaction, or mixture.

Urine is not only various in different constitutions and ages, but in diseases. In infancy, it is sweet; in age, acrid and foetid; in the jaundice it is bitter; in diabetes, sweet. Where the salts in the urine become saccharine, and more liquid is emitted than drank, there is a colliquation of the blood and fat, a defect in the natural digestions, and a decay of the solids, as may be
seen

seen by the oil on its surface. The light amber or straw-coloured urine, smooth and equal, without sediment, about the consistence of well-fermented and boiled beer, is the most healthy. The most natural urine smells offensive.

When urine has neither scent or flavour, but is transparent and limpid, it is owing to its short stay in the body, a laxity of the urinary ducts and want of sanguification to give it tincture or consistence.

The colour, scent, and consistence of urine depend on the state of concoction, the liquor drank, and the contractile power of the renal pipes. The more high coloured the urine, and the less sediment it deposits, the farther it is from a state of concoction. When high coloured and foetid, it abounds with attenuated volatile salt and oil. If gross, and of a reddish, or an icteritious colour, it indicates a redundancy of crude recrements, from unconcocted blood, and an imbecility of the secretory faculty.

The urine of the most healthy body, by long detention in the bladder, more especially after long abstinence, or after it has

stood long exposed in a glass, or after digestion in a heat not exceeding that of the human body, becomes red, alkalious, and cadaverous. The feverish heat and thirst that attend the dropical patient is occasioned by that change taking place in the waters from their stagnation. If in sickness, when there is no immediate crisis of fever, there be large hypostases, or thick settlings in the urine, and it quickly putrifies when set in a warm place, these appearances denote the blood is broken and deficient of its spirituous principle.

The enæorema and nubecula, only show a lighter degree of the contents from their suspension, and that concoction is yet imperfect. A pendant white cloud towards the bottom of the glass is a good sign; and, if it soon becomes a sediment, it will be a still farther indication of the superiority of nature. When it exhibits the appearance of a blue ring on the surface, that is also a good omen. But if urine, when shook, retains its froth long, that circumstance portends a tenacity of the mixture, and a difficult crisis. Putrid urine, while unmoved, is less offensive to the olfactory sense than
any

any other corrupt animalized body. The periodical discharge of turbid constitutional urine is the effect of a secret operation of nature for relieving the habit of recrementitious matter. If such turbid discharge does not happen about the usual time, some artificial evacuation must be referred to. —These alternate turbid and clear discharges of urine, in the gout and other chronic complaints, indicate a long and obstinate continuance of the malady.

—If, in the malignant and pestilential disease, the urine be turbid and contains a black, oily, livid sediment; or the urine and excrements be tinged with blood, accompanied with faltering pulse, and dry parched tongue, a singultus then indicates the hasty approach of death. But in any other complaint, the singultus is more alarming than dangerous, and may be quickly subdued by sedatives and antispasmodics.

Though the natural salts in human urine be neither acid nor alkaline, but, like the ammoniacal, are partly fixed and partly volatile; yet, by violent motion, and heat in the blood, they become highly alkalious and corrosive. By the appearance of urine we

learn more of the indications of a disease, and state of the fluids, than by any of the other secretions. When high coloured, it indicates an acid cooling diet to subdue the alkalescency. We must not always, however, give our decided opinion on any one unfavourable phenomena, as a lost case. Nature has infinite resources, and a multitude of ways to exonerate herself. She often will change the most unfavourable symptom into a good one. She, in many cases, only requires permission to exert her vast powers. We must be careful neither to do too little or too much, especially in making evacuations, which, either do good or, at a certainty, do much harm.

That dire disease in the blood, which terminates in the urine, and is called *Lithiasis*, or a disposition to generate gravel and stone, ought to command the attention of every humane Practitioner, who also would do well to deliver his opinion on what is most likely to prevent, or to solve, the stone. Every constitution has a peculiar tendency to some particular disease; and consequently many have to this; which, to speak generally, is occasioned, in the predisposed habit,

bit, by living much on gross, earthy, viscid diet, and by lying much in a prone posture, and leading an inactive life.

Lassitude of body, parched tongue, slow latent fever, and fizziness of the blood, attends the calculous diathesis.

Diet and regimen counteract a tendency to this, or any formidable disposition in the blood and secreted juices. Either the acid, alkaline, or acescent diet makes a great change in the essential animal salts, and consequently upon the whole constitution.

The diet fittest for those who are subject to gravel and stone, is the demulcent; such as barley, millet, rice, brown bread, decoction of green pease, honey in water-gruel, milk and water, plain water, decoction of mallows with syrup of violets, linseed-tea, sago, decoction of barley with raisins or figs; and such things as are capable of changing and dissolving those of the saline, saponaceous, mucous, and gelatinous kind, or concretions. Whey, butter-milk, asses-milk, goat-milk whey, during the spring, by being attenuant, detergent, demulcent, mitigators of pain, and correctors of acrimony, are proper.

If earthy, gravelly, saline or slimy matter, those cementing principles of the stone, are resident in the habit, they must be carried off whilst in the loose inadheseive state, and while the urinary passages are sufficiently dilated: the retention of them may give rise to more complaints than their merely coalescing into calculous concretions.

Diuretic medicine, and all thin sub-acid liquors, as they quickly pass the urinary organs, are given to preserve the stream and with it expel slimy and earthy particles, which are too gross for passing off by transpiration and before they form into concretions too large for being sent off through the meatus urinarius.

Medicines of the diuretic class are resolvent, and promote a discharge of certain portions of the blood: viz. the saline, acrimonious and putrescent; and are therefore proper for scurvy, leprosy, dropsy, &c. but the gentle ones do more good than such powerful ones as those which, by violently forcing the urinary passages, inflame and ulcerate them, without acting upon the stone: wherefore it is that temperate, emollient, mucilaginous and balsamic liquors

quors are usually given, at the sametime, to soften and relax stricture, defend against gritty concretions, and blunt such inflaming spiculæ as that of the saline of cantharides, which is one of our strongest diuretics ; and, for that very reason, Dr. Mead prescribed the selties themselves, to be taken internally, for the leprosy ; in which disease they are said to be efficacious. They are not, however, to be given in doses above one or two grains ; nor too often, lest they should cause strangury, or priapismus, which may happen to be succeeded by universal convulsions and death ; for that has frequently been the effect of an ignorant, wanton, and lascivious abuse of these renovating stimulants.

The spring saponaceous vegetable juices have a power of dissolving stony concretions in the body. Those oxen which are killed in winter have, in general, stony concretions in the liver, lungs, bladder, or biliary duct ; but those which are killed immediately after a spring-feeding on the spring juices have none.

Baron Van Sweiten says, “ a copious and
“ long continued use of grass and dandelion,
“ succory,

“succory, fumatory, and the like plants, have
 “generally been followed with plentiful eva-
 “cuation of stony or calculous fragments a-
 “mongst the intestinal fœces; that is, of those
 “generated in the biliary ducts.”

Diuretics, merely as diuretics, are far less successful in gravelly and calculous cases, than we are generally apt to imagine; nay, some plants of the astringent class are more efficacious

Dr James, in his Medicinal Dictionary, says, “he has observed considerable, singular, and surprising efficacy in decoction
 “of yarrow, if used a considerable time for
 “calculous disorders. By the use of this
 “single herb,” says he, “I have observed
 “some patients entirely freed from nephritic pains, to which they had been subject;
 “for it is proper, in cases of this nature,
 “upon several accounts; since, besides its
 “consolidating and mitigating quality, it
 “abounds with a truly anodyne oil, which,
 “both in colour and virtue, resembles that
 “of chamomile, and is highly efficacious
 “in allaying pain and spasms.”

Chefneau, ex Zacut. lib. 2. prax. mirand. obs. 66. says, “The use of water distilled
 from

“ from the green leaves of tobacco, power-
“ fully removes stones firmly lodged in the
“ kidneys.”

Paracelsus's soveraign remedy for the stone, was the extract of safron.

Uva ursi, herb arsemart, the seed of common gromwell, pariera brava, flammula jovis, hyosciamus, dandelion-root, and scrozonera, are some of the most powerful nephritic vegetables that I have yet experienced to effect loose gravelly and slimy discharges. Most of the warm acrid plants, and those of quick growth, resolve concremented matter arising from certain portions of our fluids : so far they may be said to be lithon- triptic.

Phosphorus, the most igneous substance obtainable from blood, urine, human ordure, or hot alkalescent plants, is said to have no other sensible operation than to occasion borborygmi and crepitus ventris ; which shews, that it rarifies and repulses the contained flatus. As there is great quantity of fixed air in the human calculous, its solution must depend upon the expansion of that cementing principle. I have not yet heard

heard, that the power of phosphorus has been ever tried for this purpose.

Helmont says, “ putrified urine will dissolve the stone, by taking up urinous tartar after its own has deposited.” Fermenting mixtures made of the solution of the salt of tartar, or of wormwood and acid spirit, will cause air-bubbles to rise from calculi, and dissolve some part of them. The fixed-air avolates; but when the effervescence of the mixture is over, it has no effect on the calculus.

Professor Cullen, in his *Materia Medica*, says, “ Liquid shell, a combination of the muriatic acid with a calcarious earth, I have employed in nephritic cases, with a manifest alleviation of the symptoms.”

Hoffman recommends, above all things, his own anodyne mineral liquor in nephritic complaints on account of its efficacy and softness, when exhibited in small but frequent doses; which, he says, allays the spasms of the primæ viæ, and wonderfully removes the uneasy sensations, the nausea and vomiting, they occasion.—But this, I suppose, he never expected to do more with than merely to palliate, for it cannot cure.

Some

Some attempt to solve calculous concretions by alkalines ; such as by calcined shells of fishes, lime-water, oleum tartari per deliquium, potash, or salt of wormwood ; which must be done upon the principle of destroying some acid and glutinous matter on which the concretions are very rationally supposed to form.

Zecchius, Trallian, and Carolus Piso, recommend about a pint of warm water to be drank before dinner ; affirming, that after the first stone is discharged, none can ever be formed again, if the use of warm water is persisted in.—Tepid water, no doubt, will subdue the caculous diathesis in the blood : but drinking tepid-water to excess, or so much as to render it habitual, endangers debility, indigestion, lowness of spirits, hysteria, &c.

As the lithiasis is occasioned by crudities, nothing can help the stomach to promote digestion and assimilation so much as water. But there is much difference in the qualities of water.

Those springs which possess the property of dissolving and clearing off that crust which almost all the common waters deposite on
our

our culinary vessels, and which is particularly visible on that common vessel the tea-kettle, because it is seldom cleaned, are of great service in dissolving the calculous diathesis of the blood.

Mr. Stevenfon, aged 73, now living, as he has for many years, near the north gate of Bushy Park, about sixteen years ago, was attacked with the gout; which, he says, he neither had by hereditary right, nor by excessive or intemperate living, though he has always lived well. About six years ago, his gout changed its type to nephritic symptoms, which he attributes to having drank for some years a hard spring-water. Five years ago he left off the use of that, and drank the water which is conveyed in pipes under the river Thames to Hampton Court palace from Coombe-hill. He, at the same time, began to take Castile soap, (expressed oil and alkali, in the quantity of two drams a day) which he continued to do till about a year ago, when stones, or rather fragments of a stone, began to come from him by the urethra, to the number of three, four, five, or six in a day. They were thin and concave, as if they had been lamellated. Some were
smooth,

smooth, and some rough on one side; but all had ragged edges, and consequently were voided with considerable pain.

I lately went to examine these stones, and to enquire into the particular circumstances of this case. The stones filled a large size tea-cup, and weighed eight penny-weights: the fragments weighed from three to eight grains. He told me they weighed much more on their coming away. The query is, whether these single stones were formed each on its own nucleus, or are they fragments of a single calculus? I confess that, from their form, and every other circumstance I could collect, I am induced to be of opinion they are fragments of a single calculus, and that the lithontriptic power of the Coombe water and the soap disunited the concrete substance; and I am the more confirmed in this belief, because no fur will adhere to the inside of the culinary vessels wherein Coombe water has been constantly used; nor have I heard of any one being subject to gravel or stone who constantly used that water.

For the last five years, his common drink has been Coombe water, with sometimes a little rum or geneva. The latter, however, he was soon obliged to leave off, as it proved

a most painful forcer. We have many such springs in this island as those of Coombe-hill, which we ought to prize highly, for they are not only preventive, but curative.

Solvents make less impression on smooth compact bodies than on those which are rugged, light, and pervious. The calculus with asperities is most troublesome, and does most detriment to the sensible membranes.

As to lithontriptic or nephritic medicines, it would be a fortunate circumstance indeed, for the human species, if an infallible specific remedy was discovered which could be received by the stomach, and thence carry its active principle through the medium of the blood, without injury to its texture, and act on the calculous body with unabated force; or, if such a medicine could at once be introduced into the urinary bladder, as, without injury to its coats, could there act on the formed calculus with such force as to break it down into minute particles. There may be such remedies; there probably are remedies for all disorders. There was a time when even the ague and lues venerea were deemed incurable.

When the constitution has been much harassed by nephritic paroxysms, the patient
must

must endeavour to derive content from the temporary alleviation, and persevere in prescribed diet and regimen; for experience too fatally evinces, that even extirpation is far from being radical; nothing being compleatly so, that does not totally remove the primary efficient cause.

Moses Waitt, Esq. late of Ham-common, in Surry, in the year 1782, at the age of 72, underwent the operation of lithotomy twice within the space of that year. Soon after the second stone was extracted, a third was discovered; when, life becoming thus uncomfortable, he rejected all prophylactic means, and fell, as expected, within two years from the formation of the first stone. So far was his blood from being attenuated by phlebotomy, that it was always more fizy—A circumstance I mention to show in what a short time a stone will engender, when the blood is once vitiated by the calculous diathesis, especially in the aged. The first stone, if I am to judge by the indicating symptoms, formed in about three months. Mr. Pott having extracted the first stone, and Mr. Bromfield the second, I can have no suspicion that any fragments of either remained,

mained to become a nucleus for the basis of a new formation.

Though, from the preternatural state of the blood, morbid affections are seen in the secreted fluids; yet the urine itself, in its natural state, has great sanative virtue.

A Gentlewoman of Kingston, turned of 40, whose constitution was much impaired by a constant gnawing pain at the pit of her stomach, bad digestion, great and irregular flow of the catamenia, difficult respiration, latent fever, sore breasts, frequent loud eructations, irregular appetite, interrupted sleeps, and incessant thirst, applied for my advice, after she had been thus afflicted for several years, and ineffectually attended by the Faculty. Soon after I had prescribed for her, she absented herself for about three weeks; but then returned, with an appearance of joy that seemed little less than frantic, to tell me, she was perfectly recovered by drinking a cupful of her own water once a day on an empty stomach; which she did *by advice of a neighbour*, who, by the same means, had been relieved of an habitual obstinate cholic of many years standing, and attended with several similar symptoms.

She

She said it had operated gently by stool, and strongly by urine ; that it had increased her appetite, expelled wind, abated pain, and invited sleep. Her countenance was clear and healthy.

Externally applied, it is detergent discutient, antiphlogistic and sedative. It makes a most excellent collyrium for inflamed eyes ; and Boerhaave made much use of it in fomentations and in clysters.

C H A P. VII.

On Evacuation by Bile.

THE bile promotes the peristaltic motion: that is, stimulates the fibræ motrices of the intestines to perform their animal functions. It renders the alimentary fluid homogeneous, and fit to pass through the process of animalization. The bile has many qualities, properties and virtues. Haller, in his *Prima Linea*, says, “*Impedita a fluxu bilis ad intestina, destructa vesicula animalia robustissima interpaucos dies perisse.*” Etmüller, and, indeed, many others, speak of the great importance of this preserving fluid; and, no doubt, if it is not allowed to pass on uninterruptedly in its due course after it is secreted, life cannot long exist: but there are instances of patients recovering after there had been no secretion of bile for weeks, nay months.

In 1784, a Gentleman of Kingston, between 20 and 30, had a suppression of urine.

I was

I was called in on the third day. He had been copiously bled, and taken liquid laudanum in very large quantities. His blood was loose, rarified, florid, and frothy, without any inflammatory buff or ropy crust; a state the blood is always found to be in after having taken much opium.

I ordered a julep ex spirit. minderer. aquapuleg. spir. nitr. dulc. extract. cicut. syr. althæa, to be taken in doses of two or three spoonfuls every quarter of an hour. This, with the assistance of the *semicupium* and *terebinthinate clysters*, occasioned him to void more than a pint of urine within the hour; and, in a few hours more, to empty his bladder, and drop into a profound sleep; from which he awaked composed and easy, and continued so all the next day. The apprehensions of his friends, however, induced them, in the mean time, unknown to me, and before the full effect of my mode of practice could possibly be seen, to send for another Physician, to, what is termed, assist. When he came, that Gentleman and the Apothecary thought proper to repeat the bleeding, and to resume the laudanum. Within thirty hours after this, the patient's complaint

complaint changed to a remitting fever and tympanitis, or dry-droply.

The patient was now put on a course of deobstruent medicines (as calomel and rhubarb) which were persevered in day after day, and week after week, even though the symptoms increased, till singultus, thrush and flux, had almost overpowered him—It was then thought necessary to entreat that I would again resume my endeavours to relieve him from his extreme danger.

In compliment to the Profession, I now resolved to endure, as long as possible, the premature introduction of a Gentleman whose advice I, however, was determined should do no harm, and therefore forbade his dismissal. But, so soon as I had relieved our patient of his most urgent symptoms, and as I knew he had been more than sufficiently evacuated, I ordered the Peruvian bark to be given during the remissions of the febrile paroxysms, to check the fever and putrid process, give tone and contractility to the muscular fibres, and density to the loose rarified blood. Still farther to help us, I availed myself of the opinions of Boerhaave and Boyle, who say, relief for the tympanitis

nitis is equally given by paracentesis as in ascitis. I also had seen Chefelden's account of a cow having been saved by a puncture made in the belly, when ready to burst by the expansion of vapor. The operation was, I knew, at that stage of the complaint, very safe, and might have been an useful one: my opinions, however, were again overruled by the Physician and Apothecary.

Finding myself thus hampered and restrained from saving, as I thought, a valuable life, without so much as one single reason being assigned for the opposition, I requested of the family that a third Physician of eminence should be called in as umpire. This being immediately granted, he and I agreed *unâ voce*, instead of persisting in the purging plan, to give him the red Peruvian bark, in frequent and large doses, during the remissions of his fever, which then at once gave way; his immensely distended belly subsided; a secretion of bile took place, after being upwards of seven weeks suppressed; and he perfectly recovered that good health he has enjoyed ever since.—That the patient secreted no bile, during his illness, was evident from
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the white colour of his intolerable foetid stools.

About three years ago a servant maid at Kingston, between thirty and forty, of a thin weakly habit, was attended by the same Apothecary till she was obliged to leave her service, and he, himself, urged her to seek relief in an hospital. The mistress she formerly served, however, having been my patient, recommended her to my care. I found her exceeding weak, much oppressed in her breathing, her belly enormously expanded with tympanitis, and her monthly terms obstructed. She had been copiously evacuated.—I pursued likewise with this patient the opposite method, and in ten days or a fortnight, she returned again to her former mistress's service; where she now is, and has been ever since.

These two recent and well known facts, I relate for the purpose of ascertaining two or three very material points.

First, that though no bile is secreted, Nature may nevertheless exist for a much longer time than is generally supposed.

Secondly, that a tympanitis, though deemed more difficult to cure than a humid dropfy,

dropfy, is ftill within the reach of art and judicious management; and that evacuants are not to be too much depended on, but are really destructive when much perfifted in. Animal vapour eludes the operation of the moft active purge. By weakening, it rather generates than difpels vapour.

Thirdly, that if we fubdue the leading fymptom, the concomitant will yield; as was the cafe in thefe two inftances.

When the fecreted bile is obftructed in its excretion into the intefines, the glands of the liver, biliary-dufts, gall-bladder, and aperture of the pores being thereby greatly diftended, it paffes through the lymphatic veffels into the blood, and tinges the ferum; that tinges the fkin, nails, and tunica albuginea of the eyes; and is attended with all the fymptoms of jaundice.

Calculi in the neck of the vefica-fellis, or gall-bladder, obftruct the excretion of bile; but the ftone does not form in that vifcus fo very often as many Practitioners are apt to imagine. Similar fymptoms will arife from other caufes; fuch as vifcidty of the bile, which obftructs the biliary dufts; or, from fpafmodic conftriktion of
the

the muscular fibres of the duct, which will draw the stomach and whole abdominal viscera into consent, till a paralysis ensues.

Bilious concretions are formed by a repletion of viscid bile when at rest in the gall-bladder. The weaker the patient, the more cohesive the bile from the attraction of the bilious salts.

Such saponaceous diet as honey and sugar, as well as the attenuating juices of fumatory, succory, vipergrass, dandelion, goat-beard, whey, tepid water, and the neutral salts, resolve inflammatory concretions: the alkaline resolve the glutinous. "Mercury itself," says Boerhaave, "does not fuse the blood so powerfully as the oxymel simplex of Hippocrates, or the juice of fumatory in considerable quantities." Mellow white wine meliorates the preternatural acrimony of the bile that is productive of gripes, colic, &c. Honey tempers and nourishes the bile. It is antiseptic, for it will preserve vegetables.

Hippocrates thought lymph and bile had a great share in the generation of calculous matter. If they have, may we not reasonably suppose they also contribute to the
formation

formation of gouty calculi which they so much resemble? Those who are afflicted with this disorder are much annoyed by lymph and bile.

The greatest part of our knowledge of bile we owe to Van Helmont. Although this juice subdues acids, it is neither alkaline, fixed, nor volatile; but, by the oleaginous and sulphureous corpuscles diluted in its phlegm forming a balsam, it sheaths, incides and protects the fluids.

Lymph and chyle are attenuated by volatile or fixed salts, pungent vegetables, saponaceous substances, warm air, or motion; and are coagulated by ardent spirit, spirit of vitriol, or cold air. Acidities in the primæ viæ render the bile inactive.

From an inordinate secretion and effusion of bile, diarrhœa, cholera morbus, hepatic flux, &c. ensue.

Too great an evacuation of bile, either upward or downward, is prejudicial to chylification, consequently to nutrition and secretion, from whence ensues the cold acid temperature, attended with paleness, weakness, swooning, &c. Hot climates and hot seasons, have a remarkable effect in exalt-

ing and vitiating the bile. For restraining this, we are to temper, soften, obtund, refrigerate and strengthen. If on a redundant effusion of bile, it should quickly accumulate after it has been medically evacuated, the primary inciting cause must be subdued, or the effect will not cease.

From a defect in the secretion of bile, there is a defect in concoction or assimilation, and distribution : whence colic, spasms, tympanitis, hypochondria, &c.

In order to supply a defect of bile upon an emergency, we must look for its most sensible quality ; which is so bitter, that one drop of it communicates bitterness to half an ounce of water. Experiments show that an acid, earthy, alkaline and sulphureous commixture forms a bitter, and bitters have been considered as a subsidiary bile ; but the vegetable bitter comes far short of supplying its defect in the system.

Bile is aperient, detergent, discutient, stimulant, antiseptic, and sedative. Boerhaave says, “ the bile of animals, though but little used in medicine, is one of the most efficacious, if not absolutely the best attenuant, of the animal fluids.” He found

found a drop or grain of the extract of the gall of an eel a most powerful succedaneum in defect of human bile, and particularly in dissolving curdled milk on the stomach of sucklings.—I have given an adult to the quantity of a dram without moving him more than twice.

Doctor Arbuthnot observes, that the milk on the stomach of calves, which is coagulated by the rennet, is again dissolved and rendered fluid by the gall in the duodenum.

It would be endless to enumerate all the virtues ascribed to bile, both by ancient and modern writers. I have frequently directed the use of it with bitter herb decoction in clysters; and the umbilical region to be fomented with it, for dislodging worms from the bowels. I have frequently cured the pruritus, or itch, by a liniment composed of bile, oil, sulphur and nitre.

However, it is not bile or urine only, but every distinct and separate part of an animal body, that serves, more or less, to make up the catalogue of the *materia medica*. The very viper, that possesses the most virulent animal poison, is not only an use-

ful, but an highly restorative diet and alexipharmac. Perhaps there is no better medicine for removing specks or floughs on the eyes than *oleum viperinum*.

C H A P.

C H A P. VIII.

On Evacuation by the Catamenia.

THE catamenia are a monthly evacuation of mere blood from the uterus. They vary with the climate. In this island, they, for the most part, commence at fourteen or fifteen; seldom later than eighteen, or continue longer than fifty. If they come early, and are profuse, they cease early.

This is the only periodical evacuation of blood: all others are accidental, morbid or critical; though, by habit, they will so far establish themselves in the system, that a precipitate stop would be attended with the utmost danger.—The quantity of blood thrown off at each menstruation is from four to fifteen ounces.

About that critical period when the menstrual discharge is taking its final leave, there is always some struggle in every habit, and more especially in those who are fan-

guineous, and who have been accustomed to copious menstrual, nasal, or hæmorrhoidal discharges, or other increased excretions.—After that period, all the latent seeds of diseases, especially gout*, break out in the luxurious and inactive, whose blood and juices are depraved, and who neglect to prepare for such attacks.

If the catamenia happen to return after the usual final period, as they sometimes do, they are occasioned by some inciting cause; which, if not removed, will be fatal. Nature is more easily and more effectually assisted before than after this morbid phenomenon appears.

It sometimes happens that the catamenia will not flow by the vagina, but make choice of some other emunctory; as that of the mouth: however, if no untimely astringents are obtruded, no ill consequence will happen: the error loci must be attended to, and the habit rectified, before the next expected return. I have had many of these cases, but here shall only notice two of them.

A few

* *Mulier non laborat podagri nisi menses ipse de-
fecerunt.* HIPPOCRATES.

A few years ago I was sent for in the night to a Lady, of the sanguineous habit, about thirty, who was discharging great quantities of blood from her mouth; which had much alarmed the Apothecary, who had been forty years in practice. Perceiving it was only the catamenia, I took my leave, by forbidding the use of medicine for two or three days; in which time, as I foresaw, she got well. I then ordered her body to be kept easy and soluble, by a dose occasionally of pilul. rufi; and two days before the succeeding visitation, to take three doses a day of saffron and flowers of sulphur: (about eight or ten grains of each for a dose :) which she did. She has been perfectly regular ever since.

I was soon after sent for to relieve another Lady between thirty and forty, whose catamenia had taken a similar course by the mouth. The Apothecary, mistaking it for an hoemoptysis, had bled her copiously, and thrown in some restraining medicines; which, as naturally might be expected, had almost stifled her; inasmuch that it was with the utmost difficulty she could respire. Her pulse wavered, and was low, and she
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had frequent deliquiums. I directed her to be cherished by white-wine whey, chicken-broth, &c. and, when faint, to take some cordial drops; as tincture of castor, spirit of lavender, &c. She recovered at that time, and became regular; but having been, for some time before this casual incident, in a declining hectic state, she died a few months after.

A flow of the menses, or other hæmorrhage, during the course of a putrid or malignant fever, even on critical days, terminates fatally.

As the catamenia flow from thousands every day in every month, the common idea of their depending upon, or being regulated by, the lunar changes, is evidently a vulgar error: and, as moderate bleeding immediately before their expected flow, neither retards their appearance, nor diminishes their quantity, but, on the contrary, causes them to flow more easily, and more abundantly, they therefore cannot be said to depend on a general plethora; and as those who are healthy, brisk, lively and active, not only perspire more, but also have a more copious menstrual flow than those
who

who are weak, dull and infirm, it is evident that a want of perspiration cannot be the cause of this stated local plethora.

Menstruation, foecundation and parturition, are some of those secret operations of nature, which we cannot investigate. The suspension of the menses, during the time of gestation, and that of lactation, evidently shew, the intention of nature is to preserve the blood until the maternal duties are performed.

The cachectical symptoms incidental to the sex, from a morbid suppression or inordinate profusion, are many. The blood acquires new qualities, habitudes, positions, determinations and relations. Phthisis, convulsions, hysteria, mania, are not uncommon effects of a sudden suppression. A just idea therefore of the best means of restoring this natural discharge, or suppressing its exuberance, is of the utmost consequence. The medicines and methods employed for effecting the first intention, are supposed to have a power of opening and expanding the extreme arterial vessels of the uterus, and giving force and momentum to the blood.

To

To effect this, we must carefully attend to the age, productive causes, state and condition of the constitution : as no two habits are in all respects alike ; therefore, almost every one, may require a different mode of treatment. Though we cannot speak here particularly to each individual's case, yet, we can speak decidedly to certain general characteristic signs ; as, for example, if the patient be cold, lax, feeble, pale, and spiritless, that is to say, if she be chloretic, then, such tonics as steel, aromatics, bitters, cold air and the cold-bath, are necessary to strengthen the weak system of the uterus. Cold, to a certain degree, heateth : wherefore the cold-bath rather promotes than restrains hæmorrhages. Sea-bathing has wonderful effect in removing morbid suppressed menses, when occasioned by debility.

If there be heat, plenitude, density of the blood, rigidity of the vascular system, and the suppression obstinate, such potent deobstruents as aloes, mercury, the foetid gums, castor, saffron, sulphur, and such other things as dispose to hæmorrhagy, together with bleeding in the arm or foot, and such
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thin diluting liquids, as will relax, attenuate, and expel the stimulus, and take off stricture of the blood-vessels of the uterus are required. Tepid-baths and light air are cooling because they relax and expand; wherefore, the attrition that causeth heat and compression is proportionably less. The rare is cooler than the dense fluid.

If a defect of the catamenia be from inanition, a more plentiful supply of nutritive juices, analeptics, and such cordials as wine, should be given to invigorate the organs of digestion, and enrich the blood.

If the suppression be owing to a sluggish viscosity of the fluids, then attenuants, stimulants, volatiles, exercise, and particularly dancing, and temperate air, not only remove the obstruction but subdue the cause.

If the suppression proceeds from painful spasmodic constriction of the uterus, a frequent consequence of cold, emollient, gentle aperient and foetid clysters, sudorifics, diuretics, pediluvium, semicupium, friction, electricity, sitting over warm stimulating volatile steams, antispasmodics, and mineral waters are indicated, to lessen the vis resistendi of the excretories. An injection
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of the fume of tobacco, as mentioned in page 58; or the vapour of burning sulphur in a chaffing dish, are powerful catamenial promoters. Stimulating emenagogues, are only effectual at the near approach of menstruation. These I have often assisted by the deobstruent and sedative draught*, which, in general, has given almost instant relief.

Disquieting passions, or violent motions of the mind, disturb the circulation of the animal fluids. The mind is to be soothed and quieted; but it is a difficult task to harmonize the mind before the cause of its disquietude is removed.

An ineffectual use of emenagogues, however, is not to be obstinately persisted in. I never knew a patient so far restored as to be perfectly regular, and enjoy full health, who had been morbidly obstructed for six months: nor do I think it can be proper, after so long an obstruction, to force the uterus. On
such

* *R* Extract. cicutæ.

———— hyosciami, a a gr. iij.

Aq. Puleg. \mathfrak{z} vi.

Tinct. croci \mathfrak{z} iij.

———— Castor. gutt. xxx.

Syr. rosar solutiv. \mathfrak{z} i m. f. haustus.

such occasions, I have generally enjoined my patients to pay a proper attention to the non-naturals; to the use of mineral waters, and to drink sometimes the tea of such simples as pennyroyal, white horehound, chamomile, feverfew, &c. The habit in general is to be attended to for preventing cachexy, which is much to be dreaded.

During the flow of the catamenia, but very few medicines are admissible. I have never ventured to prescribe farther than some gentle aperient clyster, lest, by incommoding the stomach and ruffling the habit, the natural discharges should be diverted from their proper course, which is easily done at this crisis.

Tho' moderate bleeding promotes the menses, yet a very large spontaneous discharge of blood by the hæmorrhoidal veins, or nose, suppresses or considerably diminishes them: copious venæsection, either before or on an undue return after the usual period of their finally ceasing, has a similar effect in the plethoric habit.

A profusio mensium, from a depravity of the menstrual blood, and laxity of the uterus, is also attended with many inveterate

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cacheetical

cachectical symptoms. When the impurity of the juices which have thus depraved the blood are corrected and carried off, astringents may then be used to brace up the lax tone of the vascular system. Rest and the dry diet must also be attended to. The same cautions are necessary for the cure of the fluor albus, a discharge of a chylous matter, separated by means of the glandulous substance of the uterus. Women of tolerable strong constitutions may endure this discharge a long time ; though not without some inconvenience : but if it is incautiously suppressed before the antecedent inciting cause be removed, leucophlegmatia, dropsy, ill-disposed ulcers, or other cachectical symptoms, will ensue.—Such acrid serosity of the blood requires the correction of demulcents.

C H A P. IX.

On Evacuation by the Semen or Sperma.

THE Semen, or vivifying principle, secreted in the testes at the time of puberty, like the speck of entity in the seed or pollen of the unembrionated plant, expands and unfolds the mystery of its nature in the formation of the foetus, whose birth is to preserve both the mental and corporeal resemblance of those from whose semen its existence is derived: that is, as nearly as is consistent with the infinite variety of nature*. It, however, is not our present intention to say more on the subject of generation than merely to show the importance of that spirituous balsamic part of the blood quod vitam impertit & partes confortat. The moderate venery of full grown, warm, and atheletic habits, by alleviating nature,

M 2 preserves

* ——— Facies non omnibus una
Nec diversa tamen ——— Ovidius.

preserves health. Semen, by long retention, loses much of its stimulating active power ; but an immoderate and too early use of venery, is irretrievably injurious : it weakens the nervous system, lessens innate heat, and consequently the assimilating power and prolific faculty. If the blood, even in the strongest constitution, is deprived of this nourishing, animating principle, the sight and memory will be thereby impaired : and tremor, debility, relaxation, dejection, tabes-dorsalis, convulsions and aepesia will soon ensue : but, in the infirm and aged, it quickly extinguishes the lamp of life.

As temperate venery has salutary effects on the male, it must, *cæteris paribus*, have the same on the female : it prevents and cures those chloretic symptoms which arise from a morbid suppression of the menses ; and restores that natural discharge, by warming and invigorating the blood : but excess may bring on weakening symptoms ; such as glandular discharges, fluor albus, and the cachectic habit. If the uterus be much debilitated, an impotent reluctance to venereal enjoyment is thereby induced, and the power of conception and retention is lost.—Fecundity

cundity depends as much upon the tonic power of the matrix, as upon the strength and purity of the semen. Whatever nourishes and dulcifies the juices, not only improves and increases the semen, but also strengthens and invigorates the matrix.

As blood is not generated so fast after the meridian of life as in youth, native heat, the instrument of vital action, diminishes, and the spermatic vessels close for want of good and active blood to distend them. Venereal incitements are then less, for it is the copious secretion of the *fuccus genitalis* that prompts to a discharge. The *vesiculæ feminales* becoming less turgid, there is less danger of a spermatic plethora, or inflammation, or swelling of the vessels of the testes; or of an over-straining of the nerves. I have, it is true, had patients, whose imaginations, even when far advanced beyond that meridian, were so much agitated by venereal dreams, as to occasion involuntary nocturnal emissions: that, however, was not always produced by a plenitude of salutary juices in the vessels; but oftener by some morbid inciting cause; which, by thus depriving the body of its animating powers,

enervated

enervated the system, and rendered the balance between the solids and the fluids unequal. This morbid excitement was unnatural, and consequently to be checked, by correcting the fault in the habit. If the cause is nothing more than mere debility and laxity, as it often is, a long continued use of chalybeate waters, and the cold-bath, will be useful.

Attention to the nature and effects of an excess of this excretion, whatever may be the cause, is no less necessary than that which is requisite to the *stillicidium virulentum* from the glands of the urethra in men, or the vagina uteri in women, à coitu impuro.

The *satyriasis* in men and *furor uterinus* in women, are affections that arise to a species of mania. Of the latter I have had several under my care : of the former but one in whom the characteristic signs were remarkably strong. He was in his eighty-second year and had been married to a woman above twenty years younger than himself, when he was seized with a hemiplegia, from which I recovered him; but he very soon after was affected with a *satyriasis*, when his wife became a sacrifice to that passion, which also killed him.

C H A P. X.

On Evacuation by Milk.

WHEN the tubuli lactei are distended with milk, it is absolutely necessary to empty them so soon as possible, by natural or artificial suction: for the best milk will soon degenerate if it is suffered to stagnate; and inflammation, suppuration, or schirri, that terminates in cancer, will ensue.—But this is the proper province of the Surgeon and experienced Acoucheur.

C H A P.

C H A P. XI.

On Evacuation by Bleeding.

TOPICAL EVACUATIONS are contrivances to assist the vital principle which governs the stadium of heat in the blood for preserving its natural motions and due consistence. Evacuation, by phlebotomy, is neither elective nor disjunctive, but suddenly discharges the innoxious with the noxious principles. Vesicatories and issues draw off that which has seceded or is disposed to secede from the general mass.

The whole intention of bleeding is to diminish the redundance and restrain the impetus of the accelerated mass and stimulating power; by which, the inflammatory diathesis may be so far reduced, that refrigeration, separation, and attenuation may take place; a revulsion be made from a morbid part; and respiration, the pulse and vital actions, become regular, equal and free.

Bleeding

Bleeding is performed in imitation of the natural spontaneous excretion or eruption of blood from the nose, hæmorrhoidal veins, anus, breasts, or uterus, which prevents or critically terminates acute diseases.

Bleeding is practised with most success in cold climates, where the inflammatory diathesis and acute diseases prevail; but excess in every climate is to be avoided; for, by occasioning an abatement of native heat, numbness, paralysis, hysteric affection, vertigo, blindness, tremor, debility, &c. may ensue. Immoderate spontaneous effusions of blood, are succeeded by dangerous convulsions, delirium, and lypothymia, or sudden failure of animal and vital actions.

A pauper—a coal-heaver in the service of the late Mr. Henry Rose, of Kingston, was lately brought to me by two others, who supported him on his feeble legs, and told me that the poor creature had been bled ten times in a few days by the Apothecary, who was now displeased with him for not submitting tamely to the lancet the eleventh time. This was for a cutaneous complaint, in which the lancet ought not to have been used at all. But it is not my intention to
comment

comment here on such practice; it needs none. I shall only say, that, by the very opposite method, he was recovered. By living on a generous diet, increasing that gradually, and daily drinking a few glasses of port after dinner, his impoverished blood was enriched and increased, and his enfeebled solids filled and strengthened.

Since the powers of life are sooner diminished by bleeding than by any other evacuation, it is evident that no such evacuation should ever be made but when it is indispensably necessary. It should be most cautiously considered, that blood, and what Hypocrates calls animal spirits, were originally united by nature to flow in one stream together; and therefore, that, if much blood is taken away, much of the vital principle must be lost with it: the remainder will consequently be weak and incapable of giving tincture to the new-formed chyle. The blood is *custos vitæ*. In scriptural language, it is “the seat, the chamber and magazine of life.—The vital strength rideth in the chariot of the blood.” The doctrine of that great Pythagorean philosopher,

Isofopher, Empedocles, placed the existence of the soul in the blood.

The rational Proficient is ever sparing of this most precious fluid; whereby he is the most successful in effecting firm and lasting cures, especially in his attendance upon infancy and age. The great error of taking away blood, almost in any quantity, from the aged and gouty, or aged scorbutic patient, or from those of weak nerves, can never be compensated. But, however much I may decry excessive and indiscriminate bleeding, I would not be understood to unite with Erasistratus, Helmont, Paracelsus, and their followers, who totally condemn the practice of bleeding on any occasion whatever; for we every day see that where a sedentary life, and high living, or a suspension of some accustomed evacuation, has occasioned a redundance of blood, which is apt to bring on scurvies, infarctions of some of the viscera, lethargic, or apoplectic disorders; or where there is an asthmatic difficulty of breathing that threatens suffocation; while sufficient strength and energy remains, a small or moderate quantity of blood, when drawn off with a prophylactic

phylactic intention, may assist and give relief even to the most aged. In the prime of life, if the patient is strong, plethoric, his disease acute, with high and quick vibrating pulse, incessant thirst, tight-bound cough, and in danger of hæmorrhage, the propriety of bleeding, and even repeating it, is obvious to the meanest capacity; but where the pulse is soft and rather languid, the heat moderate, though attended with the usual symptomatic cough, as in measles or influenza, the lancet is wisely withheld, or but sparingly used.—Enough of fever is always to be left to conquer the morbid cause. Bleeding is far from being, on all occasions, a necessary prelude to the treatment of a disease. In shunning the Scylla of fever, we must not run upon the Charybdis of palsy, dropsy, or convulsions. Bleeding on the attack of some palsies would confirm the complaint. By increasing the fever till it terminated in a profuse sweat, I have had the pleasure of seeing several of my paralytic patients restored to perfect health. A supervening fever is often the happy termination of many lurking complaints.

A palsy

A palsy does not so often happen from plenitude of blood, as from loss of its quantity, impurity of its serum, and a disturbance of the mind. When it is occasioned by a redundance, evacuation is then not only needful but must be immediate.

Howsoever necessary bleeding is in pleurisy and peripneumony in the first stage of these complaints, yet if it be too copious it will hinder expectoration and discussion of the inflammatory matter, and lay a foundation for catarrh, annual coughs, and deposition of serum and lymph on the lax glandular organs.

If there should be a plethora in the sanguineous constitution during pregnancy, the drawing off a small quantity of blood, in the second or third month, will contribute to preserve the health of both mother and foetus. But abortion, and all the dreadful consequences attending it, may be occasioned by unseasonable bleeding and purging.—As the blood, during pregnancy, has a tendency to the inflammatory diathesis, opium, which, I am afraid, is too frequently used by the unskilful in many other cases as well as this, can never be employed

to advantage: for, instead of giving tone and strength, it relaxes, and thereby increases hæmorrhage, and weakens the action of the moving fibres.

In the spring season when there is an orgasm of all nature, and every thing in animal and vegetable evolves, opens and expands, hæmorrhages ensue, that resemble a redundancy of blood. But it must be observed, that, though bleeding may be absolutely necessary in some vernal acute diseases, yet, the frequent repetition of it increases plethora, and induces cacochimy. The pulse, which in general is the Physician's best guide for the use of the lancet, is not always to be depended upon in spring.—When there is plenitude of blood, the pulse, instead of being raised, is depressed. Nor is its appearance always a true indicator for the use of the lancet: several other circumstances, besides the morbid cause, may influence its phenomena; such as the size of the orifice; the size and form of the receiver; the temperature of the weather; and the time taken in drawing it off. Professor Cullen, in his *Materia Medica*, says, “a ligature kept on a vessel for
sometime

Sometime will produce that inflammatory crust, which has always been considered as a morbid state of the blood."—In plenitude, the pulse rises on venæsection, and respiration becomes free.

As it is the quality, not the quantity of blood, that is the cause of chronic, malignant and putrid diseases, the lancet can seldom be useful in their cure; for, as the ingenious Dr. Shebbeare says, in his Practice of Physic, "whatever lessens the attracting power of heat, expedites the danger, and bleeding manifestly effects that."—In this instance, I think it is much safer to depend on Diemerbroek, than on Sydenham or the ancients. Those who protest against bleeding in the plague, and say it is not only dangerous, but deadly, must, in my opinion, be right.

The present fashionable mode of preventing exanthematous, or pustular eruptions; such as the variolose and morbillose, from rising to a degree of putridity, by the antiphlogistic aperient plan, may be safely practised in the preparative or early stage; but not so when nature is busily employed in the work of excretion; or in the exacerba-

tion of fever. A sudden retrocession of the eruptions, even at the height, is attended with struggle and sometimes with danger.

As the veins are impatient of vacuity, they invite humours promiscuously from every part, even the separated morbid matter, from the superficies of the skin, to fill up the place of the emitted blood. On this principle, bleeding, in the putrid malignant fever, generally speaking, is unwarranted; yet there is no rule without exception: a symptom or circumstance may appear to render the loss of a small quantity necessary, as was the case in the synochus putris that prevailed in the years 1772 and 1773, when the drawing off two or three ounces in the beginning, was very useful for mitigating an inflammatory symptom that terminated in ulceration of the throat; but, even in that instance, the rational Practitioner was guided by other symptoms and circumstances.

In the gout, phlebotomy, by weakening the ætherial animating principle that preserves and purifies the blood, renders the disorder more irregular and more inveterate; and invites such other disorders as
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the dropfy, jaundice, palfy, hypochondria, &c. to take place. Nevertheless, though general bleedings are inadmissible, yet topical bleedings, by leeches, for fuch local affections, as gonagra or chiragra, have relieved.

It is not fufficient to attend only to the nature, quantity, and quality of the blood; it likewise is of great confequence to determine on the manner that is moft proper for drawing it off. Dr. Boerhaave fays, “ three ounces of blood difcharged, in full fteam, affords more relief than ten diftilled in drops.” The blood difcharged fuddenly by full fteam in the ftrong and plethoric habit, no doubt, is beft; but where the patient is delicate and weak, and liable to fwoon, I prefer the fmall orifice. A violent hæmorrhage, in general, occasions fainting. Where the hæmorrhage is flow there is no difpofition to fwoon; the veffels gradually collapse and continue conftantly full: there is no fufpention of the circulation; nor is the fudden effects of inanition felt. The pofture the patient’s body is in during the operation, is alfo a confideration of moment. Profeffor Cullen, in his Prac-

tice of Physic, says, "a small quantity of blood drawn in the recumbent posture, has more effect than a much greater quantity in the erect." If this position of the body occasions less resistance to the weight of the blood propelled from the heart through the superior ramifications of the aorta, or the attraction of gravitation has less power at such time over the motion of the animal fluids, the patient must consequently be relieved from the pressure that would occasion a syncope or fainting.

For local inflammatory affections, different methods have been devised for this evacuation. For an immediate relief of the membranes of the cranium and brain, blood is generally taken from the jugular-vein: but if it is taken from the veins of the limbs, a greater quantity is required to be drawn off before the head can be relieved.

Upon the principle of revulsion, the vena saphena in the foot is opened, and sometimes it has the happy effect of relieving suppressed menses, head-ach, tooth-ach, &c.

Arteriotomy, for similar affections of the head, is sometimes performed on the temporal artery; and is more effectual than venæsection.

naefection. It would be much oftner practised, if it was not generally apprehended that there is always some danger of too great an effusion of blood, or of the formation of an aneurism: but arteriotomy may be performed with great safety, on the forehead or temples, and has the suffrage of the greatest Physicians and Surgeons, both ancient and modern, to recommend it. Indeed it was a common operation among the Ægyptians, who performed it as frequent as they did venæsection, from a very high opinion they had of its relieving the superior parts of plethora.

Cupping, with scarification on the head, neck and shoulders, is serviceable in opthalmia, vertigo, cephalalgia, mania, epilepsy, apoplexia and convulsions. To restrain a profusion of the menses, Hippocrates recommends a large cupping-glass to be placed under the breast; and, for a quinsy, a large cupping-glass under the chin, and opening the ranula vein under the tongue. Themison's sect applied cupping-glasses immediately after leeches, to draw off more blood than the leeches could suck. Cupping-glasses not only draw off blood, but, with

with it, the local venom of animals and insects: and relieve a corrupted or gangrened part after a wound or inflammation. They relieve efflorescences, or defecations of the face, from a hot constitution, by deriving the blood from the part, and consequently the heat, and allowing a due motion, that preservative of the fluids against stagnation and putrefaction.

For prolapsus uteri, Boyle speaks highly of the utility of a large cupping-glass applied to the naval; but not to stay on above a quarter of an hour, lest it injure the part.

When a patient cannot safely sustain the loss of any blood, cupping is used without scarification.

The practice of cupping was much in use amongst the *Ægyptians*. From its effects it may be said to be the restorer of defective life and nutrition.

For such affections, as ophthalmia, suppressed hæmorrhoides, rheumatic tumefactions, or inflamed swellings of the limbs, and nephritic, phrenitic, hypochondriac, melancholic and ischiadic pains, leeches on or near to the part affected give relief: they also
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are more convenient than the lancet for infants, whose veins are not conspicuous ; but the discharge by them may be excessive, as they are apt to strike an artery, unless a Surgeon is present to direct where they may fix without danger, and, if needful, to stop the bleeding. Hoffman says, " I have seen " malignant ulcers and fistulas produced " by leeches applied to the blind piles."— Much depends upon the state of the habit.

Themison is said to have been the first Physician who used leeches. Hippocrates does not mention them.

The practice of phlebotomy, according to Pliny, was originally taken from the hippopotamos, which, when full of blood, strikes his leg against some sharp point, and thus relieves himself by bleeding.

C H A P. XII.

On Evacuation by Blistering.

THE most common vesicatory is cantharides. The heat of the body gives motion to the volatile active part of these flies, which, being absorbed, attenuates, relaxes and stimulates so strong an action of the nerves of the cutis vera as to produce a true inflammation. The great afflux of humours to the stimulated part, ruptures the vessels which connect the cuticle and true skin, and extravasates between them a considerable quantity of serous fluid, forming, at first, a number of vesiculæ, which afterwards unite. Part of the morbid serum is thus attracted to the superficies, the torbid solids are excited to more frequent oscillations, and energy is conveyed to the whole nervous system. By thus restoring the circulation, relief is given to the vital powers; the secretions are promoted, and the morbid parts rendered less sensible to the stimulating cause:

cause : for, as the sentient principle is diverted to the newly inflamed part, a derivation is thereby obtained ; the obstructions are removed; pain is abated, and preternatural tension and spasm taken off. Thus blisters are stimulant, evacuant, derivative, sedative, and antispasmodic.

1. As stimulants to the living solids, they are very efficacious ; but if their power did not extend beyond that, they would do harm in a fever, which is an increased action of the heart and arteries. Head-ach has not only been cured by stimulating blisters, but by æther, when the seat of pain appeared to be external ; though indeed, there are but few head-achs that do not affect the internal membrane.

2. As evacuants, their virtue and efficacy go beyond the quantity of matter they discharge ; for much greater discharges than such as can possibly be made by them, are promoted by other causes, tho' without such relief, as the blister will give to a morbid habit. We have frequent instances of blisters curing preternatural discharges ; such as purging, hæmorrhages, &c.—Women who, after delivery, have intestinal flux, attended

tended with pain in different parts of the body, and swellings of the lower extremities, are speedily relieved by a blister on the most painful part.

3. As derivatives, when nature is endeavouring to deposite matter critically on a remote part, a vesicatory on that part will hasten the derivation thereto.

Diemerbroek, in his Treatise on the Pestilence, says, “ he applied a blister a little
“ below the place where a bubo was forming; that, he thereby excited a flow of
“ the depraved blood and juices to the part,
“ and thus promoted a speedy discharge of
“ the contagious matter.” In sluggish lethargic dispositions, with a thick ropy blood; or in catarrh, with a redundance of serous acrimonious fluids upon a particular part; or in rheumatism, in which there is an acrid collection in any part, blisters are very serviceable.—In fits of humid asthma, when applied between the shoulders, they relieve the straitness of the bronchia and blood-vessels; by drawing off the stimulating cause, and thereby allowing the vessels to regain their natural expanding and contracting power.

power, and the fluids to become more equal and uniform for circulation.

4. They are sedative and antispasmodic, by subduing spasm or painful rigid constriction. Nothing more effectually relieves the gouty spasm in the stomach, when it is applied to the side, or inside of the arms, legs or thighs; but not on the stomach itself, as the intention is to make a revulsion from the seat of pain. Blisters, and warmth, alleviate the excruciating pain of the rheumatism, tooth-ach, jaw-ach, sciatica, anomalous gout, &c.

Much depends not only on the nature of the disease, but on the stage of it when the blisters are applied. After the previous evacuations, they are most remarkably beneficial for a continued fever in that stage when bleeding is unsafe. In the low nervous fever, I have succeeded, in the beginning, by blisters and rhenish wine only.

In petechial fevers, vesicatories must not be applied too early; for by lessening the quantity of the serosity of the blood and lymph, the eruption of the pustules is prevented. They are essentially serviceable on the turn of the disease; to prevent the peccant matter from returning on the blood,

and a sudden cessation of the swellings of the hands and face, as in the small-pox.

Blisters are also serviceable in local inflammatory diseases (such as pluerisy, peripneumony, or inflammation of the lungs) that seem to require bleeding. Heister relieved ophthalmia, or inflamed eyes, by a small blister on the crown of the head. Farriers apply a blister to a sprained part of a horse, and say it cures. Hoffman says, blisters often prevent an approaching fit of the ague. Vesicatories on the inside of hydropical swelled legs, promote a great discharge of serosity, but a gangrene is in general the consequence.

In ardent fever, when the spirits are violently moved by a febrile inflammatory blood, the mouth parched, the tongue burnt, the patient restless, wakeful and delirious, with a leaping of the tendons, and the skin hot and dry, the stimulus of cantharides would increase the symptoms, and prevent, that natural composer of the brain, sleep; during which the blood most effectually separates its impurities, and the brain recovers its waste of spirits.

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Although blisters attenuate and reduce the inflammatory, they do not increase the putrid, diathesis of the blood ; as appears by the writings of some of our most sagacious observers ; such as Whytt, Huxham, Lind, Fothergill, &c. They are found to have great good effect even in that most malignant of all febrile diseases, the plague.

Mercurialis introduced blisters among the cures of the plague, and Saxonia confirmed his practice : but Aretæus was the first who used them in epilepsy, gout, lethargy, apoplexy, foul eruptions on the skin, and some other chronic disorders.

When a blister is intended to give stimulus only, it is removed so soon as the part becomes rubified ; and is renewed alternately *utcunque opus fit*. Sinapisms, however, are most commonly employed for this purpose ; and, when applied to the soles of the feet in affections of the brain, as in coma in fever, or in stupor, termed *anæsthesia*, where the palpitation of the heart and arteries is weak, they have good effect.

As cantharides are apt to inflame and ulcerate the urinary organs, the sinapism is preferable for a long continued stimulus.

Sinapisms, by inviting a greater flow of blood to the surface of the body, are called rubificants; but, as their power may be extended so far as even to blister and discharge a serous fluid, I hope I may be allowed to arrange them among evacuants. When applied early to the fauces externally, they are effectual in quinzy.

C H A P. XIII.

On Evacuation by Fontanel or Issues.

THESE artificial ulcers are of vast importance for preserving from, mitigating, and removing, a variety of bodily infirmities; such as gout, rheumatism, leprosy, foul defecations of the skin, head-ach, vertigo, lethargy, epilepsy, hæmoptysis, phthisis-pulmonalis, palsy, catarrh, hydrocephalus, hysteria, hypochondria and melancholia. They often cure tooth-ach, sore eyes, sore breasts and old standing ulcers; and, by cleansing the habit of foul inciting particles that induce a preternatural flow of the catamenia, they are very serviceable in cacochymies or bad habit of body about that period when the menstrua finally cease. Issues not only prevent, but cure. A cold will fly off at an issue: that is to say, those inciting particles will pass off which would cause a phlogosis, or inflammatory disposition. A fever may possibly suppress the discharge

which was designed to prevent it; but, when the fever is subdued, the issue will again run and carry off the reliëts. Quercetan the Armenian, in his *Alexiacus Pestis*, says, “the
 “ medical man, whose office it is to attend
 “ on the sick, admirably preserves himself
 “ by an issue.” Hoffman honours issues with the title of *egregia prophylactica*; and Diemerbroek, of *præstantissima subsidia*. It is said an issue is a preservative against infection of the plague*. When pestilent buboes and carbuncles inflame, maturate, and discharge a laudable matter, the fever abates, and the morbid matter deposits and passes off.

Ætius, for the bite of a mad-dog, recommends the ulcers to be kept open for the space of fifty or sixty days; that is, till the virus is spent: and, Dr. Boerhaave, in imitation, recommends a continual suppuration to be kept up in the part for six months. Celsus, by cupping, and then applying the
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* Et cum fontanellæ etiam excrementitios humores sensim è corpore tollant, atque hinc apparatus ad pestem suscipiendam demant, et cæ tempori pestis utiles sunt.

SENNERTUS, lib. iv. cap. v.

actual cautery to the wound, supposed the poison might be extracted.

In the days of Hippocrates and of Celsus, they opened issues by cautery for dropsy, arthritis vaga, or flying gout, labrifulcio or tumified lips, epilepsy, consumption, &c. It was a practice formerly at Montpelier, at Padua and in Tuscany, for epilepsy, to cut not only through the integuments of the cranium, but to make an opening by the actual cautery through the future of the skull itself, for the malignant fume to fly off from the brain, and by that means prevent a return of the fit; but I only mention this to show, that, however crude the opinions of the ancients were in respect to the operation, their ideas of the utility of issues were always correct.

The seton was successfully introduced by Columella, during the plague in the reign of Claudius, until which time the cautery had been used in the cure of that disease. It was soon after extended to the epidemic and malignant diseases of horned cattle, and attended also in them with success.

If there is plenitude or redundance of humours, occasioned by diet, absorption of
humidity,

humidity, confinement, or whatever disposes the fluids to depravity; an issue or fontanel is highly beneficial.—The seton termed *a rowel*, has long been used by farriers whenever a repletion, or a coacervation of humours, required a drain.

The practice of making issues is very ancient: Galen, Forreſtus, Ambroſæus Paræus, Glandorpius, Mercurialis, Platerus, Angelus Sala, Rammazzini, Fracaſtorius, and others of the ancients, teſtify their utility in phthiſis, ſcrophula, lepra, lues-venerea, ſcurvy, epilepsy, rickets, cataract, dimneſs, gout, and other affections, ſive anticipando, ſive curando; and aſſert, thoſe who have either ſpontaneous or artificial ulcers are ſcarce ever known to die of the plague.

The moderns, ſuch as Hildanus and Baglivi, ſpeak highly of the excellence of ſetons in catarrh, phthiſis, hæmoptyiſis, &c.

Dr. Willis ſays, “ he cured one patient
“ of an obſtinate weakneſs in the loins, and
“ another of an inveterate ſciatica, by an iſ-
“ ſue in the groin.”

Dr. Sydenham ſays, “ the remains of
“ the morbiſic matter of a rheumatism may
“ be

“ be easily carried off by an issue in one of
“ the legs.”

Dr. Morton, speaking of issues in an original pulmonary consumption, says, “ Issues
“ in the arms, or between the shoulders,
“ are serviceable for abating the quantity of
“ the serous liquor of the blood, and con-
“ sequently for comforting the brain and
“ nerves, and tempering the animal spirits,
“ which doubtless contribute very much to
“ the extinguishing of the hectic flame,
“ and to the prevention of a consump-
“ tion.”

Dr. Nicholas Robinson says, “ when the
“ lungs were oppressed with a ropy tough
“ phlegm, or matter, that lies deep and re-
“ quires great labour in pumping up, I ad-
“ vised a couple of issues, or setons, to be
“ made in the arms, or in each side of the
“ breast; or between the shoulders just be-
“ low the nape of the neck; and it is im-
“ possible to conceive the benefit I have
“ known to accrue from these issues, especi-
“ ally when they made a free discharge.”

Baron Van Sweiten and Ruyfch declare that nothing, in their practice, succeeded better than issues.

Sir John Pringle says, “ I can freely recommend, from repeated trials, the use of setons or issues on the side of the part that is most affected.”

I imagine it to be of little consequence where an issue is fixed, provided it be in a convenient and safe place.

Some children, who have not sufficiently purged off the small-pox, are afterwards tortured with boils and running sores; for which I have experienced nothing so effectual as issues, sea-bathing, and sometimes intermediately drinking sea-water.

As I have seldom had occasion to prescribe a dose of physic for a person who happened to have an issue, even though frequently constipated before, I am led to believe an issue is efficacious in obviating habitual constiveness. The stimulating purge is only temporary, and does not radically, or effectually, remove the cause: an issue removes not only the cause of constipation, but also that of laxation.

There probably is nothing more difficult in physic than to find a remedy for habitual constipation, and bring the animal functions to perform their office regularly. If the
constipated

constipated habit is occasioned by a weakened tone of the intestines, Pyrmont, Tunbridge or other chalybeate waters, if drank daily for some weeks, will be very efficacious; but if the cause of the constipation is a defect in secretion, or a hot temperament of the blood and depending juices, refrigerating alterants and an issue will be necessary. From these I have repeatedly seen very happy effects.

By many Practitioners, the potential cautery or caustic is, at this time, preferred to every other method of opening an issue. This, however, depends on the part where the issue is to be fixed, and the quantity of matter that it may be necessary to discharge.

The idea of an issue is apt to terrify and disgust; but, when properly managed, it is neither painful to the most tender, nor offensive to the most delicate: if, however, the pea, or cord, or acrid matter, should happen to itch or irritate and inflame the part, the pain ought to be patiently endured, as the stimulus is a salutary one, and promotes the discharge.

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Some gentlemen are afraid of recommending issues, lest they should weaken the patient; but my experience warrants me in saying, that, on the contrary, they strengthen, by drawing off that which keeps the body weak. In the course of a long, and, I may say, a successful practice, I have prescribed issues to all ages, from childhood to threescore and upward, but never could discover they had any ill effect. Indeed, I remember once having a patient whose blood was so much impoverished by necessitous poor low diet, that I found it indispensable to close the issue rather hastily; but after she had been comforted with a more generous and plentiful diet for some months, the issue was renewed with advantage.

The fontanel relieves the genus nervosum, evacuates morbid serum, lessens repletion, tempers the mass of blood, and promotes digestion, concoction, nutrition, secretion, and excretion. It also clears the skin of foul defecations, and brightens the complexion.

But, however beneficial issues may be, post conceptionem, and during pregnancy, in preventing miscarriage by relieving the habit,

habit of that which occasions weakness; yet, while the power of conception is retained, I think they should never be prescribed for a married woman: for, from some instances, in which I had many reasons to conclude they defeated the intention of nature, I have been long deterred from prescribing them under such circumstances.

Miscarriages, in general, are occasioned by frights. In weak, delicate and irritable habits, they are often so violent as not only to bring on deliquium, but convulsions, and the most alarming symptoms, if not death. If a flooding comes on, astringents have no effect on the uterus, till the foetus and secundines are expelled, when they immediately become unnecessary, because the hæmorrhage stops spontaneously. Gentle exercise, plain diet, tonic strengtheners and tranquillity, are necessary to prevent a miscarriage.

The danger of precipitately drying up an issue, by which nature has been invited and habituated to throw off the noxious humours that offended her, may be no less fatal in its consequence than a sudden ob-

struction to any discharge by her own efforts : for, in either case, the matter, which is morbid, would fall back upon the habit : but no such effect ensues from it drying up of itself, without neglect, and after it has for some time discharged a laudable matter ; for the habit is then as secure as if the indisposition had terminated by a spontaneous critical abscess, which the fontanel, or issue, was originally designed to imitate. It however may, now and then, be necessary to take a gentle dose of physic, till the body is perfectly regular in her motions, and the determination is led off from the artificial channel.

The common issue that is preserved by a pea is the easiest ; and, as its effects are similar to others, it therefore is most generally used, and is particularly well adapted for children. Issues made by the actual or potential cautery, produce happy effects, where the great and sudden discharge is required.

Moxa, or Indian moss, the boast of China and Japan, as a specific for gout, epilepsy, colic, head-ach, tooth-ach, madness, &c. is a soft, woolly, caustic herb, a species of mugwort, which they prepare
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and lay on the part affected, where it is suffered to burn for a few minutes, but not through the skin; to effect which, it is lighted successively till the heat has destroyed the force of the morbid matter; as the actual cautery is said to cure the bite of the viper, or mad-dog, by destroying the texture of the part; and, if any should still remain, by allowing that virus to run off by the fore. A warm cabbage-leaf or coltsfoot-leaf is then laid on the eschar, which falls off the next day, when there appears a thick matter like pus or lard. The part is afterwards, by this means, kept open, to allow a discharge from the habit to purify the blood.

If the issue by moxa is really capable of accomplishing the cure of those great and stubborn disorders, I apprehend it must be effected when it is used at an early stage; for, though an issue may prove serviceable in an advanced stage of a chronic disease, by lessening its force, and enabling the stomach and the chylopoëtic organs to perform their functions more regularly, yet the great and permanent cure cannot be expected from it unless the issue is made before the disease

has firmly rivetted itself in the vital principles of the constitution.

Two of my patients, between forty and fifty, before they had issues, were long and severely afflicted by the gout. They have had them almost seven years, and received so much benefit as to imagine themselves cured.

A Gentleman, between sixty and seventy, of a full corpulent habit, who happened to have two or three slight apoplectic strokes, had an issue, or rather two large ones, made between the shoulders, by the advice of his Physician, and he has lived ten years since in excellent health. He was first plentifully evacuated. The issue, by evacuating gradually, allows the relaxed vessels of the brain, after great distension, to recover their pristine tone.

A young man of a full phlegmatic habit, with several exulcerations on his body, having been infected by the pruritus, or itch, was advised to attempt his own cure by an unction of brimstone and butter. On the very first use of this ointment the itch went off, the sharp ichor and sores dried up, and epilepsy ensued. He then fled to London
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for advice. After he had been blistered, and taken valerian, castor, and volatile salts, without receiving relief, he applied to an eminent Physician, now living, who judiciously ordered some blood to be taken from him, a cooling dose of physic every third day, for three or four times, and an issue or seton to be fixed in his neck. The issue discharged freely : and he very soon recovered a perfect good state of health.

It has often been attempted to cure the itch by mercurial girdles, and by mercurial ointment, upon empirical principles, without regard to circumstances, time of application, or proper evacuations ; and this, as might be expected, has generally brought on asthma, or palsy, head-ach, epilepsy, or flux, according as the repelled matter chanced to fall. Such of these patients as have come under my care, I have found necessary to bleed, purge, fumigate and blister ; besides making a constant drain from the habit, for the security of the brain and nervous system, by one or more issues. I do not remember that this method has ever failed of a cure. Diet, exercise, &c. was attended to.

For a Gentleman, about fifty, who had anasarcaous swellings of his legs, attended with cough, a sense of fulness about his chest, wheezing, and large discharges of phlegmy matter, a loss of appetite, and who, as he said, could take no medicines, I ventured to order an issue below the knee. On finding a good effect from that, I ordered, soon after, another in the other leg, and sent him a few times to the fumigating-bath. With the assistance of a cupful of the simple infusion of white horehound, and two drams of the tincture of cortex eleutheria in each, which he was prevailed on to take forenoon and afternoon for some time, I thus was so fortunate as to restore him to a much better state of health than he had enjoyed for many years before.

Thus, without quoting the authorities of many other very eminent Physicians and Surgeons, I presume I have sufficiently united the testimonies of the ancients and moderns, with the experience of my own practice, to establish the necessity of a much more general use of issues than has hitherto obtained.

C H A P. XIV.

On Evacuation by Sternutatories and Errhines.

THESE incentives to sneezing differ only in their degree of strength and power of action. They are intended to purge off the redundant stagnated lymph from the anterior part of the head: but, by the convulsive motion and quicker distribution of the fluids, which they occasion, they have a general effect upon the system.

When errhines, such as those of the cephalic herbs, or tobacco, are insufficient, and a more violent shock is necessary to be given to the system than these can produce, the acrid sternutatories, such as hellebore, elaterium, euphorbium, turbith mineral, or sternutatory powder of the dispensatories are used.

Sternutatories, by promoting expectoration, and sometimes a ptyalism, are serviceable in humoral asthma, and other pectoral complaints. By inciting excretions from the
brain,

brain, they are beneficial in comatous, paralytic and apoplectic affections : and also in those cases where the nerves are remiss or defective ; for they facilitate the secretion of the animal spirits. It however must be observed, that the abuse or, which is exactly the same thing, the too frequent use of strong sternutatories, destroy the nervous power, and thereby bring on the most dismal symptoms : such as head-ach, stupor, deafness, blindness, weakness of memory, convulsions, hæmorrhages and involuntary excretions. Sternutation or sneezing relieves singultus or hiccup, by exciting a contrary motion. It promotes the birth, by contracting the diaphragm and muscles of the lower belly ; but it is unsafe in inflamed eyes, fractured ribs, rupture, recent congestions, &c.

Some Physicians, on the idea that sneezing is a favourable symptom, have endeavoured by sternutatories to rouse the faculties of their expiring patients. In some diseases, sneezing is also an indication of death.

Tobacco-snuff is the errhine in most continual use ; but the powder of the common cephalic herbs is better adapted for some
morbid

morbid affections of the head, as they convey vigour and energy to the animal functions. The nasty fashionable use of tobacco-snuff in Europe, instead of stimulating a discharge of the mucid stagnating lymph, becomes familiar to the glandular pituitary membrane, clogs the frontal sinuses and lachrymal ducts, obtunds nervous sensation, stupifies the brain, relaxes and weakens the organs of sight, deadens the lustre of the eyes, fallows the complexion, and has brought on consumption.

Volatile salts and spirits are sternutatories, for they stimulate the olfactory nerves to convulsive motions. The volatilia foetida and the volatilia fragrantia are very different in their effects on the system. The foetida, by being disgusting, depress; and are applied to the organs of smelling, to restrain the impetuosity and turbulent motion of the spirits in the brain or nerves; such as in hysteric convulsive affections. The fragrantia or sweet-smelling parts of aromatics, though their stimulus be exquisitely pleasant and more mild, are not less efficacious; for they expand and render more lively and vigorous, the motion of the languid spirits.

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The heart is fortified, the blood invigorated, and the pulse raised; while an increased quantity of more active spirits are conveyed to the brain, and the secretions are rendered more open and free. Either the foetida or fragrantia, when taken in substance, have a more durable effect.

C H A P. XV.

On Evacuation by Sialogogues and Masticatories.

THOUGH either of these medicines promote a glandular discharge by the mouth, they differ in their nature, degree of action and effect on the system.—Masticatories are vegetable, and are partial in their effect: Sialogogues are fossil, and are universal in their effect. But, as we have already noticed the powers of the principle sialogogue, mercury; we therefore shall pass on to masticatories: such as pyrethrum, horse-radish, staphysagria, &c. which, by their pungent stimulating quality, evacuate the oral glands, and thereby become serviceable in phlegmatic quinzy, tooth-ach, swelling of the gums, rheumatism in the head, lethargy, palsy of the tongue, and obstructions of the parts which are subservient to deglutition. “Remember, says Bacon, masticatories for the mouth.” Indeed, though nobody can suppose

suppose that the great and permanent cure is to be effected by a mere local stimulus, yet the masticatory is nevertheless entitled to a place among preservatives from foul and contagious air, as it prevents the saliva, that is tainted by inspiration, from passing into the habit by deglutition.

Exanthematous or pustulary fevers, are seldom mortal to those in whom a ptyalism hath taken place. These fevers rarely terminate by sweat, but by saliva:—a catarrh, by diarrhœa.

Tobacco is a masticatory. But it is particularly to be observed, that the united power of medicine and diet cannot supply a waste or defect of that fine digestive fluid saliva. Great spitters are never great eaters. Dr. Bryan Robinson favoured the Public with an ingenious treatise on the great salutary power of morning fasting-spittle.

The common absurd habits of trifling with this powerful exotic, occasions the abuse of it to be so remarkably pernicious. That which nauseates, may suppress hunger, but cannot feed. The apathy that is consequent to the internal use of tobacco, evidently shows that
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the common use of it is not natural. By descending into the primæ viæ, it perverts the alimental juices, affects the nervous system, and brings on, with tremor and paleness, sickness, confusion, vertigo, loss of memory and stupefaction.

The active principles of tobacco are a sulphur and a penetrating caustic volatile salt. By distillation, it yields an acid phlegm, some urinous spirit, and much foetid oil. Tobacco discovers its prevailing acid by making the solution of tournsol red. All the preparations of it are *emetic*.—It is a very active medicine, whether used internally or externally. As an external, it is detergent, resolvent, antiseptic, vulnerary, and antipestilential. It destroys cutaneous vermin, but with them the hair. By dropping two drops of the essential oil of tobacco on the tongue of a cat, she was thrown into convulsions and killed: similar effects were produced by dropping a few drops of the oil into the vein of another cat, and suffering it to mix with the circulating blood. A single drop of the oil of tobacco has cured the tooth-ach*.

Q

The

* James's Medicinal Dictionary.

The common error of smoking tobacco to excess, must be very prejudicial; for it increases thirst by exhausting the native moisture, and that especially of the brain*. The smoke of our own cephalic herbs, in many cases, is preferable to tobacco: the scent is, at least, more grateful to some, and less offensive to all. But the smoke of tobacco is, by far, the most effectual for relieving the cold humid and full phlegmatic habit; for unloading the head and fauces; for resolving catarrh, and for promoting expectoration; which shows it possesses great salutary, as well as deleterious powers; and confirms the necessity of these remarks, to prevent the indiscriminate absurd practice that prevails of so much abusing it, as rather to humour fashion than to satisfy reason. . . . An observation that may be applied also to the too common mode of injudiciously trifling with medicine in general, or not advertent to the adage *Quid natura faciat aut ferat*.—I never met with two patients whom I could invariably treat alike.

* Vide Borghi's Letter to Bartholine.

On the whole, I flatter myself, with the hope of having so far satisfied the *Judgment* of the *Intelligent Reader*, that, for the present, I may be permitted to take leave of him in the words of that illustrious Roman, Celsus: “Sed purgationes quoque ut interdum necessariae sunt, sic ubi frequentes sunt, periculum afferunt.”

THE END.



