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MEDICAL REMARKS

ON

N A T U R A L,

SPONTANEOUS AND ARTIFICIAL

E V A C U A T I O N.

BY

JOHN ANDERSON, M.D.

L O N D O N:

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

M D C C L X X X V I I ,

THE HISTORY OF THE

ROYAL NAVY

FROM THE FIRST

SETTLEMENT OF THE

WEST INDIES

TO THE PRESENT

STATE OF THE

NAVY

BY

JOHN BARRETT

OF THE

NAVY OFFICE

LONDON

PRINTED BY

JOHN BARNARD

ST. MARTIN'S LANE

1793

THE

NAVY

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LONDON

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T O
the W O R S H I P F U L the
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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 H U M B L E I M I T A T I O N of

Their exemplary Zeal

to promote the Happiness of Mankind,

I S,

with *all due Gratitude* for

the 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.

TO

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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 the observation and experience of a long and successful practice.

Upon the same principle for which the liberal Literati of all ages have commended those who
hazard

hazard a supposed claim to the good opinion of the Public. . . . the principle of being useful to society, and 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.

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MEDICAL REMARKS.

C H A P. I.

On the Indication to Evacuation, and the Power and Effect of the Evacuant.

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, which promotes it, that gives partial or universal sympathy, and thereby restores the oscillatory motion.

Medicines, whether applied externally or internally, act primarily by organical motion; and then on the fluids in a ratio proportionate

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to

to the texture and velocity of the blood, the temper of the solids, and their own natural inherent power, in their peculiar sphere of action.

For exciting evacuations, the learned and attentive proficient will not only adopt the kind of stimulus, and quantity of the evacuation, to the sex, age, temperament and constitution of his patient, but even 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 36° , as thirty did on the same habit in winter at Edinburgh in the latitude 57° *.

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

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

† “Les montagnards qui ne vivent presque que de lait, ont des fibres si peu sensibles, qu’il faut pour

The peculiarities of different constitutions, the accidents of life and their effects, are likewise so many and so various as totally to prevent a possibility of fixing them to any established data: 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—*Afarum*, an emetic in its primary influence on the stomach, becomes a diuretic when taken in a weak decoction: antimonial wine, when taken in sufficient quantity, vomits, and that powerfully: diaphoretic antimony, sweats; and yet both are insipid to the taste. In the selection of drugs, we must not only attend to the apparent discrimination of their native excellence, but to the time they have been gathered. To obtain the intended benefit of these, we must attend to the operations of Nature, and care-

les purger, des doses qui tueroient tous les paysans 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." Tiffot, Avis au Peuple. Des Purgations, sect. 551, p. 519.

fully 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 diseases that will not bear to be trifled with, or for a moment neglected; pleurisy, 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 life; 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

It has often been questioned, whether medicines are possessed of 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 other fluids from remote parts to be discharged along with them. Thus, rhubarb, cellery, asparagus, onions, nutmeg, mace, turpentine, act, as it were, specifically and uniformly on the renal organs; mercury, on the salival; and antimony, on the milary glands. 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.

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 continually require their increase;

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

CHAP. 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.

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

Imme-

Immediately before the paroxysm of remitting and intermitting fevers, spasms in the primæ viæ are accompanied by vomiting of bilious fordes.

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 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 through the circulating fluids, would prejudice the constitution. This effort is best assisted by small quantities of ipecacuanha wine; for that strengthens the stomach and bowels, which might lose their proper tone if the puking continued; when dangerous symptoms, such as nervous spasms or convulsions, diarrhœa, or hectic, would ensue.

When

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 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 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,

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 be in disorder, 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*. Cold spring-water is the best drink. For the same reason similar nauseating symptoms afflict those who have no menstrual discharge. This sickness affects both after eating or drinking.

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Sympa-

Sympathetic vomiting also is occasioned by stone in the pelvis of the kidneys, or in the gall-bladder, which is quieted by sedatives and antispasmodics.

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, and debility, that so frequently affects the delicate, feeble, irritable habit.

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 the efficacy of the stimulus of an emetic in biliary obstructions from crude viscid bile.

3. *Antipathetically.* The antipathy or aversion, that some persons have to certain things is so great as to make them swoon, vomit, or purge at the sight or even smell of a cat, a mouse, cheese, or medicine. Whatever is loathsome to the sight, or has a foetid smell, or a nauseous taste, raises abhorrence, and excites vomiting.

4. *Cri-*

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, with great difficulty, if ever, is 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 indigested 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, and takes off the oppletion or fulness, from the vesicles of the lungs, head, faucial, and miliary glands, and thereby admits of a free and regular circulation through the extreme capillary vessels.

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. The emetic thus given, lessens the cold and hastens

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.

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 Evacuation by the Intestines.

PRETERNATURAL alvine discharges may be produced by a vast variety of causes. Those discharges which are promoted by purgatives, are very considerable ; for the stimulus of the medicine extends to the remote parts of the body, and evacuates the different secreted fluids by the many excretories that terminate in the various circumvolutions of the intestinal canal, the receptacle and drain for their purification. But though it must be
 allowed,

allowed, that purgatives are very useful 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 twofold; 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.

The ruffling resinous scammoniate and aloetic liquating purges, very frequently repeated, hurt the stomach and intestines, stimulate the arterial and nervous systems, increase the progressive motion of the blood, even to the febrile 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 di-

a diminution of their resistance. To these succeed languor and debility, the small, sharp, and hoarse voice, ghastly countenance, dejected mind, disturbed sleep, convulsive motions, uneasiness in 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 brais, into water; and grana cnidia, and carthamus, into phlegm.

The drastic purge is most commonly used for 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 the pent up indurated fœces; but that being once obtained,

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

The drastic cathartic, as I have just now observed, is the medicine generally referred to. However, I have succeeded sometimes 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 more kindly, prevented that resistance, and therefore was effectual.

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 bowels are emptied by a clyster in the evening, the purge taken next morning will operate readily.

But though ^{the gout} drastic physic be objectionable, as improper in ~~this disease~~, yet lenient and cardiac is often necessary and proper. The stomach and bowels must be evacuated before an attempt be made to expel the gout from a visceral part to the extremities. The patient must not be suffered to endure constipation: an occasional discharge of thin bilious stools obviates a paroxysm. To stop this, or, indeed, any other flux prematurely by styptics, that is, before the inciting particles are ob-

D

tunded,

tunded, 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 are binding as well as laxative.

In cholera morbus, or flux of bile by the mouth and anus, in remarkable hot seasons, that exalts the bile, we are to temper, soften, refrigerate, pacify, and strengthen. Common diarrhœas, in the same seasons, are to be treated nearly in the same manner as to generals. Too great an evacuation of bile, either upward or downward, is prejudicial to chylication, consequently to nutrition and secretion, from whence ensues the cold acid temperature, attended with paleness, weakness, swooning, &c.

Though lenient physic obviates and relieves in a venereal gonorrhœa, yet super-purgation 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,

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.

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 very corrupt, the secretions so vitiated, or the bones rendered so foul by this disorder, as not to be cured by the slow but sure alterative, such as the pills and decoction I have particularized below*.

The

* ℞ sulphur. antimon. præcipitat. ʒij.

Calomel. ppt. ʒi. Terantur simul diu in mortorio vitreo. Postea add.

Refin. Guajac. pulvarizat. ʒi.

Camphor. ʒij.

D 2

Extract.

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 diseases, 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 facilitating another patient. I can, indeed, speak boldly of the utility of mercury, not only in

Extract. cicutæ.

—— Hyosciami a a ʒss.

Balsam. Canadens. vel copaib. q. s. f. 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 et festinatio et voluptas curet. CELSUS,

this,

this, but in other inveterate complaints, when given in small doses, and at such proper distances, as not to salivate. I have, for instance, a great number of times, cured dropsy 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.

The mercury 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 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

It is difficult to maturate 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 compleatly resolved without universals, which destroy the cementing principle, and discharge insensibly as well as sensibly the noxious particles. I have often been so fortunate as to succeed in these cases by the alterative pills and decoction particularised in page 19 and 20.

The warm mineral springs and tepid seawater bathing help much to resolve and disperse the stony schirrus, before it degenerates into the painful corrosive cancer.

Strong purging has been recommended by some eminent men, for dropsies; 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

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 authorizes me to assert, I have succeeded with a considerable number by the lenient method—with none by the draftic *. The lenient phyfic operating kindly, it expanded the excretory orifices, and allowed the obstructed fluids to pass off gradually without occasioning languor, debility, or deliquium animi, which generally attends draftic 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 draftic cathartics, which carry off the very nutritious particles that would restore the relaxed fibres to their due

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

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 by the load of stagnating water, cures have, sometimes, been performed by thus taking 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. cicutaë & calomel. The patients took a dose of these pills every other day for two or three weeks.

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

In leprosy, scrofula, and scurvy, drastic physic is inadmissible, the blood and secreted juices being too much impoverished. Mercury, in particular, is to be used sparingly in these

these constitutions, as in them its action is so quickly shown on the glands of the mouth.

From retention of lymph, arises head-ach, tooth-ach, rheumatism, catarrh, pectoral stuffings, quinzy, apoplexy, lethargy, nervous affections, languor, dulness, dropfy, &c. In scrofula, the lymph becomes so viscous and inspissated as neither to be absorbed nor exhaled, 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 be received to support the body, atrophy, or wasting, ensues.

By the power of sudorifics, 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 af-

fect 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 ofordes 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, they are of infinite use. These are termed coolers; but whatever be their effect post operationem, yet no medicines can properly be said to be coolers, which, during their operation, induce heat and thirst, even to the febrile degree; and for which very reason it is, that sea-water draughts are efficacious in the cold

cold chronic disease, but not in the acute or inflammatory. The operation of sea-water is quick and easy, without inducing languor, and is the properest physic to be taken during a course of sea-bathing. The only danger is in the excess; for, if taken in very large quantities, and long persisted in, by despoiling the nutritive juices, it impoverishes the blood, and brings on 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, which, 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 Norris'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 un-

seasoned 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, hysteric and hypochondriac affections, and in nervous complaints in general : in fluor albus, gleet, or feminal 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.

It also is recommended by Boerhaave for the bite of a mad dog before symptoms of hydrophobia appear.

But it is likewise necessary to observe, that, though sea-bathing relieves some complaints, it nevertheless exasperates others ; such as gout, which it is apt to throw on the brain ; inflammatory complaints ; febrile heats ; phthisis pulmonalis, or consumption of the lungs, and other diseased viscera ; which is

proof

proof of the heating quality of sea-water, whether used internally or externally.

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, and exciting rest.

The preferable time for sea-bathing, is 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.

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, 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 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

tinued 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 completely 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 who came from London, aged about forty-five, 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 get into his carriage with a very little help, and was also daily gaining strength in his side.

The

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

1. A Lady, from irregularity of her menses, had a large indurated swelling on 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 been bathed, once a day, for a fortnight, during which time the discharges increased, the sores gradually diminished; and, after they had been dipped in the sea one hundred and three times, and drank the sea-water occasionally, 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.

Ten thousand cases might be given every year of the efficacious powers of sea-water, sea-bathing, and sea-air; but these few instances, now given, ascertain it fully to me.

If the emersion is succeeded by a glowing warmth, the bath is salutary; a reverse sensation is proof of the reverse effect, unless the efficacy of the water has been perverted by the antipathy of the patient. But that, by the indulgent kindness of humane, judicious Guides, is almost always overcome.

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 Brighthelmstone; where, after bathing twice in the sea, and finding himself chilly on coming out, and his inflammatory symptoms increase, his Apothecary judiciously directed him into the warm sea-water

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.

Mild aperient land-springs act beneficially as alterants, and suit in many cases wherein sea-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 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 per se, it will have as much effect

as a dram and a half, in any sort of preparation. 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 rankest poisons. Thus arsenic is said to possess the power of curing that deadly corroder the cancer, when guarded and applied externally; and some speak of 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 it cannot be supposed that this can be done without its entering the circulation; though some of high note say, that *Æthiop's* mineral,

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. Finally, 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 generous yellow white wine, before and after bathing. The stimulus and commotion may be quelled by a

* 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.

few drops of thebaic tincture; or 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 is milk-and-water, 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.

Laxative clysters are for quickly exonerating the intestines; but the very frequent use of them, or, indeed, of other relaxing and deturging

terging ones, at first sight, would appear to be injurious: by carrying off the nutritious with the recrementitious parts, they 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 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.

Clysters are admissible at any stage of a fever. They alleviate the pain of the stone-colic

colic and hæmorrhoides ; and are serviceable in bilious, remitting, and intermitting fevers, dysentery, lientery, tenesmus, suppressions of urine, cephalalgia or headach, lethargies, apoplexies, deliria, &c. Opiate clysters will induce sleep, the same as opiates taken by the mouth ; and give check to diarrhœa, by suspending the peristaltic motion, not by removing the cause. Opium does not remove the cause of any disorder that I know. An aperient clyster, administered in time of labour, assists the birth, and the expulsion of the secundines.

Avenzoar is said to have been the first who proposed clysters. 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*, as of the smoke of tobacco, has succeeded by its stimulating and contracting power in obstinate constipation ; and is of

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

Emblema LXXXVII. Andriæ Alcati,

use in colic, prolapsio intestinum, &c.—
Sydenham frequently 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 of the 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 a decoction of the leaves of tobacco; that is, about two drams to about eight ounces of water, to be injected.

2. *By suppositories or medicated cones.* These have procured a motion when the indurated fœces prevented the admission of a clyster. The suppository has this peculiar advantage, it occasions no flatulent distention: but the great operation, however, is not to be expected from the mere dry stimulus given to the sphincter ani.

3. *By dashing, or throwing cold water on the thighs and abdomen,* which 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. By it I have, several times, relieved in long and obstinate constipation, when every other means has failed.

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, applied to the region of the stomach, or feet, will create nausea, and sometimes will vomit. But the influence of a medicine applied topically to the superficies of the skin, is not simply that of evacuation. 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, I have dislodged worms from the intestinal canal. By the tonic and sedative application to the abdomen, I have

have quieted dysenteric tormina, and given a check 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 repeatedly 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. The simple application of a large slice of toasted bread dipped in claret wine, 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 spirituous liniments.

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, there was

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either

either an influence of a specific stimulant, or a specific sedative, and also an absorption of their fine essential and active parts, to affect 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, symptomatical, critical, or artificial.

Natural sensible perspiration, commonly called sweat, by its subtle volatility, evaporates very fast, and leaves the skin dry. In hot climates, the saline particles thus exhaled, are seen condensed upon the superficies of the skin and the cloaths.

Gentle universal 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

easy motion, is a proof of a laxity of the sudorific ducts, and indeed of the whole system, that should be corrected as soon as possible, by nourishing diet, and proper strengthening drinks; by the cold-bath, and by 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. Strong and firm bodies sweat but moderately.

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 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 prevailed, 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 faculty, 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 gradually on the feet, and diffuses itself over the body, towards the acme or height of fever, is critical; and 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 exsudant nulla podagra.* While flannel can preserve a sweat on the region of the stomach, the gout will not attack it.

The sweat of the febrile patient, by a high exaltation of the saline principle, becomes fœtid and offensive. It is better that 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, dropsy: if it fall on the intestines, a diarrhœa ensues; if on the renal
organs,

organs, a 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.

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

The *artificial sweat* does not flow kindly without the aid of external heat. It however must be observed, that excessive heat does not rarify, subtilize, or separate; but, like ardent spirit, burns and condenses. It is the moderate and genial heat that expands 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 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 for their separation. Sudorifics may be considered as possessed of a threefold power. They
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are atténuant, 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 a 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 for an incipient or long standing disease.

The most powerful internal sudorific is the alkaline. As the alkaline sudorific and anti-acid diet most readily attenuate, neutralize, and retrieve the motion of the blood when deprived of its fluidity, it would seem that the coagulation is occasioned by the effect of some prevailing acid; though I do not know that any experiments yet made upon the natural chyle, or new milk, or fresh drawn blood, or recent rendered urine, have discovered either acid or alkali in propria forma in them; except it is by Homberg's and Lemery's; which, perhaps, were made on diseased blood.

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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 disorders 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 alkaline diaphoretic, by increasing the action of the solids and giving motion to the fluids, promotes sufficient heat for preventing the cold fit of fever. It cures a cough, and is serviceable in catarrh, diabetes, dropsy, rheumatism, dysentery, and lientry, by turning off and diverting the acrid stimulating ferocities that

that have an inward tendency, and relax the tone of the bowels. Upon this principle it is, that emetics and diuretics 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 temperating acrimony, and allaying spasm, they will not only increase these, but deprave the blood; as may be perceived by the saliva, and by the urine acquiring a putrid fœtor. 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.

Insensible perspiration, though natural, is very different from *the sensible*. It is the most putrid discharge from the body, and the most fugitive;

fugitive; as, indeed, all putrid effluviæ are. 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 fœces 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 occasions the most destructive disorders. The quantity of this discharge is proportioned to the habit, the season and climate.

Sensible perspiration is most obvious in those who are most remarkably fat; for the profusion of their fluids relaxes the cuticular passages and overbalances that equipoise which the solids would preserve.

CHAP. V.

On Evacuation by Expectoration.

EXPECTORATION is not performed merely by the specific action of the expectorating medicine; it requires the assistance

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of a certain aptitude of air which gives impulse and motion to the organs of deglutition and respiration. 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 excretories of the lungs, because every thing grosser than the natural air that enters the trachea and bronchiæ of the lungs, creates vehement disturbance. The vapour-bath, when applied externally to the pulmonary region, is far more effectual; for it renders the matter moveable, and stimulates an excretory motion.

That natural stimulus to expectoration, a cough, if 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 breathing. Expectorants, for the same reason, however necessary, must not be used too soon.

The natural crisis of cough, pleurisy, peripneumony, or pleuro-peripneumony, is expectoration.

pectoration. 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, gives uncommon alacrity, increases perspiration, excites appetite, 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 original, but acquired, and opposed in due time ; that is, before the affection advanced to vomica ; or tubercles or concretions were formed in the bronchiæ of the lungs ; or empeyema in the chest*. While

* Empeyema, or purulent collection, succeeds an inflammation of the lungs that has not been resolved by expurgation, expectoration, revulsion, or crisis. The distending matter being too sily 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.

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 much within the power of art to cure, or to prevent its farther progress; 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.

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 diet, exercise, and regimen, with the occasional assistance of a little medicine and *proper evacuations*, it is, that hectic symptoms have a chance of being subdued.

subdued. But, if these are permitted to advance till the consumption is confirmed, no Physician, I believe, will be so delusive as to promise beyond the palliative cure. Principiis obsta.

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 fœtid; 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

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 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 does not smell, and is transparent and limpid, it is owing to its short stay in the body, a laxity of the parts, and sanguification not being sufficiently performed for giving it tincture or consistence.

The colour, smell, 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 redundance of crude recrements, from unconcocted blood, and an imbecility of the secretory faculty.

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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 attends the dropical patient is occasioned by that change taking place in the waters from their stagnation. If in sickness there be large hypostases, or settlings in the urine, when there is no immediate crisis of fever, 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,

ture, and a difficult crisis. Putrid urine, while unmoved, is less offensive to the olfactory sense than 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.

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,
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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, 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 siveness 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 aceffant diet makes a great change in the

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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 chick pease, honey in water-gruel, milk and water, plain water; and such things as are capable of changing and dissolving those of the saline, saponaceous, mucous, and gelatinous kind, or concretions. Whey, buttermilk, asses milk, goat-milk whey, during the spring, by being attenuant, detergent, demulcent, mitigators of pain, and correctors of acrimony, are proper. Decoction of mallows and syrup of violets have also a good effect.

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 passages are sufficiently dilated: the retention of them may give rise to more complaints than their merely coalescing into calculous concretions.

Diuretic medicines, and all tenuous sub-acid liquors, as they quickly pass the urinary

nary 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; but such gentle ones as precipitate the peccant particles in the mass of blood, do more good than such powerful ones as those which, by violently forcing the urinary passages, inflame, and exulcerate them, without acting upon the stone. Wherefore it is that emollient mucilaginous liquors are usually given, at the same time, to soften and relax stricture, and blunt such spiculæ as that of the saline of cantharides, which is one of our strongest diuretics; and for that very reason Dr. Mead prescribed these flies to be taken internally for the leprosy, in which they are very efficacious. They are not, however, to be given in doses above one or two grains; nor too often, lest they should cause stranguary, 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 billiary ducts; 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 grafs and dandelion, succory, fumatory, and the like plants, have generally been followed with plentiful evacuation of stony or calculous fragments amongst the intestinal fœces; that is, of those generated in the biliary ducts.”

Dr. James in his Medicinal Dictionary, says, “ he has observed considerable, singular, and “ surprising efficacy in decoctions of yarrow, “ if used a considerable time for any 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

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

The uva ursi, herb arsemart, the seed of
 common gromwell, and pariera brava, are
 some of the most powerful nephritic vege-
 tables yet discovered as specifics for effecting
 loose, gravelly and slimy discharges.

As this complaint is occasioned by crudities,
 nothing can help the stomach to promote
 digestion and assimilation so much as water.
 Zecchius, Trallian, and Carolus Piso, re-
 commend 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 per-
 sisted in.

Those springs which possess the property of
 dissolving and clearing off that crust which
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almost all the common waters deposite on 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. S——, 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, 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,
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as if they had been lamellated. Some were 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 sized 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 ~~nucleus~~ *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.

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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. *Natura nihil agit frustra.*

Hoffman recommends, above all other things, his own anodyne mineral liquor in nephritic complaints, on account of its efficacy and softness, when exhibited in small but frequent doses; which allays the spasms of the *primæ viæ*, and wonderfully removes the uneasy sensations, the nausea and vomiting, they occasion. Some attempt to solve calculous concretions by alkaline medicines; such as by the shells of fishes, *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 supposed to form.

Solvents make less impression on smooth compact bodies than on those which are rugged,

ged, 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 were a fortunate circumstance indeed, for the human species, if an infallible specific remedy were discovered which could be received by the stomach, and thence carry its active principles through the medium of the blood, without injury to its texture, and act on the calculous body, wherever it might be, 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 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

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from being radical ; nothing being compleatly so, that does not totally remove the primary efficient cause.

Moses Waitt, Esq. late of Ham-common, in Surrey, 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 always was 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 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

creted 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 colic of many years standing, and attended with several similar symptoms.

She said it had operated gently by stool, and strongly by urine ; that it had increased her appetite, expelled wind, abated pain, and in-

vited sleep. Her countenance was clear and healthy.

Urine is not only aperient, diuretic, attenuant, detergent, carminative, and stomachic, but, externally applied, is discutient and sedative. 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 ^o matrices 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 *Primæ Linæ*, says, “*Impedita a fluxu bilis ad intestina, destructa vesicula animalia robustissima interpaucos dies perisse.*” Etmuller, 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
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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 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. aq. puleg. spir. nitr. dulc. extract. cicut. fyr. 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

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 who had been called in first, thought proper to repeat the bleeding, and to resume the laudanum. Within thirty hours after this, the patient's complaint changed to a remitting fever and tympanitis, or dry-dropfy.

The patient was now put on a course of deobstruent medicines, as calomel and rhubarb ; which was persevered in day after day, and week after week, even though the symptoms increased, till singultus, thrush, 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

bark to be given during the remissions of the febrile paroxysms, to check the fever and putrid process, and give tone and contractility to the muscular fibres. Still farther to help us, I availed myself of the opinions of Boerhaave and Boyle, who say, relief for the tympanitis is equally given by paracentesis as in ascitis. I also had seen Cheselden'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, once more, over-ruled 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 im-

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mensely 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.

About three years ago a servant maid at Kingston, between 30 and 40, 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

ture 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, is still 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 persisted in.

Thirdly, that if we subdue the leading symptom, the concomitant will yield, as was the case in these two instances.

When the secreted bile is obstructed in its excretion into the intestines, the glands of the liver, biliary-ducts, gall-bladder, and aperture of the pores being thereby greatly distended, it passes through the lymphatic vessels into the blood, and tinges the serum; that tinges the skin, nails, and tunica albuginea of the eyes; and is attended with all the symptoms of jaundice.

Calculi in the neck of the vesica-fellis, or gall-bladder, obstruct the excretion of bile; but the stone does not form in that viscus so very often as many Practitioners are apt to imagine. Similar symptoms will arise from other

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causes; such as visciduity of the bile, which obstructs the biliary ducts; or, from spasmodic constriction of 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, goatbeard, whey, tepid water, and the neutral salts, resolve inflammatory concretions: the alkaline resolve the glutinous. Mellow white wine meliorates the preternatural acritude of the bile that is productive of gripes, colic, &c. Honey tempers and nourishes the bile. It is antiseptic, for it will preserve vegetables.

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

forming a balsam, it sheaths, incides and protects the fluids.

From a defect in the secretion of the bile there is a defect in concoction and distribution; whence colic, spasms, tympanitis, hypochondria, &c. From an effusion, ensues diarrhoea, hepatic flux, &c.

In order to supply the defect of bile on 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. Perhaps the extract of centaury comes nearest to it.

Stagnation, profusion, or vitiation of the bile occasions many a formal inveterate disorder, that does violence to the constitution.

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 of gouty calculi which they so much resem-

ble? Those who are afflicted with this disorder are much annoyed by lymph and bile.

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

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.”

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.

Boerhaave 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. — It would be endless to enumerate all the virtues ascribed to bile, both by ancient and modern writers. I have myself frequently directed
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the use of it with bitter herb decoction in clysters; and the umbilical region to be fomented with it, for dislodging of worms from the bowels, and with good effect. I have frequently cured the pſora, 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 useful, but an highly restorative diet. Perhaps there is no better medicine for removing specks or sloughs on the eyes than *oleum viperinum*.

C H A P. VIII.

On Evacuation by the Catamenia.

THE catamenia are an evacuation of mere blood, appointed by Nature to flow monthly from the uterus. They vary with the climate. In this Island, they, for the most part, commence at fourteen or fifteen; seldom

dom later than eighteen, or continue longer than fifty. If they come early, and are profuse, they cease early.

About that critical period when the menstrual discharge is taking its final leave, there is some struggle, more or less, in every habit, and more especially in those of the sanguineous habit, who have been accustomed to copious menstrual, nasal, or hæmorrhoidal discharges, or other increased excretions.

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.

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A few years ago I was sent for in the night to a Lady of the sanguineous habit about 30, who was discharging great quantities of blood from her mouth, which had much alarmed the apothecary, who had been forty years in practice. I presently perceiving it was only the *catamenia*, 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 next expected monthly return to take three doses a day of saffron and flowers of sulphur: (about gr. 8. or 10. of each for a dose) which she did. In consequence thereof the *catamenia* again flowed easily in the natural channel, and she has been perfectly regular ever since.

I was soon after sent for to relieve another Lady between 30 and 40, whose *catamenia* had taken a similar course by the mouth. The apothecary mistaking it for an *hæmoptysis* had bled her copiously, and thrown in some restraining medicines; which, as naturally might be expected, had almost stifled her, insomuch that it was with the utmost difficulty

culty she could respire. Her pulse wavered, and was low, and she 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 hectic state, she died a few months after.

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. As 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.

Menstruation, impregnation 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 show, 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. Mania is not an uncommon effect 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 that purpose 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 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, and therefore may require a different mode of treatment. Though

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we cannot speak particularly to every 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, tonics, as steel, aromatics, bitters, and the cold-bath, are proper. 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, potent deobstruents and bleeding in the arm or foot, with such thin diluting liquids, as will relax, attenuate, and expel the stimulus, and take off stricture of the blood-vessels, 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 cordials, as wine, that
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give vigorous action to the organs of digestion, and enrich the blood, becomes necessary.

If the suppression be owing to a sluggish viscosity of the fluids, attenuants, stimulants, volatiles, exercise, as dancing, and temperate air, remove the obstruction, and subdue the cause.

If the suppression proceeds from spasmodic constriction, emollient and gentle aperient clysters, pediluvium, semicupium, friction, electricity, sitting over warm stimulating volatile steams, antispasmodics, and mineral waters, lessen the vis resistendi of the vessels, and promote a flow.

Disquieting passions, or violent emotions 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
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obstruction, to force the uterus. On 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.

A profusio mensium, from a depravity of the menstrual blood, and laxity of the uterus, is also attended with many inveterate cachectical symptoms. When the impurity of the juices which have thus depraved the blood are corrected, 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

stance of the uterus. Women of tolerable strong constitutions may endure this discharge a long time; but if it is incautiously suppressed before the antecedent cause be removed, leucophlegmatia, dropy, ill-disposed ulcers, or other cachectical symptoms, will ensue.

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 fœtus, whose birth is to preserve both the mental and corporeal resemblance of those from whose semen its existence is derived. 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. A moderate emission of semen from the full grown, warm, and athletic

letic habit, by alleviating Nature, preserves health, and therefore to such becomes a necessary evacuation. Semen, by long retention, loses much of its stimulating active power: but an immoderate use of venery, is irretrievably injurious: it weakens the nervous system, lessens innate heat, and consequently the prolific power and concoctive faculty. If the blood is deprived of this nourishing, animating principle, the sight, understanding and memory, will be thereby impaired; and tremor, debility, relaxation, dejection, tabes dorsalis, convulsion and aepesia will ensue.

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.

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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 succus 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 overstraining 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 emission: 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 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 debility and laxity, as it often is, a long continued use

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, a 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 married when he was first seized with a hemiplegia, of which he got better, but very soon after was effected with a satyriasis, when his behaviour was truly ludicrous, and he died soon after.

C H A P. X.

On topical Evacuation by bleeding.

TOPICAL EVACUATIONS are contrivances to assist the vital principle which governs

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 redundancy and restrain the impetus of the accelerated mass and stimulating power, that the inflammatory diathesis, or inordinate cohesion, may be broken through, for refrigeration, separation, and attenuation to take place; that a revulsion may be made from a morbid part; and that respiration, the pulse and vital actions, may become regular, equal and free.

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

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climate

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--was lately brought to me by two others, who supported him on his feeble legs, and told me that the poor creature had been blooded 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 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

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, 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 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 sympto-

symptomatic cough, as in measles or influenza, the lancet is wisely with-held, 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 does not so often happen from plentitude of blood, as from loss of its quantity, impurity of its serum, and a disturbance of the mind. When it is occasioned by a redundancy, 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 discusion of the inflammation.

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 both of mother and foetus. But abortion, and all the dreadful consequences attending it, may be occasioned by unseasonable bleeding and purging.

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.

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

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. 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 pustulary 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 exacerbation 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,

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, render the disorder more irregular and more inveterate. Nevertheless, though general bleedings are inadmissible, yet topical, as by the leech for the local affection, such as gonagra, or chiragra, has relieved.

It is not sufficient to attend only to the nature, quantity, and quality of the blood, but to the manner of its being drawn. Dr. Boerhaave says, “three ounces of blood discharged, in full stream, affords more relief than ten distilled

tilled in drops." The blood discharged suddenly by full stream in the strong and plethoric habit, no doubt, is best; but where the patient is delicate and weak, and liable to swoon, I prefer the small orifice. A violent hæmorrhage, in general, occasions fainting. The posture the patient's body is in during the operation, is likewise a consideration of moment. Professor Cullen 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 quanti-

ty is required to be drawn off before the head can be relieved.

Arteriotomy, for this same affection of the head, is sometimes performed on the temporal artery; and is more effectual than venæsection; and it would be much oftener practised, were it not for fear 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 is serviceable in vertigo, cephalalgia, mania, epilepsia, 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

than the leeches could suck. Cupping-glasses not only draw off blood, but, 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 navel; 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.

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

For such local inflammatory affections, as ophthalmia, hæmorrhoids, rheumatic tumefactions, or inflamed swellings of the limbs, and nephritic, hypochondriac, and ischiadic pains, leeches on or near to the part give relief: they also are more convenient than the lancet for infants, or little children 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.” But much depends upon the state of the habit.

Themison is said to be the first Physician who takes notice of leeches. Hippocrates never once mentions 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. XI.

Of 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. Part of the morbid serum is thus attracted to the superficies of the body, the torpid solids are excited to more frequent oscillations, and energy is given to the whole nervous system. By thus restoring the circulation, relief is given to the vital powers that are oppressed, the secretions are promoted, and the morbid part is rendered less sensible to the afflicting cause. The sentient principle being diverted to the new inflamed part, and a derivation obtained, obstructions are removed, pain is abated, and preternatural tension and spasm taken off. Thus blisters are stimulant, evacuant, derivative, and sedative.

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.

As evacuants, their virtue goes beyond the quantity of fluid matter they discharge; for much greater discharges than what is made by them, are promoted by other causes, but without such relief, as is given by the blister, to a morbid habit.

As derivatives, when Nature is endeavouring to deposite noxious matter on a remote part, a vesicatory hastens on that derivation of the peccant matter which gives relief to the patient.

They are sedative, by subduing spasm or painful stricture. On the like principle it is that heat alleviates the excruciating pain of rheumatism and tooth-ach.—Be the theory of blisters what it may, it is now very generally allowed that the practice of physic would be very imperfect without them. They often, by their specific power, give a favourable turn to a disease, when other methods and medicines fail in giving relief. After previous evacua-
tions,

tions, they are most remarkably useful for a continued fever, in that stage of it when bleeding is unsafe. They are even serviceable in pleurisy, and acute diseases of the lungs, that seem to require bleeding.—Heister mentions a case of inflamed eyes being relieved by a small blister on the crown of the head, but that I presume was after bleeding. De Haen says, blisters often prevent an approaching fit of the ague. We have frequent instances of blisters curing preternatural discharges, as catarrh, purging, and hæmorrhages. Nothing more effectually relieves the gouty spasm in the stomach, when it is applied to the side, or inside of the arms, or legs, or thighs; but not on the stomach itself, as the intention is to make a revulsion from the seat of pain. In rheumatism, sciatica, anomalous gout, and in critical tumours, they are useful in stimulating to an expulsion the separated noxious matter, and for preventing a return of it on the blood. Farriers apply a blister to a sprained part of a horse, and say it cures. Blisters give relief in low nervous fevers. I have sometimes succeeded in the beginning of these fevers by blisters and Rhenish wine only.

In petechial fevers, vesicatories must not be applied too soon; for, by lessening the quantity of the serosity of the blood and lymph, the eruption of the pustules is prevented.

Vesicatories, on the inside of hydropical swelled legs, promote a great discharge of serosity; but a gangrene is, in general, the consequence.

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 was the first who introduced blisters in that formidable disease. Saxonia and others have since confirmed his practice.—Aretæus was the first who used blisters 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 *utcumque opus*

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 exulcerate the urinary organs, the sinapism is preferable for a long continued stimulus. Sinapisms, by inviting the 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 ferous fluid, I hope I may be allowed to arrange them among evacuants.

C H A P. XII.

On Evacuation by Fontanelis 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-pul-

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monalis,

monalis, 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 cacochimic habits 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 relicts. Quercetan the Armenian, in his *Alexicus 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, mature, and discharge a laudable matter, the fever abates, and the morbid matter deposits and passes off.

Ætius,

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. Celsus, by cupping, and then applying the actual cautery to the wound, supposed the poison might be extracted; and Dr. Boerhaave, for the same purpose, recommends a continual suppuration to be kept up in the part for six months.

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.

The seton, termed *a rowel*, has long been used by farriers whenever a repletion, or a coacervation of humour, 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 pthisis, scrophula, lepra, lues-venerea, scurvy, epilepsy, rickets, cataract, dimness, gout, and other affections *sive anticipiando, 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, pthisis, hæmoptysis, &c.

Dr. Willis says, “ he cured one patient of an obstinate weakness in the loins, and another
of

of an inveterate sciatica, by an issue in the groin."

Dr. Sydenham says, "the remains of the morbid matter of a rheumatism may 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 ferrous liquor of the blood, and consequently 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 consumption."

Dr. Nicholas Robinson says, "when the lungs were oppressed with a rosy tough phlegm, or matter, that lies deep and requires great labour in pumping up, I advised a couple of issues, or setons, to be made in the arms, or in each side of the breast; or between the shoulders just below the nape of the neck; and it is impossible to conceive the benefit I have known to accrue from these issues, especially when they made a free discharge."

Baron Van Sweiten and Ruyfch declare
that

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.

After inoculation for the small-pox, some children, whose bodies have not been sufficiently purged, 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 costiveness. 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.

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

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 ever happen to irritate and inflame the part, the pain ought to be patiently endured, as the stimulus is a salutary one, and promotes the discharge.

Some

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 of that which occasions weakness, yet, while the
power

power of conception is retained they are not to be prescribed for a married woman. This is an observation which arises from a long and close attention to the effects of issues.

Miscarriages, in general, are occasioned by frights in the weak and irritable habit; and, are often so violent as not only to bring on delirium, but convulsions, and the most alarming symptoms, if not *death*. If a flooding comes on, astringents have no effect on the uterus, till the fœtus and secundines are expelled, when they immediately become unnecessary, because the hæmorrhage stops spontaneously. Exercise, 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 obstruction 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 dis-

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charged 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 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

bite of the viper, or mag-dog, by destroying the texture of the part; and, if any virus should still remain, by allowing it to run off by the fore. A warm cabbage, leek or colts-foot 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.

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. XIII.

On Evacuation by Sternutatories and Errhines.

THESE incentives to sneezing differ only in their degree of strength and power of action.
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They are intended to purge off the redundant stagnated lymph from the anterior part of the head.

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, sternutatories, such as hellebore, elaterium, euphorbium, turbith mineral, or sternutatory powder of the dispensatories are requisite.

Sternutatories, by promoting expectoration, and sometimes a ptyalism, are serviceable in humoral asthma, and other pectoral complaints. By inciting excretions from the 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, and involuntary excretions. Sternutation or sneezing relieves singultus

gultus 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, &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 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, and thereby loses its stimulating power, clogs the frontal sinuses and lachrymal ducts, obtunds nervous sensation, relaxes and weakens the organs of sight, deadens the lustre of the eyes, falls the complexion, and has brought on consumption.

CHAP.

C H A P. XIV.

On Evacuation by Sialogogues and Masticatories.

THOUGH either of these medicines promote a glandular discharge by the mouth, they differ in their degree of action and effect on the system.—Sialogogues act universally; masticatories, partially. But we have already noticed the powers of the principal sialogogue, mercury, wherefore we shall pass on to masticatories: such as pyrethrum, horse-radish, staphysagria, &c. which, by their pungent stimulating quality, discharge the oral glands, and thereby become serviceable in phlegmatic quinzy, tooth-ach, swelling of the gums, 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 that the great and permanent cure is to be effected by a mere stimulus, yet the masticatory is nevertheless entitled to a place among preservatives from foul and contagious air, as it prevents

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.

Roll-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. The common absurd habits of trifling with this very 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 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 volatile salt. By distillation it yields an acid phlegm, some urinous

ous spirit, and much fœtid oil. 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 *.

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 most 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 full phlegmatic habit; for unloading the head and fauces; for

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resolving

* *James's Medicinal Dictionary.*

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. *Mediotutissimus ibus.* I never met with two patients whom I could invariably treat alike.

On the whole, I therefore 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.”

T H E E N D



