A treatise on female nervous hysterical, hypochondriacal, bilious, convulsive diseases : apoplexy and palsy; with thoughts on madness, suicide, etc., in which the principal disorders are explained from anatomical facts, and the treatment formed on several new principles.

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TREATISE

ON

FEMALE, NERVOUS

DISEASES,

MADNESS, SUICIDE,

&c. &c.

A

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ON

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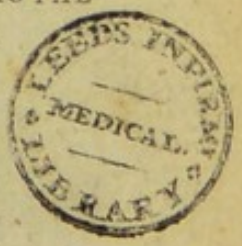
AND THE TREATMENT FORMED ON

SEVERAL NEW PRINCIPLES.

BY

WILLIAM ROWLEY, M. D.

MEMBER of the UNIVERSITY of OXFORD, the ROYAL
COLLEGE of PHYSICIANS in LONDON, &c.



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INTRODUCTION.

THE following work contains an attempt to improve the treatment of female and nervous diſeaſes, and to explain ſeveral new principles of cure.

In each diſorder, anatomical demonſtrations are produced, to elucidate the true cauſes, and the rationality of the practice of cure propoſed. As ſuch diſquiſitions are only intended for the medical faculty, it was thought moſt eligible to deliver them in Latin.

Pathological diſſections ſhew the effects of diſeaſes; but a previous knowledge of the animal, vital, and natural functions,

tions, during life, explain, by inductive reaſoning, the various impediments ariſing from morbid affections.

As a large *Conſpectus* of the work is ſubjoined, in the form of contents, a long explanatory introduction is not requiſite.

The doctrines advanced are the collective reſult of long experience, and abundance of practice in all the branches of medicine. The healing art, to be extenſively uſeful, ſhould neither be confined to any narrow ſyſtem, ſect, nor particular department.

In moſt parts of this treatiſe, new ſentiments are delivered with openneſs and freedom. What is offered, is reſpectfully ſubmitted to the learned, experienced, and candid, in the profeſſion: their approbation may confirm what is rational; their judicious objections to whatever may be

be thought defective, either in theory or practice, will be conſidered worthy of attention.

The performance originally extended only to female diſeaſes; but the hyſterical are ſo nearly allied to many others of the nervous claſs, that it was determined to comprehend the whole in this volume, with their numerous ſymptoms.

The *Formulæ medicamentorum* are not intended to confine the medical profeſſion to the ſpecimens introduced; for medicine, if not empirical, muſt continually vary according to conſtitutions, mental diſpoſition, age, ſexes, climates, ſeaſons, ſtages of the diſeaſe, &c. This doctrine is ſeriouſly recommended. The treatment of the irritable, florid, pallid, robuſt, or debilitated, &c. is conſidered, with the neceſſity of continually varying the modes of cure. An exquiſite diſcrimination in theſe particulars, I have ever conſidered the ſublimeſt

meſt ſkill in the art of medicine. The preſcriptions therefore are only produced as general outlines for practice, which may be altered agreeably to indications, contra-indications, &c., in every individual patient. The judicious application of medical precepts, however ingenious, muſt be ſubmitted to the diſcernment of the experienced preſcriber.

That the performance may be uſeful to the afflicted, is the earneſt wiſh of

THE AUTHOR.

SAVILLE ROW,
SEPT. 20, 1788.

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Experiments to prove the nervous fluid exiſting erroneous. Impeding the courſe of the blood the *evident* and *real* cauſe of the effects produced by ligatures, &c. *Heat* reſident in arterial blood and preſerved by arterial action. The deprivation of arterial action the deprivation of human or animal heat. Life and death, how aſcertained by the preſence or abſence of arterial action and heat. Arterial action and heat ceaſes to be perceptible, if the arterial blood and action be intercepted by a ligature on a nerve: all the parts below the ligature, dependent on the nerve, become torpid, cold, and inſenſible; nor can they convey to the brain any ſenſations from *ſtimuli*. The interruption, therefore, of arterial blood one great cauſe of inſenſibility, independent of the compreſſion of the medulla, &c., of the nerves, ——— 257, 258

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The *regular* or *irregular* diſtribution of what phyſiologiſts and phyſicians have called *animal ſpirits*, *liquidum nervoſum*, *nervous juice*, or *fluid*, with all their wonderful effects, as related by medical authors, *want proofs*, inſtead of mere aſſertions, to ſupport the doctrines. The *appellations*, then, of *nervous fluids*, &c., ſo common in all medical treatiſes, are here excluded as *non-entities*, and the words *nervous powers*, *nervous influence*, or *nervous principle*, ſubſtituted. This, perhaps,

haps, uſeful to the fabricators of curious hypotheſes on matter, ſpirit, and metaphyſical ſubjects, 259

Electric fire paſſes in rapidity equal to the mind; but it is much doubted whether the electric fluid would be impeded in paſſing through a nerve by a *non-electric* ligature: experiments prove the contrary. The *nervous fluid* ſecreted by the brain acting as a *gland*; but perhaps particles of light attracted from the atmoſpheric air by the lungs in reſpiration, &c., and conveyed by the arterial ſyſtem to the brain, &c. *Vital heat* reſides in the arteries and arterial blood. Mr. J. Hunter's idea of blood being alive not irrational, &c. Attractions conſidered, —— — 260

To know that all voluntary and involuntary ſenſations and actions are conveyed by the nerves to and from the brain, is perhaps ſufficient for medicine. Deprivations of the nerves and brain produce deprivation of ſenſe. Contractions of muſcles from the *vis inſita* no proof of ſenſations being impreſſed on the mind after death. As no *human being* has yet undergone the trial of ligatures round the nerves leading to the heart during life, no juſt concluſions can be drawn of what are the ſenſations from ſuch an experiment, as dogs have been the ſubjects, who ſhew tokens of great miſery, and die in a day or two. The heart certainly circulates the blood, but not to anſwer the purpoſes of life. Irritations of nerves produce convulſive action; but depreſſion of the brain, or compreſſion of nerves, inſenſibility, &c. The ſoul's action does not extend beyond the ligature round a large nerve in voluntary motion, —— —— 261

Putrid changes produced in the blood irritate the brain, and occaſion delirium; an increaſed quantity of blood, ſtupor or inſenſibility. The regular powers of the ſoul reſiſted by accumulated or changed blood in the brain. All diſeaſes whatever are changes of the

blood acting on the ſolids and nervous powers, and theſe latter on the fluids, ——— 262

Four conditions neceſſary to the cauſes of any diſeaſe preſent. 1. Change of the blood, &c.; 2. Irritation of the ſolids, &c.; 3. Increaſed or diminiſhed action; 4. Perceptibility of an univerſal or partial diſeaſe in the mind. Without impreſſions of the mind, no diſeaſe would be felt or deſcribed by the patient, nor comprehended by the phyſician. The ſoul not ſeparable from the body in a medical view, — *ib.*

If Stahl and his followers attributed too much to the ſoul's feelings, which they could not prove; yet the mechanical and other phyſicians have equally erred in denying the ſoul any power or knowledge of the diſeaſes of the body. Experiments made to determine the ſoul's connection with the body. The mind or ſoul not defineable but by obſervations on the oſtenſible effects, operations, &c., in the body, — 263

The future man an inert maſs in the ovulum before maſculine impregnation, &c. Impregnation ſhews the *punctum ſaliens*, how the embryo grows in the womb. While the fœtus is in the uterus there is no reaſon to ſuppoſe it poſſeſſes any qualities of the ſoul that appear afterwards. On the fœtus being excluded at the ninth month from the uterus, ſome operations of the ſoul immediately appear after breathing and receiving the atmoſpheric air. The circulation of the blood changed, ——— ——— 264

The air ſeems to contain the *pabulum vitæ* of rational life. In the infantile firſt months, very imperfect ſketches of the ſoul's powers appear; afterward gradually receives various impreſſion by no evident intuitive knowledge; but by the ſenſes, it imitates ſounds, &c. ——— ——— 265

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The

The ſoul united with the body collects ideas. The extent of human knowledge, in different men, exceedingly different, —— —— 266

The operations of the ſoul begin and end with reſpiration. The ſoul as fugitive as air; how it receives, retains, and increaſes in knowledge. The ſoul only retains what it is taught or invents, and reflects, reaſons, and judges only in proportion to the number and diverſity of ideas it has received or collected. Where there be few ideas, reflection, reaſoning, and judgement proportionably confined: where they are extenſive, the ſoul views men and things extenſively. The inferiority or ſuperiority of human underſtanding generally depend on the paucity or multiplicity of ideas and juſt reaſoning poſſeſſed by the mind, 267

The ſoul has powers to impel a greater quantity of blood to the head for either mental or bodily exertion: it can diminiſh or augment the heart's action by ſorrow or joy. Effects of muſic, &c. The ſoul can direct blood to the organs of generation, &c. — *ib.*

Violent anger has ruptured the blood veſſels of the brain. The ſoul an inviſible agent or power acting in various modes on that animal matter called brain. The ſoul acquires ſtrength and knowledge by the organs of ſenſe, but not without human growth and human induſtry, —— —— 268

The brain being the ſoul's principal receptacle, conveys, in health, the ſoul's intentions to the body by means of the diſtribution of the nerves, &c. No perceptible nervous fluid admitted. The ſoul's influence pervades by its ſubtilty all parts, the conductor and governor of all its various feelings and actions, &c. All cauſes equal to their effects. The brain being ſound, the ſoul's powers not impeded; but the brain being diſeaſed, the free exerciſes of the ſoul are interrupted variouſly, which diſſections demonſtrate.

A ſound

A ſound underſtanding, by diſeaſed brain, converted into madneſs, folly, &c. — — 268

The ſoul's action annulled, or its free influence obſtructed, from affections of the medullary or cortical ſubſtance and membranes of the brain; from hence falſe conceptions, reaſoning, and judgement, — 269

In the nervous parts, remote from the brain, irritability excited by vitiated, changed, and acrid blood, acting as ſtimuli, and arterial action is increaſed. Inſenſibility or numbneſs, produced by ligatures, pervert the regular influence or perception on the mind. What that inviſible influence the ſoul is, beyond demonſtration or human comprehenſion. It is reſident in the brain and nervous ſyſtem; and as theſe parts pervade all the body, the ſoul influences and perceives the moleſtation of every ſenſible part, —— 270

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and

and ſoundneſs of the brain, it may eaſily be conceived why irritation, diſtention of veſſels, or other cauſes producing local heat, friction, &c., in the component parts produce contrary effects, 273, 274

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A TREA-

A

TREATISE

ON

FEMALE, NERVOUS DISEASES,

MADNESS, SUICIDE,

&c. &c.

General Method of preventing FEMALE DISEASES, *&c.*

THE delicate ſtructure of the female body; the peculiar ſenſibility of the nervous ſyſtem; the abſence, preſence, diminution, increaſe, or obſtruction of the catamenia; the ſtate of the uterus, and the ſingularities of each individual conſtitution, all require the moſt ſerious attention of the phyſician, who would treat the diſorders of females with integrity and ſucceſs.

The due regulation of the catamenia is of the utmoſt importance: but it ſhould not be determined on from the greater or leſs quantity of the diſcharge, but what the conſtitution has been accuſtomed to; this varies more or leſs in every female.

Perſons of ſuperior rank, who uſe little exerciſe, and are of a relaxed habit, have often this evacuation in greater abundance than thoſe of an inferior ſtation; yet this may anſwer the moſt ſalutary purpoſes in both conditions.

The conſtitution, in general, regulates the catamenia without requiring any aſſiſtance from art: therefore, phyſicians and the female ſex ſhould be very cautious how they counteract this uterine excretion by improper and ill-timed remedies; for irreparable miſchief has been the conſequence *.

An increaſe or diminution of the menſtrual evacuation may happen from various cauſes;

* Hunc ſanguinem ex ipſius uteri vaſis deponi demonſtravit autopſia in fœminis, eo fluente extinctis; in vivis mulieribus, quibus uterus inverſus ſanguinem ex oſtio interno deſtillavit; in aliis, quibus cum menſes deficerent, uterus ſanguine congeſto plenus fuit, natura uteri vaſis pleniſſima mollis ſpongioſa, comparata cum tenui, minima flocculenta, calloſa vagina.—Nihil tamen intercedit quin utero impedito ſanguis per vaginam deponatur, ut alius per ultimum inteſtinum & per remotiſſimas demum corporis partes deponitur.—*Hallerus.*

as changes of air, diet, and exercises; violent affections of the mind, as anger, grief, fear; retentions of natural and diurnal excretions, as the feces, urine, and perspiration, without any injury to the constitution: these changes, or any little slight symptoms arising from them, should not be considered or treated as diseases.

In healthful constitutions, besides the purposes of propagating the human species, the womb expels whatever is noxious or redundant; and prevents or cures, by this means, many female complaints *.

The diet of females should be regulated according to the individual constitution: but during the flowing of the catamenia, all *acids*, *flatulent*, *cold*, *milky*, *viscid*, and *gross diet* should be avoided; as likewise *cold bathing*, *sudden cold*, *vegetable*, and all bracing or *astringent* medicines, *purges*, or *vomits*.

If the discharge should be accompanied with much pain, arising from the resistance of the *os internum*, or from little coagulated masses formed in the uterus, which it endeavours to expel by repeated and painful contractions †,

* Καλαμηνίων γινομένων πλειόνων ἧσσοι ξυμβαίνουσι. *Hippoc.*

† These pains are frequently mistaken for colics, both by medical practitioners and females, and very improperly treated. The pains are situated under the pubis, between the bladder and rectum, &c.

warm cloths may be repeatedly applied to the lower part of the abdomen, or a bladder filled with hot water, which will retain its heat a conſiderable time; and warm, comfortable drinks may be uſed in moderation; if theſe do not ſucceed, an emollient carminative clyſter may be preſcribed *.

Theſe pains are immediately removed by opiates; but the greateſt ſkill and circumſpection are required in their adminiſtration; for they ſometimes produce *delirium*, *convulſions*, *headachs*, *obſtruction*, and a train of other diſagreeable ſymptoms, not only in this, but in other feminine complaints; and, their effects are commonly equal to the proportion of nervous ſenſibility the conſtitution poſſeſſes.

In the intermediate time, from one monthly diſcharge to another, the accuſtomed way of life, and that which has been experienced to agree, ſhould be continued, if not productive of indiſpoſition, and this will be beſt determined by every one's natural feelings. Air, exerciſe, regular diet, and amuſements, are more conducive to health, than confinement, indolence, a minute attention to trifling changes, and a conſtant application to the art of medicine.

From natural conſtitution, and often from

* Of carraway, anniſeeds, and chamomile flowers boiled, and a cup of ſweet oil. Myrrh and aloetics are uſeful.

errors

errors in living, ariſe a plethora or fulneſs in ſome women, and an extreme relaxation in others: both require a different treatment.

To remove fulneſs, joined with too much floridity, a more abſtemious diet may be purſued once or twice in the week, avoiding ſuppers, or large draughts of different liquids.

To invigorate the relaxed and pallid, light nutritious meats, with a glaſs of wine, avoiding all teas, lemonade, ſmall beer, or any weak drinks, as much as poſſible. By regulating exactly the quantity of liquids taken into the ſtomach, ſo as never to exceed the ſolid food: but, as each individual may require a particular treatment, to direct this, is the province of medicine.

Coſtiveneſs is a common female complaint, and productive of many evils: in thoſe of a plethoric habit, and florid complection, *magneſia*, *ſal polychreſtum*, *ſena*, ſtewed prunes, manna; and to robuſt habits, even Rochelle ſalts may occaſionally be repeated, if a more free uſe of boiled vegetables ſhould not anſwer.

To the relaxed, thin, and pale, *aloetics* joined with *ſoap*, a few grains of *Rufus's pill*, or ſuchlike remedies, will be proper; but no preparation, perhaps, is better, than about from two to eight grains of the *pilula ex colocynth. cum*

aloe. twice or thrice in the week; it commonly removes moſt pains in the ſtomach, and acts very gently if well prepared.

A grain of the *pulv. gambog.*, or half a grain of calomel, as an excellent deobſtruent, may be added in ſome caſes.

Such are the general means by which good health may be preſerved, and many grievous diſeaſes prevented.

Of the Chlorosis, *or* Green Sickness.

A partial or total obſtruction in the uterine veſſels of young females, under or about the age of puberty, attended with great paleneſs, or a ſallow green colour of the face and ſkin, and a diſinclination to move, is called the chlorofis, or green ſickneſs *.

To the above appearances the following ſymptoms may be added; paleneſs of lips; great laſſitude; coldneſs of the feet; loſs of appetite, or a deſire for abſurd things; nauſea and vomiting; diſturbed ſleep; a languid pulſe; yellow, turbid, or aqueous urine; a

* Hipp.; Iliſcis Avicennæ; febris alba & virginum obſtructiones Mercati; Cachexia Plateri, de diſcolorarione. Morbus virgineus & febris alba Rod. a Caſtro. Fœdi colores Ballonii. Febris amatoria Langii. Icteritia alba Etmulleri. The multiplication of names for one and the ſame thing may be numbered amongſt modern abſurdities.

diffi-

difficulty of breathing; ſwellings of the feet, and other parts; palpitation of the heart; pains of the head; faintings, and a great dejection of the mind.

The immediate cauſes of the chloroſis ſeem to be, a depraved ſtate of the fluids, from a repeated accumulation of what ſhould have been diſcharged by the uterine veſſels; a diminiſhed ſenſibility of the nervous ſyſtem, and a loſs of vigor in the ſolids. Inſtead of a proper proportion of the red particles in the blood, ſerum or lymph predominate; the fine feelings are blunted, and the ſoul and body appear in a ſtate of torpidity, and every little exertion of the muſcular powers produces fatigue.

The other cauſes are, a humid and cold air; a natural lax, ſpongeous and phlegmatic habit; a ſedentary life; affections of the mind; improper diet; a bad digeſtion: but, above all, the admiſſion of a depraved and ill-prepared chyle through the lacteal veſſels *.

When the diſeaſe has been ſome time confirmed, the mind and body become the reciprocal cauſes of its increaſe and continuance: the languid ſtate of mind is daily more debilitated by the ſluggiſh circulation of cold un-

* Vitium primæ coctionis, quæ fit in primis viis, non facile corrigitur in ſecunda, quæ in viſceribus ſanguificationi & depuratione inſervientibus peragitur, minus in tertia quæ actu nutritionis abſolvitur.

healthy fluids; and this feeble circulation appears to deaden the nervous ſenſations, and deprive the ſoul and active nervous powers of thoſe exertions which might expel the formidable enemy. The effects may be ſeen but rarely; but a few examinations after death ſhew ſufficiently the conſequences of the diſeaſe *.

The cure conſiſts in correcting the vitiated fluids; and removing glandular, or other obſtruction.

Removing the torpidity of the nervous ſyſtem; and

Invigorating the ſolids.

1. Theſe ends may be produced by neutral

* *Chloroſis.*

Anatomical Examinations after Death.

Symptomata.	*Extiſpicia.*
Chloroſis cum ſpirandi difficultate & convulſionibus ſuccedentibus.	Lympha in thorace & pulmones pure exeſi.
Cordis palpitationibus ſtipatur & ſyncopem lethalem accerſit.	Cor ſanguine concreto turgens, valvulæ deformes & quaſi oſſeæ.
Chlorotica ſubito extinguitur.	Ovarium ſiniſtrum ingens.
Chlorotica difficile ſpirat & convulſionibus aggreditur.	Pulmones putridi.
Chlorotica centum & amplius venæ ſectiones intra annum paſſa ſyncope de medio tollitur.	Cerebrum & vaſa ſanguifera ſanguine vacua.
	Ventriculus contractus.

ſalts,

ſalts, aloetics, mercurials, and antimonials, given as evacuants and alteratives.

2. By air, exerciſe, warm medicated baths, diverting the mind, riding on horſeback.

3. By chalybeates, bark, Spa, Pyrmont, Bath, ſimilar waters, and an attention to proper diet.

The diſorder, however, being ſlow in its advances, and ſeldom attended with immediate danger, the attempts to cure ſhould be conducted gradually: but the diſeaſe is not to be left to nature; the aſſiſtance of art is to ſecond her efforts, and in moſt caſes is abſolutely neceſſary.

The depraved humours may be evacuated, and glandular obſtruction removed, by aloetics and calomel ad gr. ſs. vel j., once, twice, or thrice in the week; and the blood may be accelerated and changed by an electuary of *limatur. mart. ſpec. aromat.* and *conſ. roſar.* ter de die.

Manna and *cremor tartari*, *rhubarb*, *jalap*, and *nitre*. The application of any of the above remedies, according to the circumſtances of caſes and conſtitutions of patients, muſt be left to the ſkill of the preſcriber.

To the *plethoric*, the ſaline preparations diſſolved and united with *aloetics* may be proper.

To the pale, languid, and hyſterical, the *aloetics* alone, or joined with the *fœtid gums*, and in all obſtinate caſes, the *mercurials*, as

merc.

merc. dulc. ſex ſubl. ad. gr. ſs; at proper diſtances may be adminiſtered conjointly with aloetics, or bitter laxatives.

In the intermediate days may be given *horis duabus ante prandium quotidie*, with or without *chalybeates*; as light correctors of the ſtomach.

Elix. aloës.
—— myrrh. c.
Tinct. ſacra. ad ʒi vel ʒiſs.
——— Rhei ad ʒij. in quorum vehiculo appropriato.
Pil. gummoſs. ad gr. v. cum
— Rufi ad gr. iij.
Extract. cathart. ad gr. iij.
——— Rhabarb. cum gentian.
——— ——— —— ſabin.
Gum ammoniac.
—— galban.
—— myrrh ad gr. v.

As gentle alteratives,

Cinnabar factitium.
Æthiops mineralis.
Pulv. merc. dulc. lot. cum ſulph. aurat. ant. ad gr. j. ter de die in a pill.

To reſtore and invigorate the ſolids and quicken the circulation.

Rubigo ferri ad ℈j.
Flores martiales ad ʒj. cum infus amar. ter de die.
Elix. vitriol. dulc. ad ʒj.
———— acid. ad gtt. xv. cum decocto cort. Peruv. vel infuſo amaro.
Lixivium martis ad gtt. xx.

Vinum

Vinum chalybeatum ad ʒij.

——— amarum.

Pulv. cortex Peruv. ad ʒſs ex cyatho lactis vaccini bis vel ter de die.

But what has been found, after above twenty years experience, and in ſome thouſands of female and other caſes, an excellent corrector of the moſt depraved ſtate of the fluids, is our pulvis mineralis purificans, which is prepared in the following manner:

Pulvis mineralis purificans fortior.

℞. Flor. ſulph. pulv. ſal. nitr. argent. viv. aa ℔j. terantur ſimul in mortario vitreo vel lapideo donec perfectiſſima unitas facta ſit.

Pulvis mineralis purificans mitior.

℞. Flor. ſulph. argent. viv. aa. ℔ſs. pulv. ſal. nitr. puriſs. ℔j. miſce ut ſupra.

The aloetic and calomel pill ſhould be preſcribed at the ſame time.

Cauſe-removing remedies for the firſt intention.

Formulæ remediorum.

No. 1. ℞. Tart. emet. gr. ⅛ ad gr. ſs.
Aq. com. ʒiſs.
Magnes. alb. gr. x. M. f. hauſtus bis vel ter in ſeptimana ſumendus.

No. 2. ℞. Calomel gr. ⅛ ad gr. ſs. vel gr. j.
Pil. rufi gr. iij. M. accuratiſſime f. pilula ſemel bis vel ter in ſeptimana ſumenda.

No.

No. 3. ℞. Pil. gummoſs.
— ex. colocynth. cum aloe aa ʒj.
M. f. pilulæ No. xxiv. capiat unam mane & nocte ſuperbibendo ʒij. aquæ vel infuſi pulegii cum ʒj. tinct. flor. mart.

After the foregoing evacuants the following remedies are proper.

No. 4. ℞. Tinct. melampod. ʒj. capiat. coch. parvul (tea ſpoonful) ex infus. fol. puleg. mane horâ undecima quotidie: vel,

No. 5. ℞. Elix. aloës ʒvj.
Tinct. aromat. ʒij. M. capiat gtt. LX bis vel ter de die ex cyatho aquæ parvo: vel,

No. 6. ℞. Vin. Chalybeat. ʒiſs.
Tinct. ſacr. ʒiſs. M. capiat ʒij. ter de die ex cyatho infus. flor. chamæmel.

No. 7. ℞. Elix. aloës ʒiſs.
Lixiv. mart. ʒſs M. capiat gtt. XXX vel LX bis de die ut ſupra.

No. 8. ℞. Elix. myrrh. comp. ʒiſs.
Aloës ʒiſs M. capiat. gtt. LX bis vel ter de die ex liquore appropriato.

Any of the above preparations may be made into draughts, or mixtures, with the aqua puleg. or aqua mentha; with an addition of camphor julap, if neceſſary.

No. 9. ℞. Con. cort. aurant. ʒiſs.
Chalyb. cum ſulph. præp. aa ʒiij.
Spec. aromat. ʒij.
Syr. ſimp. q. s.
M. f. elect. cujus capiat Q. N. M. bis in die ſuperbibend. ʒij. infus. amar.

No.

No. 10. ℞. Lac. ſulph. ℈ſs.
Rubig. ferri præpar. gr. xv.
Myrrh pulv. gr. xx.
Spec. aromat. gr. iv. M. f. pulv. bis in die ſumend. e coch. ſyrup. ſimp.

By ſuch remedies the offices of the ſtomach, inteſtines, and lacteal veſſels are reſtored; the glutinous or ſerous matter is diminiſhed, evacuated, or changed; a more healthful and nutritious chyle is prepared and abſorbed, the red particles of blood increaſe, the lips begin to aſſume their natural colour; the arterial ſyſtem acquiring ſtrength and elaſticity, the uterine veſſels open, and the menſtrual diſcharge becomes regular.

Practical Admonitions and Obſervations.

Bleeding ſhould never be preſcribed, except to robuſt, full habits, and when the diſorder is recent.

Chalybeates agree beſt with the cold leucophlegmatic conſtitutions: all alcalines ſhould be avoided at the time they are adminiſtered.

In full, plethoric habits, the neutral ſalts, or cremor tartar joined with cathartics, may be proper, and even the preparations of hellebore; but this laſt is rarely neceſſary; and one great objection to its uſe is, its draſtic effects, which were remarked by Hippocrates.

Pede-

Pediluvia are uſeful, of ſalt, warm water, and balm, pennyroyal and ſavin: but they ſhould not be uſed in œdomatous ſwellings; but, inſtead, frictions applied to the feet and legs, and a roller of thin flannel.

Cold, humid air, acid fruits, and moſt aqueous diet, ſhould be avoided. A light nutritious diet, but of a dry nature, and a glaſs of wine, in ſome caſes may be uſeful.

The quantity of fluids in the body ſhould be diminiſhed by a partial abſtinence from liquids; this alone has proved a cure; probably by removing the lateral preſſure from the arteries, rendering more dry and elaſtic the fibres, and reſtoring their power of contraction.

Exerciſe of riding, jumping, dancing, running up ſtairs; opening the cheſt by the dumb bell, or by leaden weights made at the plumbers, for exerciſing the arms, ſhould be ſtrongly enforced.

The mind ſhould be diverted with various objects, and the paſſions rouſed, if poſſible.

The Bath waters have been known to cure the chloroſis when moſt other methods have failed.

The gentleſt methods of cure, with little or no medicine, ſhould be firſt adopted, and then the milder remedies, and ſo gradually to the more powerful; but great care ſhould be taken never

never to prescribe a remedy more violent than the disease.

On the SUPPRESSION *of the* MENSES.

The appearance of the menses in females is commonly from the fourteenth year to the fiftieth: but this varies in different constitutions; for some have the discharge sooner, and experience its total suppression before the age of forty.

The cessation of this periodical and accustomed discharge is called a suppression.

The remote causes of suppression are, sudden cold; a superabundance of the coagulable lymph in the blood; grief, or fear; previous diseases; powerful evacuations, or an improper administration of astringents.

The immediate causes seem to be, a want of due force, or a preternatural resistance in the uterine vessels, probably from a diminished force in the heart and arterial system; and this may arise from extreme plethora, or relaxation; tumors in or near the uterus, or its coalition, may cause the menstrual suppression, &c.*

During

* *Suppressio mensium.*

Anatomical Examination after Death.

Symptomata.	*Extispicia.*
Suppressi menses, cum ventris intumescentia & respiratione læsa.	Hydrops cysticus.

Sup-

During pregnancy, ſome few exceptions to the contrary, the menſes are totally ſuppreſſed.

In

Symptomata.	*Extiſpicia.*
Suppreſſi menſes cum doloribus & abdominis intumeſcentia.	Uterus effuſo ſanguine turget & membranaceo proceſſu obturatur.
—— Ab immani pathemate & oculus tumet & dolet.	Exoſtoſis in fundo obſita.
—— Cum tumore in regione iliaca.	Hydrops tubarum.
—— Totum intumeſcit abdomen menſibus ſufflaminatis.	Hydrops cyſticus.
—— Accerſunt hæmoptyſim & tabem.	Pulmones pure exeſi, aqua in thorace & pericardio.
Menſes ſuppreſſi accerſunt, cachexiam.	Sanguis concretus in corde.
—— Item.	Serum in thorace ſtagnans, pulmones perduri & ſanguis in cordis thalamis.
—— Aſcitem cum dolore immani circa pubem.	Uterus ingens & ſcirrhoſus.
—— Ventris dolores, abortum concitantes & quibus ſe adjungit febris cum tumore ventris & ſudoribus uberrimis.	Colluvies ſanguinea in abdomine.
—— Ventris intumeſcentiam.	Moles carnea 34. libras ponderans.
—— Diarrhoeam colliquativam cum ſpirandi difficultate, tuſſi & ſudore immodico.	Pulmonum tubercula.
—— Genitalium inflammationem.	Ulcus uteri.

Menſes

In the ſuppreſſions of unimpregnated women, a fulneſs and diſinclination to motion is per-

Symptomata.	*Extiſpicia.*
—— Tumorem in regione pubis cum reſpiratione læſa, pedum oedemate, febre lenta, &c.	Tumores veſiculares in abdomine.
—— Lypothymiam frequentem.	Lapides in pericardio, pulmones ſcirrhoſi & ſubnigricantes.
Menſium ſuppreſſio dolorem circa inguen comitatur & tandem hæmorrhagiam accerſit enormem.	Ulcus uteri.
Suppreſſio menſium ſuccedanea febri quartanæ & tumori in hypochondrio ſiniſtro.	Tubarum purulentia.
—— Animi perturbationi & accerſit aſthma cum tuſſi & ſputis purulentis.	Pulmones & inteſtina inflammata, glandulæ ventriculi tumidæ.
—— Venæ ſectionibus crebro inſtitutis cui denuo ſuccedunt ventris dolor & aſcites.	Hydrops ovariorum, uterus ſcirrhoſus.
Sufflaminantur menſes poſt caſum ab alto denuo fluunt & oriuntur dolores cum abdominis prominentiis quam plurimis.	Colluvies ſanguinea in abdomine.
Poſt ſuppreſſionem, urinæ difficultas. Iſchiadicus dolor ſæviens. Hyſtericæ convulſiones, vomitus frequentes, ciborum averſatio.	Muſculi erant quaſi excarnes, vix ullam ſanguinis veſtigium uſquam ſupererat. Venter totus falſo opplebatur ſero. Ventriculus exiguus, contractus. Ren dex-

perceived; floridity or paleneſs; pains in the loins, groins, and head; faintings, nauſea, loſs of appetite, and, in time, all the functions, whether natural, vital, or animal, become depraved. Hæmorrhages happen from various parts: ſchirrus, dropſies, ulcers of the womb ſometimes ſucceed, and even apoplexy.

As uterine ſuppreſſions frequently ariſe without any manifeſt cauſe or injury to the conſtitution, the abſolute neceſſity of their removal becomes a queſtion of the utmoſt importance, before any mode of medical treatment is adopted. Natural and ſecret cauſes operate,

Symptomata.	*Extiſpicia.*
	ter plures habebat calculos; ſordium ulcus & fœtidum erat in collo uteri.
A ſuppreſſione, pectoris dolor, difficilis reſpiratio.	Graveolentia ex utero & vicinis partibus maxima exiſtebat, omnes exterius livebant a prægreſſa inflammatione.
Virgini annos 20. natæ ſanguis per uterum reſpondere deſiit, ante duos annos; dolores ad hypocondria orti ſunt, dein venter intumuit ad magnam molem.	Venter ampliſſimus, vis aquæ ingens; præcipuum & peculiare vitium in teſtibus, tubis, ipſoque utero erat. Omnes hæ partes concretæ erant cum alis veſpertilionum in maſſam tuberoſam informem.
Fœmina, poſt ſuppreſſionem a quatuor menſibus, hyſtericas affectione dein etiam mania laborabat.	Teſtes albi, duri, ſcirrhoſi, æquo majores ſuo, pondere quaſi pene uterum tracti-

for ſalutary purpoſes, far above the reach of human comprehenſion: their effects are evidently perceived, but their inveſtigation eludes the ſearch of the moſt acute philoſophical inquirer. A buſy phyſician, then, either by miſconceiving the caſe, or by a miſapplication of remedies, though authoriſed by the beſt medical writers, might do more miſchief with a few preſcriptions than his whole life could repair. Certain conditions ſhould be eſtabliſhed, founded on experience, reaſon, and nature *.

Suppreſſions ſucceeding accidental hæmorrhages, violent evacuations, fevers, or any other debilitating diſeaſes, ſhould, in general, be left to nature, or treated only with tonics.

Partial or total ſuppreſſions from changes of air, climates, ſeaſons, or ſlight colds, unleſs they

* In obſtructed menſes it might be reaſonably expected, that Sydenham, Boerhaave, Aſtruc, Pitcairn, and the late Dr. Shaw, phyſician to King George the Second, had been directed in their writings, by reaſon, experience, and nature, from their acacquired reputation: but *calomel*, a *mercurial*, is ordered by Sydenham and Aſtruc, in the doſe of 20 gr.; Boerhaave, 10 gr.; Shaw, from 10 to 15 grains at bedtime, and of jalap 20 gr., compound powder of ſena 20 gr., and ſix grains of vitriolated tartar mixed together, or 20 grains of ſome draſtic aloetic pill the following morning; the ſame has been copied by Brooks and others. Skilful and experienced phyſicians indubitably muſt know, that homicide, or irremediable injury, is likely to be the conſequences of ſuch dangerous practices. What unſafe

they continue long, and produce ill effects, ſhould be left to nature.

Suppreſſions producing inflammatory and other ſymptoms of inconvenience require medical aſſiſtance to remove the complaints or promote the diſcharge: but every attempt of this nature ſhould be founded on a clear knowledge of phyſiology, the peculiarities of the conſtitution, and effects of remedies; it ſhould be conducted with great circumſpection, taking particular care to be certain the female is not pregnant.

Sudden ſuppreſſions during the diſcharge from cold, or any other cauſe, are often removed by repeatedly bathing the feet and legs in warm water and common ſalt, half an hour or more, night and morning, or at night alone. This is excellent for recent colds in general. At the ſame time, a few grains of the pilula rufi, with or without the pilulæ gummoſæ, may be uſeful.

The efforts, however, to produce the flow of the menſes, ſhould be particularly directed about the time of the ſucceeding period. Then warm bathings to the legs, and fomentations

guides muſt ſuch writers be to the generality of junior practitioners; and the more ſo, as faſhion and prejudice have made them univerſally read, admired, and recommended! The doſes are 20 or 40 times more than it is, in general, ſafe to give, eſpecially to delicate women.

for

for the abdomen, will be proper; and from 20 to 40 drops of the ſpirit nitr. dulc. joined with, from gtt. xxxx. ad ʒj. of the tinctura ſacra, or elix. aloës, and taken in penny-royal water twice in the day, a little warm.

In all inflammations, difficulty of breathing, and headach, ariſing from plethora, or in the pleuriſy, bleeding and the antiphlogiſtic regimen will be proper: but when the fluids become depraved by a long ſuppreſſion, the methods of treatment recommended in the *chloroſis* will beſt ſucceed; for theſe purpoſes, mineral alteratives, as the *pilula rubra*, cinnabar, &c. or our pulvis mineralis purificans, has produced excellent effects *; mercurials, antimonials, aloetics, and chalybeates.

Of the immoderate FLOW *of the* MENSES.

When the menſtrual evacuation exceeds in quantity, or happens more frequently than uſual, and cauſes debility, it is conſidered an immoderate flow of the menſes.

1. The remote cauſes may be nouriſhing high diet, heating liquors, violent ſtrainings or exerciſe, particularly dancing; violent paſſions of the mind.

* The methods recommended in the ſchirrus breaſts, as cauſe-removing remedies in glandular and other obſtructions, are moſt likely to ſucceed by a long perſeverance.

2. Coſtiveneſs, or any efforts that direct or cauſe a great flow of blood to the uterus.

3. An over-diſtenſion of the extreme branches of the uterine veſſels, from frequent abortions, child bearing, difficult and preternatural labors.

4. Living in warm chambers, an inactive life; too much freedom in the uſe of weakening liquids, as tea, &c.

5. The more immediate cauſes are plethora and floridity, a ſerous or acrid ſtate of the blood; for large uterine hæmorrhages, by diſcharging the red particles, deprave and render *acrid* all the fluids, *relax* the ſolids, and produce a *febricula*; theſe jointly often become the cauſes of future hæmorrhages.

6. An impetuous force in the arteries, and an impeded circulation in the veins; by which the lateral appendices in the uterus are diſtended, and often become flaccid, and incapable of reſiſting the increaſed motion and quantity of the blood; hence they are ruptured, or corroded by an acrid ſtate of the blood, and a violent irreſiſtible flux is the conſequence. This being repeated, produces a general relaxation of the uterine veſſels, and the relaxation cauſes a continuance of the complaint; for, when by nutritious diet the veſſels begin to fill, the blood, finding a weak reſiſtance in theſe parts, opens

again,

again, and unloads itſelf by frequent and often irregular uterine hæmorrhages.

7. Extraneous bodies in the uterus, ſchirrus, ulcer, abortions.

8. In the mind a great ſenſibility.

The ſymptoms and effects of an immoderate flux of the menſes are in proportion to the quantity diſcharged and ſtrength of the conſtitution*. A large flow may be ſalutary to ſome, but highly injurious to others. It may, by evacuating all the red particles, produce paleneſs,

* Anatomical Examinations after Death.

Morbi a catameniis immodicis.

Symptomata.	*Extiſpicia cadaverum.*
Menſes immodici, cum doloribus ventris, conatibus hyſtericis, crurum & abdominis intumeſcentia.	Tumores cyſtici in abdomine.
—— Accedunt tumores in hypogaſtrio & dein hydrops.	Tumores ſteatomoſi circa ovaria, aqua in abdomine.
Menſes immoderate fluunt cum tumore in regione pubis.	Tumor ſteatomatoſus circa uterum.

Sectis cadaveribus per hunc morbum extinctorum in conſpectum veniebant *pulmones* perduri, tumidi, infarcti, pure, exeſi.

Inteſtina contracta, purulenta, putrida.

Meſenterium infarctum, tumens, induratum.

Hepar, maximum, ſcirrhoſum.

Lien durus, ingens, ſanioſus.

Pancreas mole maximum, ſcirrhoſum.

neſs, faintings, coldneſs of the extremities, convulſions, œdematous ſwellings in the feet, cachexy, dropſy, hectic fever, and conſumption.

The manner of cure ſhould be accommodated to the various cauſes. In caſes of plethora and floridity, bleeding is proper, and a very abſtemious diet; in the depraved ſtate of the fluids, a cure will ſeldom be effected, but by reſtoring the blood to a proper conſiſtence, and ſtrengthening the ſolids; extraneous bodies, if poſſible, ſhould be removed; the ſchirrus and ulcer require a diſtinct and peculiar treatment.

The time of adminiſtering remedies ſhould be well conſidered; while the flux is preſent, great caution ſhould be uſed. The *ſudden ſtoppage* has produced dangerous diſorders, as coughs, ſpitting of blood, the ſchirrus and cancer of the womb *; therefore the attempts,

Renes calculoſi, a ſede dimoti.

Uterus ſanguine ſcatens, ſcirrhoſus, quaſi cartilagineus, purulentus, exeſus diſruptus.

In *pectore* & *abdomine*, ſtagnationes ſeroſæ & ſordidæ.

Ovariorum & *tubarum* hydrops; tumores ingentes, ſcirrhoſi, ſteatomatoſi, &c.

* From having ſeen a great variety of cancerous, and other womb caſes, I muſt obſerve that there have been many inſtances in which thoſe diſorders may be traced, to be owing to an ill-timed attempt to ſtop the menſtrual diſcharge by ſyptics.

in general, at this time ſhould be to moderate the diſcharge by reſt, tranquillity of mind, and a diminiſhed diet, but eſpecially of the liquid kind to the plethoric. In weakneſs, the habit muſt be ſupported by light, nutritious, dry diet, and a glaſs of red port. Hot liquid food, as caudle, &c. increaſes the evil: but an almoſt *total abſtinence* from food and liquids, by cutting off the ſupply, will avail more than any thing in ſafely checking the diſcharge, in conjunction with *cold* air.

If theſe methods ſhould not ſucceed, and it becomes neceſſary to check the diſcharge, the methods of cure ſhould be applied according to the diverſity of conſtitutions and caſes.

Remedies for the plethoric and florid before the body is much relaxed.

Small and ſometimes repeated bleedings in the arm.

Gentle laxatives of oil and manna, ſal polychreſtum, magneſia, rhubarb, or cremor tartar.

Terra foliata tartari ad ʒſs.
Sal nitrum ad ℈j. diſſolved.
Miſtura ſalina.
Tinctura roſarum cum pauco nitro.

Which may be adminiſtered alone, or occaſionally with

Liquor. anodyn. min. Hoffm. cum nitro.
Elix. paregor. ad ʒj.

Tinctura

Tinctura Thebaic. ad gtt. v.
Julep. e camphor. ad ℥ſs.

Cloths dipped in brandy and vinegar, equal parts, and applied cold to the loins.

Cucurbitulæ applicatæ mammis ſine ſcarificatione.

A cool room, lying coolly on a couch, an abſtemious diet; but, above all, *tranquillity* of mind.

Remedies for the pallid, nervous, and relaxed.

Cortex Peruvianus ad ʒſs.
Terra Japonica ad ℈ij.
—— figillat. ad ℈ij.
Bolus armena ad ʒſs.
Sanguis dracon. ad ℈ij.
Elix. vitriol dulc. ad ʒj.
—— —— paregor. ad ʒj.
Infus. fol. papav. cum ſummitatibus millefolii & floribus chamomillæ vulgaris.
Extract. cort. Peruv. ad ℈ij.
—— Ligni Campechen. ʒſs.
Camphora ad gr. v.
Rad. valerian. ſylves. ad ℈ij.
Tinctura roſar. ad ℥ij.
—— corticis Peruv. ad ʒij.
—— terræ Japon. ad ʒiſs.
Confect. damocrat. ad ℈j.
Aq. Selteran. cum vino rubro.
Liquor. anodynus mineralis Hoffmanni cum vel ſine pauco opii.
Cret. ppt.

More

More powerful remedies of the ſtyptic kind, which are rarely neceſſary, and which ſhould be uſed very cautiouſly, are,

Alumen. ad gr. xij. diſſolved.
Serum aluminoſum ad ℥iij. ter de die.
Lixivium martis ad gtt. xv. in aqua.
Vitriol alb. ad gr. ſs. } Diſſolved in decocto cort.
——— cœrul ad ½ gr. } Peruv. vel tinct. roſa.
Colcothar vitrioli. ad gr. xx.
Tinctura ſtyptica ad ℥j.
Elix. vitriol. acid. ad gtt. xxv.
Flores zinci ad gr. x.

The tinctura ſaturnina, and the ſaccharum ſaturni, are recommended by authors; but are very dangerous remedies: for beſides their poiſonous qualities, they may occaſion *palſies* of the *ſtomach*, *inteſtines*, or other parts; and though they may have ſucceeded in ſome inſtances, who knows how fatal their conſequences have been in others? It is the abſurdly drawing *general* concluſions from *particular inſtances of ſucceſs*, that the uſe of ſuch preparations, and other numerous errors, have been adopted. When erroneous methods of cure are ſafe and innocent, even though ariſing from weakneſs of underſtanding, or ignorance in the preſcriber, they are, in ſome meaſure excuſable: but all poiſonous and hazardous remedies ſhould be baniſhed from practice; for the preſent limited knowledge in medicine does not juſtify their application. It may happen,

pen, that all medical attempts to ſtop the immoderate flux may prove fruitleſs, and death may be the conſequence: in which caſe, the conſciouſneſs of having adopted a ſafe practice, muſt be not only ſatisfactory to the friends, but likewiſe to every practitioner of integrity.

FORMULÆ.

For the plethoric and florid, when the flux is recent.

Gentle, cooling laxatives in theſe caſes ſhould be cautiouſly preſcribed, as any irritation on the rectum may ſenſibly affect the uterus, and increaſe the flux. For the ſame reaſon, all *warm* clyſters are abſolutely improper.

No. 11. ℞. Crem. tart. ʒj.
—— Mann. opt. ℥ſs. ſolv.
Aq. com. ʒij.
M. f. hauſtus, pro re nata ſumendus.

No. 12. ℞. Ol. amydal. dulc. ʒvj.
Mannæ opt. ℥ſs. ad ʒj. ſolv. in
Aqua pura ʒiſs.; deinde adde
Mucilag. gum. arab. ʒij. M. f. hauſtus.

No. 13. ℞. Pulv. rhei. gr. xij. ad ʒſs.
Magnes. alb. calcinat. ʒj.
Aq. menth. vulg. ſimp. ℥iſs.
Tinct. ſenæ ʒiij. M. f. hauſtus.

To check the impetuous circulation,

Sanguis mittendus ad ʒvj. ʒviij. vel ʒxij.,

If there be no *contraindication*.

No.

No. 14. ℞. Sal. nitr. gr. x. ad ℈j.
Aq. puræ ℥iſs. ſyr. papav. errat. ʒj. M. f. hauſtus, ter vel quater in die ſumendus.

To this draught may be added of julep e camphor. ℥ſs., and inſtead of the ſyr. papav. from 3 to 10 drops of tinctura thebaica, if it may be ſafely given.

No. 15. ℞. Tinct. roſar. ℥iſs.
Sal. nitr. puriſs. gr. v. ad xij. vel ad ʒſs. M. f. hauſtus, quarta quaque hora ſumendus.

No. 16. ℞. Liquor. anodyn. min. Hoffman. gtt. xx. ad lx.
Aq. puræ ℥iſs.
Sal. nitr. g.. vel ℈j. ſyr. papav. errat. ʒj. M. f. hauſtus, ter vel quater de die ſumendus.

All ſtimulants and cordials ſhould be, if poſſible, omitted: but, in caſe of nauſea, to the foregoing draughts may be added,

Tinctura ſtomachica ad ʒiij.
——— cinnamomi ad ʒiij.
Confect. cardiac. ad gr. xv.
Aq. cinnam. ſimp.
—— menth. vul. ſimp.
—— nuc. moſchat.

FORMULÆ.

For the pallid, nervous, and relaxed.

Laxatives, if abſolutely neceſſary, are,

Tinctura rhei ad ℥ſs.
——— ſenæ ad ʒvj. in aqua.

Magneſia

Magneſia alba ad ʒj.
Rhubarb. ad gr. xij. cum ʒj. crem. tart.

To check the immoderate flux :

No. 17. ℞. Tinct. terra Japon. ʒij.
Elix. vitriol. dulc. ʒj.
Aq. com ʒiſs. M. f. hauſtus.

No. 18. ℞. Tinct. roſar. ʒij.
Vitriol. alb. gr. ¼ vel ½. M. f. hauſtus, bis vel ter in die ſumendus.

No. 19. ℞. Tinct. Thebaic. gtt. v. vel x.
Elix. vitriol. dulc. ʒj. M. f. hauſtus quarta quaq. hora ſumendus.

For the nervous, who cannot bear the more powerful opiates :

No. 20. ℞. Camphor. pulv. gr. iij. ad v.
Pulv. rad. valerian. ſylv. gr. xx. ad ℈ij.
Confect. damocrat. gr. x. ad xv. ſyr. ſimp. q. s. M. f. bol. ter in die ſumendus ſuperbibendo ʒij. tincturæ roſarum, vel infus. rad. valerian.

If great pain attend, and opiates be thought neceſſary ;

℞. Liquor. anodyn. min. Hoff. gtt. xx. ad xl.
Decoct. pectoral. ʒiſs.
Tinct. Thebaic. gtt. v. ad x. bis vel ter in die ſumendus.

If a cough ſhould be troubleſome ;

℞. Elix. paregor. ʒj.
Aq. com. ʒiſs. M. f. hauſtus, ter vel quater in die ſumendus.

Or,

Or, an oleous or ſperma ceti draught with opium.

In this laſt caſe, all aſtringents are improper.

More powerful preſcriptions.

℞. Extract cort. Peruv. ℥ſs.
Aq. cinnam. ſimp. ℥ij. ſyr. papav. errat. ℥ſs. M. capiat coch. parv. tertia quaq. hora, in tinct. roſar.

Of the ſtyptic kind, and moſt powerful, but not always ſafe, and rarely neceſſary:

℞. Flor. zinc. gr. v. ad x.
Tinct. roſar. ℥ij. M. f. hauſtus, ter vel quater de die ſumendus.

Ligatures applied to the extremities are advantageous.

℞. Alumen. gr. x. ſolve in aq. cinnam. ſimp. ℥ij.
Sanguin. dracon. gr. xv.
Tinct. Thebaic. gtt. v. M. f. hauſtus ter vel quater de die ſumendus.

It happens ſometimes, that neither opiates nor ſtyptic remedies will ſtop the hæmorrhage, until the quantity of blood is greatly diminiſhed in the whole body, and then the emptineſs of the veſſels proves the cure.

Theſe are the general methods of treatment during the immoderate diſcharge of the catamenia: but the utmoſt efforts ſhould be uſed to prevent hæmorrhages; this can beſt be effected between the periods.

The

The treatment between the periods of the diſcharge ſhould be directed,

1. To prevent the fulneſs of the veſſels.

2. To ſtrengthen the ſolids in general, and the uterine veſſels in particular.

3. To reſtore the blood from a ſerous, or acrid, to a juſt conſiſtence, and a mild balſamic ſtate.

4. To allay nervous ſenſibility.

As hæmorrhages ſeldom happen, unleſs there be a ſufficient quantity of blood in the body to rupture the veſſels, one principal part of the cure conſiſts in not only obtaining, but preſerving a diminiſhed quantity of blood, by a great *abſtinence* from liquids; for by this means, the very ſources of ſupply are cut off. If little be drank, the blood veſſels, which are, or have been, diſtended beyond their proper dimenſions, will gradually contract themſelves to their original ſize, acquire ſtrength daily, and not having ſo large a column of blood to circulate, they will reſiſt the morbid diſpoſition of nature to evacuate ſo violently the catamenia. If the uſual ſupply of liquids, of whatever quality, be indulged in, the proſpects of cure will be very doubtful, and in ſome caſes impoſſible. Tea, coffee, and ſuch liquids, therefore, ſhould be avoided, or uſed very ſparingly.

For

For breakfaſt. — Hartſhorn ſhavings, or iſinglaſs, boiled in water to a jelly, a little of which may be mixed with milk; but the quantity ſhould never exceed a ſmall teacup full or two, with a dry toaſt.

Simolina, rice, ſago, and ſalop, or a thin chocolate, with ſome ground rice.

If tea cannot be diſpenſed with, it may be mixed with the yolk of a new-laid egg and milk: but in all caſes the ſtate of the ſtomach and natural inclinations of each individual, ſhould be conſulted and accommodated in the manner leaſt likely to diſagree.

Dinner.—All ſoups and liquid food whatever ſhould be avoided, as likewiſe the ſalt and ſpicy. Fiſh may be eaten.

Lean parts of meat, roaſt or boiled, and potatoes, or poultry, with little or no vegetables, or leguminous food, will be proper; as theſe laſt cauſe flatulency, and excite a ſtimulus.

Large draughts of ſmall beer, water, or any other liquors, are improper; but, inſtead, a little wine and water, and even porter, may be uſed; though the quantity ſhould be proportioned to the other food, conſtitution, and exerciſes of the patient.

Fruits ſhould be uſed very moderately.

Tea-time. — No tea, or not above one ſmall diſh, ſhould be drank in the afternoon.

Supper. — Little or no ſupper, except dry toaſt, and a ſmall portion of wine and water, or porter.

Bleeding a few days before the diſcharge is expected, is ſometimes uſeful.

Coſtiveneſs ſhould be particularly attended to, prevented, or removed: but this without purging, or exciting much ſtimulus in the rectum. Lac ſulphur and magneſia, cremor tartari, lenitive electuary, ſal polychreſtum, manna, oil, ſtewed prunes, rhubarb in powder or extract; or, in ſome caſes, the pilula ex colocynth. ſimplicior. ad gr. iij. vel vj. according to the diverſity of the conſtitutions, may be recommended.

Gentle exerciſe and a clear air will prove greatly advantageous.

Theſe methods, without or with little medicine, will frequently ſucceed in removing the very cauſes of the uterine hæmorrhage; by leſſening the blood's motion and quantity, changing its quality, and ſtrengthening the ſolids in general.

To reſtore the uterine veſſels in particular; general or partial cold bathing in the ſea, or cold bath, or in what the French call *bidèe*, may be uſeful, when uſed with great circumſpection: but, above all, placidity of the mind, and reſiſting thoſe natural impulſes as much as

poſſible

poſſible, which direct a flux of fluids to the uterus.

When the repeated hæmorrhages have made great ravages in the conſtitution; when the craſſamentum of the blood is in a great meaſure deſtroyed; the face extremely pallid; a ſerum or lymph circulates through the whole ſyſtem, and all the functions, natural, animal, and vital, are injured; the modes of cure muſt be varied according to the circumſtances. In general, however, the bark, bitters, and reſtoratives, in conjunction with the preſcribed diet, may often ſucceed. If the blood be in an acrid ſtate, then the pulvis mineralis purificans, cinnabarine preparations, and demulcents, properly applied, may avail: but if any of the principal viſcera be very much affected, all medical aſſiſtance whatever proves fruitleſs.

To allay nervous ſenſibility, the mind muſt be particularly attended to, and all objects or ideas that engage the attention, or excite emotions of the ſoul, ſhould, as much as poſſible, be ſuppreſſed or removed. In theſe circumſtances, patients ſhould endeavour to ſecond the efforts of the phyſician, by a determined calmneſs and placidity of the mind; for without this, medicine will not ſucceed. The remedies moſt proper will be thoſe of the nervous kind, which allay irritation without heat-

ing the habit or quickening the circulation, as valerian root, camphor, &c.

Practical Admonitions and Observations.

In regulating the neceſſary abſtinence from drinks, no particular ſtandard with regard to quantity can be eſtabliſhed: but this ſhould be determined by the effects liquids have in the conſtitution; the excretions of urine, perſpiration, and the peculiarities of each habit conſidered individually.

An immoderate flow of the menſes is frequently accompanied with nauſea and vomitings from extreme nervous ſenſibility, and the ſympathetic conſent of parts. In ſuch inſtances both medicine and food increaſe the ſickneſs and vomitings; therefore neither ſhould be adminiſtered. So great is the ſenſibility at ſuch times, that the leaſt ſmell of any thing, not even diſagreeable, will excite vomiting; and every effort to diſcharge upwards what may be on the ſtomach, occaſions a rapid flow of the uterine flux.

The learned Dr. Cullen, of Edinburgh, propoſes this query: whether gentle emetics would not be advantageous in an immoderate uterine hæmorrhage? If long experience and ſtrict obſervation in practice may determine this queſtion, in oppoſition to a viſionary theory, the

anſwer

anſwer is, no; and ſuch a rough practice might in a few minutes deſtroy the patient. In moſt of the caſes where the uterine floodings have proved fatal, vomiting is one of the moſt deſtructive ſymptoms; its action always increaſes the diſcharge to a dreadful degree. As, therefore, it ariſes commonly from ſympathy with the uterus, and from no diſeaſe in the ſtomach, increaſing its force by a vomit, muſt more or leſs be attended with dangerous conſequences *.

The immediate connection of the uterus and rectum forbids the uſe of warm or laxative clyſters, vomits or irritating purgatives, as they would increaſe the menſtrual evacuation.

No opiates ſhould be uſed until it be firſt known whether the patient can bear them; for ſmall doſes, even five drops of liquid laudanum, in very nervous and irritable habits, have produced dangerous convulſions.

* Practitioners ſhould always recollect, that what may prove very efficacious in one country, may do irreparable miſchief in another. In Scotland, notwithſtanding the coldneſs of the climate, I have ſeen people walking half naked, without ſhoes or ſtockings; the food is chiefly oatmeal and ſmall beer; the habitations unclean. This hard way of living may produce a conſtitution that may bear *rough* and *violent* methods of cure: but practitioners in medicine ſhould be extremely cautious how they introduce German, Dutch, or Scotch methods of practice in London, where people are reared, and live in quite a different manner.

The more powerful aſtringents, or ſtyptics, ſhould never be uſed but in caſes of the moſt urgent neceſſity, and, even then, in ſmall doſes.

When the patient is recovering, the diet ſhould be nutritious, but ſmall in quantity, and gradually increaſed. The uſual food ſhould not be permitted, until there be no probability of a return of the diſorder.

Of the Fluor Albus, *or* Whites.

A periodical or continual diſcharge of a white, pale, greeniſh, or yellow humor, from the uterine veſſels, is called the Fluor Albus *.

It is commonly accompanied with a waſting of the body, paleneſs, debility, headach, pain in the back and loins, loſs of appetite, and nebulous or turbid urine.

The remote cauſes are, a tender and delicate conſtitution of the body; too great humidity, either from liquids or moiſt air; coſtiveneſs; ſalt or viſcid diet; too much ſleep or indul-

* Synonima & definitiones a variis ſcriptoribus.

Sauvages. — Leucorrhæa ſeroſo-flavæ, vel puriformis materiæ ex utero delapſus.

Linnæus. — Muci e ſinu muliebri effluxus.

Vogelius. — Fluor albus. Nimia muci aut ichoris ex vulva profuſio.

Fr. Hoffmannus. — Cachexia uterina ſive fluor albus.

J. Juncker. — Fluor albus.

gence

gence in bed; a ſedentary life; ſuppreſſion, or an entire ceſſation of the catamenia; frequent abortions; laborious and difficult labors; violent exerciſe; affections of the mind.

The immediate cauſes are a morbid affection of thoſe veſſels in the uterus that pour out the catamenia *.

The

* Authors have not perfectly agreed on this matter.

Hoffman ſays, — Nil itaque eſt dubii, quin per eadem vaſa, vias & poros fluxus materiæ mucidæ contingat, e quibus ipſe menſtruus ſanguis fertur, atque hujus adverte evidens argumentum eſt, quod menſibus ſuppreſſis, fluor albus in quibuſdam, loco horum ſuperveniens obſervetur.

Heiſter, ſpeaking de menſtruorum fontibus, p. 81, ſays, — Quibus obſervationibus variiſque rationibus nixus, naturam in hoc negotio variare, & modo per uterum, modo per vaginam, modo forte per utraque loca exire, cum Friendio †, Morgagno, & Vatero ‡ exiſtimo.

De Graaf. — Cum de fluore albo menſtruorum nobis hic ſermo ſit, alia difficultas oboritur, num ſcilicet fluor ille, ſi continuus exiſtat, a gonorrhœa ſit diſtinguendus? Ita namque inter ſe conveniunt, ut niſi mentem adhibeat medicus, præ ſimilitudine facile in errorem abeat, quanquam a diverſis partibus procedant, & per diſtincta loca excernantur: ſiquidem fluor iiſdem, quibus menſtrua fluunt, ductibus ejicitur, &c.

——— Gonorrhœam vero ex glanduloſo corpore provenire, & per lacunas circum & in meatus urinarii exitu collocatas erumpere, cadaveris ali cujus mulieris hoc vitio infecti diſſectio palam fecit; nam utero ejuſque vaginâ innoxiis, corpus glanduloſum ſive proſtatas urethræ circumpoſitas ſolum malè affectas vidimus.

† In emmenologia. ‡ De utero gravido.

The color, conſiſtence, and quality of the fluor albus greatly differ in different conſtitutions.

Morgagni de ſedibus & cauſis morborum, lib. iii. epiſt. xlvii.

Ob. 11.—Muliebris fluoris fontes in utero plerumque ſunt. Rarum eſt enim quod in Hiſtoria Regiæ Academiæ Parienſis legitur; ex amplo alterius ovarii abſceſſu, quocum tuba communicabat, in hanc purulentum ſerum, ex eaque in uterum, ex hoc denique in vaginam defluxiſſe. Ipſe autem uterus ſeri fons eſt multitoloris aut ſimplicis, aut purulenti, &c.

Ob. 12.—Cum mucum, ſecundum naturam ſe habentem, uteri oſculo, & proximæ cervicis parte abſterſiſſem; comprimendo inferiorem uteri fundum, cervicem, & oſculi uterini coronam, prodire ex his locis omnibus, & ordinate quidem, vidi albam craſſiuſculam materiam, quæ unde albus fluor proveniſſet, non obſcure ſignificavit.

Ob. 14.—Cum incidiſſem fundi cavum, inveni humida materia plenum ex albo in flavum & ſubviridem colorem vergente. Qua deterſa, fundi interior facies apparuit, in minuta albida tubercula paſſim excreſcens, &c.

In ſpeaking of the early appearance of the diſorder;

Ob. 15.—Noli autem mirari quod in puella id ætatis 14. annorum eſſe potuerit muliebris fluor. Pluribus enim circa pubertatis initia incepit, nonnullis etiam vel multo citius, raro quidem, non ſecus ac raro, ſed revera multo citius menſtruorum fluxus eſt obſervatus. Lege obſervationem nobilis puellæ novem circiter annorum a muliebri fluore perſanatæ, imo alterius quæ illa minor annis duobus, eodem morbo tenebatur, & quaſi ſerum lactis nondum clarificatum emittebat copioſe, non ſine ardore aliquo & pruritu.

In my courſe of female practice, I have known ſimilar inſtances happen at an earlier period.

Many caſes follow of excreſcences being found in the uterus.

Ob.

tions. In the florid, it is commonly white and viſcid: but in thoſe of a thin, pale, or ſcorbutic habit, variouſly diſcoloured, ſerous, and ſometimes acrimonious. Theſe varieties ſeem to depend on the ſtate of the blood, and *indicate* the neceſſity of applying *different modes* of cure.

Ob. 23. Virginis annos natæ triginta tres, &c. — Interea dum hæc experirer, & iis qui aderant, demonſtrarem, excreſcentias binas animadverti, alteram in fundi latere dextro cervice proximi, alteram paululo infra in eodem cervicis latere. Parva erat utraque & ex veſiculis compacta ſimilibus. Verum ſecando, quæ inferiorem faciebant naturalem mucum dedere, & quæ ſuperiorem, limpidam aquam.

Lieutand, pr. med. j. 538. — Cadaverum ſcrutatio hujuſce intricatiſſimi morbi indolem parum elucidat. quidquid enim inter diſſectionem oculis ſubjicitur, nihil aliud eſt quam effectus morboſus a genuina cauſa multum diſcrepans, id genus ſunt uteri, ovariorum, tubarum, cæterarumque partium genitalium læſiones; horum organorum infarctus, vel inſolita craſſities, exulcerationes, putreſcentia, gangræna, &c.

Nec major lux affulget ex introſpectis viſceribus, quæ diverſimode labefactata ſe præbent.

From a variety of opportunities in examining whether the fluor albus is only a diſcharge from the uterine veſſels or vagina, the following is the reſult of the obſervations.

1. That in plethoric and full habits, this diſcharge does ſometimes flow from the veſſels or glandular parts of the vagina; and when this is the caſe, it is white, viſcid, and benign.

2. That in cachectic habits it principally flows from the uterus, and is various in color and conſiſtence; but commonly of a thinniſh and ſerous nature; and if acrimonious, a deeper tinge is ſeen round the margin of the ſpot.

The

The greateſt number, however, will be cured by the following, or ſimilar preſcriptions; but particularly the debilitated.

No. 26. ℞. Calomel ppt. gr. vj.
Pil. Rufi ℈ij. M. f. pilulæ N°. xij. ſumat unam omni nocte.

No. 27. ℞. Limat. mart. præp. ʒvj. vel colcoth. vitriol. pulv. ʒſs.
Pulv. cort. Peruv. ʒj.
Spec. aromat. ʒij.
Syr. ſimp. q. s. f. elect. cujus capiat q. N. M. bis vel ter in die.

This diſorder is not common to the plethoric and florid: but when it happens, an antiphlogiſtic regimen, cooling evacuations, occaſionally, and exerciſe, will beſt ſucceed.

Pulv. rad. jalap. ad gr. xij.
Nitrum ad gr. xv.
Sal polychreſtum ad ʒj.
Cremor tartari ad ʒij.
Electarium lenitivum ad ʒij.
Magneſia alba ad ʒiſs.
Lac ſulphuris ad ʒj.
Spirit nitri dulc. ad gtt. xxx.

No. 28. ℞. Pulv. rad. jalap. gr. viij. ad gr. xij.
—— ſal. nitr. gr. x.
Aq. com. ʒiſs. ſyr. ſimp. q. s. M. f. hauſtus.

No. 29. ℞. Elect. lenitiv. ʒij.
Lac ſulph. ʒij.
Pulv. jalap. ʒiſs. ſyr. ſimp. q. s. M. f. elect. cujus capiat q. N. M. bis vel ter in ſeptimana.

℞. Sal.

No. 30. ℞. Sal. polychreſt. ʒij. ſolv. in aq. com. ℥vijſs.
Spt. nitr. dulc. ʒij. ſyr. croci q. s. M. f. miſ-
tura, cujus capiat coch. iij. ter de die.

No. 31. ℞. Sal. polychreſt.
— nitr. aa gr. x. M. f. pulvis, bis de die ſu-
mendus ex cyatho aquæ puræ.

When the fluor albus is of various colors, not acrid, and the patient pale, languid, and debilitated, aloetic laxatives, or rhubarb given at proper intervals, ſtomachics, chalybeates, and preparations of bark, turpentine, and vitriol, will be proper with cold bathing.

As the *effects* of the diſeaſe by an examination after death are perceived to have been *congeſtions* in the abdominal viſcera, ariſing from obſtruction, nothing can be more rational than to preſcribe mercurials, antimonials, or chalybeates, in ſmall doſes, as the moſt certain deobſtruents, and averters of thoſe effects.

Aloetica purgantia cum calomel ad gr. ſs. vel gr. j. alterna quaque nocte.

Terebenthina e Chio
——— e Cypro } ad ʒiſs.
——— Veneta

Tonica and aſtringentia omnia. See Immoderate Flow of Menſes.

Tinctura Guaiacina ſimp. ad ʒiſs.
——— ——— vol. ad ʒj.
Balſamum Copaiba ad gtt. xl.
——— Canadenſe ad gtt. xxxx.
——— Peruvianum ad gtt. xxxvj.

Balſamum

Balſamum Traumaticum ad gtt. xxxx.

Spt. terebenth. æther. ad gtt. xij. ex cyatho aquæ puræ, vel vini aquâ diluti bis vel ter de die.

FORMULÆ.

No. 32. ℞. Terebenth. e Chio ʒij.
Extract. rhubarb. ʒſs.
Colcoth. vitriol. ℈j. ſyr. balſam. q. s. M. f. pilulæ mediocres; capiat ij. vel iij. mane & nocte.

No. 33. ℞. Gum. oliban. ʒſs.
Sacchar. alb. ʒj. tere ſimul; deinde add.
Tinct. cort. Peruv. ʒj.
Aq. cinnam. ten ℥iſs. M. f. hauſtus bis vel ter de die ſumendus.

No. 34. ℞. Extract. gentian.
——— cort. Peruv. aa ʒj. M. f. pilulæ N°. xxx. capiat ij. ter de die ſuperbibendo coch. iij. miſturæ ſequentis.

No. 35. ℞. Infus. amar. ℥vijſs.
Tinct. valerian ʒvj.
Elix. vitriol. dulc. ʒij. M. f. miſtura.

No. 36. ℞. Pulv. cort. Peruv. ℥iſs.
Balſ. Copaiv. ℥ſs. ſyr. balſam. q. s. M. f. elect. cujus capiat q. N. M. bis de die ſuperbibendo hauſt. ſequent.

No. 37. ℞. Vin. chalybeat. ʒj.
Infuſ. amar. ℥iſs. M. f. hauſtus.

Or,

No. 38. ℞. Decoct. cort. Peruv. ℥iſs.
Elix. vitriol. acid. gtt. xv.
Tinct. ſtomach. ʒiij. horis duabus ante prandium ſumend. quotidie.

Or,

No. 39. ℞. Liquor. anodyn. min. Hoff. ℥iſs.
Tinct. ſacræ ℥ſs. M. capiat. gtt. lx. bis vel ter de die ex cyatho infuſi flor. chamœmel.

Fumes

Fumes of tacamahac, maſtich, amber, gum benzoin, and thuſ, are uſeful, applied to the uterus, or rather vagina.

If the diſcharge be acrimonious, ſo as to irritate, or excoriate the vagina, the cure will be beſt effected; evacuations being premiſed.

By changing the whole maſs of depraved humors to a milder ſtate, chiefly by alteratives from the mineral kingdom; and afterwards, if neceſſary,

By ſtomachics, cortex Peruvianus, bitters, and chalybeates, the cold bath, &c.

REMEDIA.

Pulvis mineral. purif. fort. ad ℈j. ter de die.
Mercurius ſaccharat. (Eding. ph.) ad gr. ij.
Æthiops mineralis ad ℈j.
Cinnabar factitia ad ℈j. bis de die.
Merc. dulc. ſexies ſub. gr. $\frac{1}{8}$ ad gr. ſs. omni nocte.
Pil. mercuriales ad g. ij. bis in die.

FORMULÆ.

No. 40. ℞. Pulv. miner. purif. fort. gr. xxv. vel ʒſs.
Aq. puræ ℥iſs.
Mucilag. gum. Arab. ʒiſs. M. f. hauſt. bis vel ter de die ſumend.

Or,

No. 41. ℞. Cinnab. fact.
Pulv. rhabarb. ā ā ʒj. ſyr. balſam. q. s. M. f. pilulæ N°. xxx. capiat ij. bis de die.

Or,

Or,

No. 42. ℞. Merc. ſacchar. Pharm. Edinb. ℈j.
Conſ. cynoſbat. q. s. M. f. pilulæ N°. x. capiat unam alternis noctibus.

No. 43. ℞. Cinnab. fact. ʒj.
Camphor. pulv. ʒſs. ſyr. balſam. q. M. f. pilulæ N°. xxx. capiat ij. bis vel ter de die.

No. 44. ℞. Merc. dulc. ſex. ſub. ppt. gr. v.
Conſ. cynoſbat. q. s. M. f. pilula No. xv. capiat unam bis vel ter in ſeptimana.

No. 45. ℞. Pulv. mineral. purif. mit.
—— e tragacanth. c. aa ʒiij. M. dividendus in xx. doſes, capiat unam ter de die ex cyatho aquæ puræ.

During the adminiſtration of theſe alteratives, all acids and ſalt diet ſhould be avoided.

After evacuants, injections of aqua vegeto mineralis, or weak ſolutions of vitriol alb. may be uſed; but never until the cauſes are removed.

Theſe are the means by which the cure of the *fluor albus*, ariſing from different cauſes, be attained.

In the firſt, the cure ſeems to be effected by diminiſhing the ſuperabundance of the fluids.

In the ſecond, by reſtoring the tone of the ſtomach and inteſtines; by which a more nutritious chyle is ſeparated and received; on which all good health depends.

The third, by directing powerful remedies in ſmall doſes to the minute ſyſtem, ſo as never to diſturb or ſtimulate the conſtitution; by opening

opening all the glandular ſecretions and excretions, and by diminiſhing the load of morbific fluids, the moſt ſalutary effects are experienced.

There is, however, a fourth means of cure, without which all the others may fail; tranquillity of mind, clear pure air, moderate exerciſe, and a judicious diet.

Admonitions and Practical Obſervations.

The ſuddenly checking the diſcharge by aſtringents, internally or externally applied, eſpecially before proper evacuations, and other cauſe-removing remedies *, may prove very injurious to the conſtitution. What ſhould be evacuated may be abſorbed by the lymphatic ſyſtem, and produce ſlow nervous fevers, hectic and conſumptive complaints; calamitous, cachetic, and chronic diſeaſes; ſchirrus and cancerous ulcers of the uterus. It is, therefore, much ſafer to wait patiently for a cure being effected by the gradual and almoſt imperceptible changes produced in the whole conſtitution; this may frequently depend on well-planned diet and alterative medicine.

Before any means of cure are adopted, the

* This word I ſhould imagine may be aptly applied to medical writings. Cures are either palliative or radical: what moves cauſes may, therefore, be called cauſe-removing remedies, in contradiſtinction to palliatives.

quantity

quantity and quality of the diſcharge ſhould be aſcertained by viewing the linen. To a ſkilful and experienced phyſician, this will not only indicate what remedies will be moſt eligible, but accurate prognoſtics may be formed of the eaſe or difficulties to be encountered in the cure, and likewiſe the ſtate of the patient's habit. In proportion as the evacuation is copious, ſerous, and acrimonious, ſo will its removal require a longer or ſhorter ſpace of time.

Large doſes of powerful mercurials, draſtic purges, and even cantharides, and preparations of lead, are recommended internally by ſome authors. Such medicines ſhould be avoided in moſt caſes, particularly to delicate females, as they may prove deſtructive.

The diſorder is ſlow in its advances, ſeldom *urgent or ſerious* in its conſequences, and therefore does not require very *deſperate remedies*.

Previous

* The deſtructive effects of cantharides, preparations of lead, and other poiſons, may be collected from the following obſervations of the truly great Hoffman.

F. Hoff. lib. ii. — De hyoſcyamo, memorabilis eſt locus in Scribon. Largo, c. 181. dum ait: hyoſcyamum qui biberunt caput grave veniſque diſtentum habent, mente abalienantur cum verborum altercatione, unde etiam nomen herba trahit altercum: poſtea ſopiuntur & omni ſenſu carent, liveſcentibus membris eorum.

Similar

Previous to preſcribing the mineral alteratives, a ſmall bleeding may be neceſſary, eſpecially

Similar effects are produced by a decoction of the roots of hemlock. Mathiolus in comment. Dioſcorid. lib. vi. cap. 11. Many examples may be ſeen in Wepfer.

Quæ veneni vim ac naturam æmulantur medicamenta, in eorum numero ſunt emetica & purgantia draſtica ſive vehementiora; ſunt etiam ſtupefactiva quædam ex mercurio male præparata.

Ex emeticis multum vehementiæ & virulentæ qualitatis habent ſtibiata, præſertim in ſubſtantia data, ut antimonii vitrum, mercurius vitæ, crocus metallorum, ſulphur auratum, &c.

De venenis ſoporificis papaver, opium, ad ſtupefactiva vero, quæ valentioris ſunt virtutis, omnia ex mandragora, hyoſcyamo, ſolano, ſtramonio, datura, pertinent.

De ceteris medicamentis virulentam naturam referentibus.

Cantharides, nux vomica, & medicamenta ex metallis, auro, venere & ſaturno parata quorum non adeo tutus uſus eſt.

Ex omnibus, quæ inimica naturæ ſunt, nullum eſt, quod tam valide & tam graviter inteſtina earumque tonum deſtruat, quam *ſaturnina quædam*. —— Repetita ſi fuerit etiam minor doſis, lenta morte homines tollunt. —— Quod Galli la poudre de ſucceſſion vocant, ſaturninæ eſſe proſapiæ conſtat.

From lead in wines.

Plura de hiſce legi poſſunt in Miſcellan. Nat. Curios. dec. iii. anno iv. ob. 30. 92. & 100. item dec. i. anno iii. 131. & in Hoffman. in diſſertatione de metallurgia morbifica.

Scribonius Largus. 184. p. 101. Dioſcorides Anazarbæus, lib. 6. cap. 27. Cæſalpinus, lib. iii. cap. 24.

Borellus, cent. iv. ob. 32. — Obſervatione digna memoriæ reliquit: habui amicum, qui *ſacchari ſaturni nimiam* hauſit *quantitatem*, ut tamquam paralyticus & fere mortuus factus ſit;

cially if the patient be young, and the diſeaſe accompanied with a turgency of the veſſels: the quantity, however, extracted, ſhould not exceed above four or ſix ounces; and this will be improper, if the legs ſhould be œdematous.

When the diſorder has been of long continuance, either from neglect, or injudicious treatment, a great relaxation of the whole ſyſtem is the conſequence; in which inſtances, the Bath waters, and others of the chalybeate claſs, have been uſed with extraordinary ſucceſs.

After the diſorder is cured, there often remains a great relaxation of the ſeminary veſſels and glandular ſyſtem, productive of an ejection of gelatinous lymph upon any ſlight emotions of the mind, or bodily efforts: theſe ſymptoms are beſt removed by the cold bath, bark, and vitriolic preparations.

In every caſe, the original cauſes of the diſ-

rigebant membra ejus, tamquam congelatus & apoplecticus erat.

I myſelf was witneſs of a perſon being deſtroyed by only taking ten drops of Goulard's extract diluted in water, to the ſtrength of the *vegeto-mineral water*.

The inſtance of Mr. Hankey was a very extraordinary eſcape: this gentleman drank a glaſs full of the *extract of lead*; I was immediately ſent for, and by a very ſucceſsful management ſaved his life. See this extraordinary caſe, and its mode of treatment, in my other work on poiſons, &c.

caſe

eaſe ſhould be accurately inveſtigated, and ſkilfully removed.

Particular attention is required, leſt the ulcer of the womb or bladder, or the gonorrhœa, be miſtaken for this diſorder.

The firſt is accompanied with pains ſimilar to labor; a very fœtid diſcharge; and a ſchirrus of the *os uteri*; ulcers, or fiſſures.

The ſecond may be known by difficulty of urine, acute pains at the neck of the bladder, immediately under the pubis, and by purulent pus in the urine.

The third is diſcoverable by the *ardor urinæ*, inflammation of the clitoris, and acrimony of the diſcharge, iſſuing from the female urethra, or lacunar glands, &c.

The fluor albus is generally without pain, though if very acrid, it may produce ſmarting, and excoriation of the parts.

On the HYSTERIC PASSION.

Flatulency in the inteſtines and ſtomach, and a ſenſation of a globe aſcending in the œſophagus, and conſtringing the fauces, ſo as to threaten ſuffocation, is nominated *Paſſio Hyſterica*, or the hyſteric paſſion: but it is generally accompanied with a variety of other ſymptoms.

This diſorder being complicated, may be di-

vided into three ſpecies; by which means it will be more clearly comprehended, and more methodically treated.

I. *Paſſio hyſterica flatulenta*, or the flatulent hyſteric paſſion.

II. *Paſſio hyſterica convulſiva*, or the convulſive hyſteric paſſion.

III. *Paſſio hyſterica ſtertoroſa vel apoplectica*, or the ſtertoroſe apoplectic hyſteric paſſion.

There might be delivered many other ſpecies and ſubdiviſions of this complex diſeaſe, originating from various cauſes, agitating the human body and mind with great vehemence.

The *ſymptoms* common to all the ſpecies before the fit commences, are; general debility; an unaccountable lowneſs of ſpirits; liſtleſſneſs, and melancholic ideas; a total averſion to any thing

* Synonima & definitiones a variis ſcriptoribus.

The ancients ſuppoſed this diſorder to be a ſuffocation of the womb, from their inaccurate knowledge in anatomy, and called it ἡ πνιξ τῆ εν γαστρὶ. — *Hippocrat.* ſect. v. 602, 16 & 29. & aliis locis.

Sydenham, Afflictio hyſterica,

Sauvages, Hyſteria, 135. G. xx.

Artuum organorumque etiam internorum ſpaſmus clonicus tonicuſve, paroxyſmis fugacibus leviter variantibus, cum mortis formidine intenſiſſima.

Stahlianis, Malum hyſterico-hypochondriacum. Melancholia nervea Illuſt. *Lorry*. Iſteriſmo *Cocchi*, Bagni de Piſa.

Linnæus,

thing requiring attention; grief, fear, ſorrows, ſuſpicions, anxiety, agitate the mind violently; dulneſs, or increaſed ſenſibility, in all the external and internal ſenſes; faintings, watchfulneſs, drowſineſs, or ſtupor.

The patient is reſtleſs at night, or has troubleſome dreams, with evident marks of indigeſtion; is frightened by the incubus, or night mare; receives no benefit from ſleep; relaxation increaſes every day; and the mind is agitated on the moſt trifling occaſions with ſurpriſe and timidity.

The eyes dazzle, or are dim, or have a confuſed viſion; giddineſs and ſwimming affect the head.

Palpitations of the heart; oppreſſions and uneaſineſs in the thorax increaſe the patient's diſmal apprehenſions.

Linnæus, 126, Præcordiorum preſſio ſub pectore cum flatulentia, ſuffocatione, anxietate, palpitatione, verticis preſſione.

Vogel, Hyſteria anxietas præcordialis cum ſpaſmis ventriculi ac inteſtinorum, variiſque congeſtionibus conjuncta, chronica.

Cullen: Hyſteria; ventris murmura; ſenſus globi in abdomine ſe volventis, ibique ſtrangulantis; ſopor, convulſiones; urinæ limpidæ copia profuſa; animus, varius & mutabilis. Theſe are more the ſymptoms, than the definition of the diſeaſe; nor are they well choſen as characteriſtics by Dr. Cullen.

Home, Malum hyſtericum.

The reſpiration is ſhort, painful, and difficult.

The pulſe becomes ſmall, irregular, ſometimes intermitting. Senſations appear in various parts ſuddenly, like cracking and explo-ſion, ſimilar to the electric ſpark; and, perhaps, from a fluid paſſing through the nerves, ſimilar to the electric.

The appetite is depraved or loſt, with a painful, bad digeſtion, accompanied with flatulency in the ſtomach or bowels, colicky pains, conſtipations, or a diarrhœa.

The urine is very pale and copious, as in all the other nervous affections.

The *general ſymptoms* during the paroxyſm or fit, are: palpitations of the heart; reſpiration is difficult, obſtructed, ſhort, painful, and irregular.

Contractions like ſtrangulation ariſe in the throat; with a ſenſation of a ball or globe aſcending, nearly choaking the ſufferer.

The tongue faulters, trembles, and incoherent things are ſpoken; the voice changes; ſome roar, ſcream, or ſhriek immoderately; others ſigh deeply, weep, or mourn plaintively.

The eyes are agitated, look exceedingly wild, are convulſed, fixed, or ſtaring.

The

The pulſe is weak, uneven, changeable, intermittent, or ſcarce perceptible.

Hiccups and flatulency diſtend and agitate the inteſtines, ſtomach, and œſophagus, without evacuation of wind. Spaſmodic contractions pervade all the alimentary canal.

An eruption of wind, either upwards or downwards, relax and mitigate the ſymptoms.

Vomitings or purgings always relieve; and they are commonly accompanied with a violent diſcharge of air, which had been detained, during the paroxyſm.

There is likewiſe a copious diſcharge of urine, ſometimes containing a thick ſediment.

When the paroxyſm continues violent, then ſucceed faintings, dreadful and ſtrong convulſions, ſtertor, from the mouth iſſues froth; and the diſorder, except in not having ſuddenly ſeized the patient, aſſumes the form of epilepſy, and even apoplexy.

After the concluſion of the paroxyſm, there remains great debility, wearineſs of the whole body, headach, and pains in the convulſed muſcles, as though the body had been contuſed or beaten.

In the mind, perturbations on the ſlighteſt occaſions, petulence, impatience, and all, or part, of the ſymptoms which preceded the fit.

Theſe are the general ſymptoms of hyſteric complaints: but beſides theſe, they imitate every diſorder incident to the human body, and they are more or leſs violent in every individual.

The *cauſes* of this alarming diſorder are various: but firſt ſhould be conſidered the *remote* or prediſpoſing; which are,

1. A delicate and tender hereditary ſtructure of the body.

2. Exquiſite irritability and ſympathy of the nerves.

3. Inánition, or profuſe evacuations by vomiting, ſtools, menſes, hæmorrhages, or fluor albus, &c.

4. A retention of the catamenia, lochia, or other neceſſary excretions.

5. Great natural earneſtneſs on all occaſions, and extreme ſenſibility of the mind.

6. Colicky pains, nephritic, uterine, and other complaints.

7. A viſcid, acrid, acid, or flatulent diet.

8. High-ſcented perfumes.

9. A ſedentary, inactive life.

10. An unhappy diſpoſition to anticipate miſery or misfortunes, diſtreſſes or dangers, where none in reality exiſt.

The *more immediate or proximate cauſes* are,

1. Diſ-

1. Diſtenſions of *air*, perhaps *fixed*, in the inteſtines.

2. The periſtaltic motion of the inteſtines is inverted.

3. The air which ſhould naturally paſs downward, or be partly received with the abſorbed chyle, are retained, augmented, and repeatedly generated by the groſſer parts of the aliments; this accumulated air, by the inverted motion of the inteſtines, takes its direction upwards, paſſes through the ſtomach into the œſophagus; and thus the whole alimentary canal, too much diſtended to excite acute pain, is blown up like a bladder.

4. The ſphincter of the rectum, in the inferior part of the inteſtines, is ſtrongly contracted; the entrance of the œſophagus, in the ſuperior and primary part of the inteſtinal tube, is ſhut, and both ſo over-diſtending their fibres by an increaſed air, as to deſtroy the elaſtic power of the muſcles deſtined to contract, or dilate theſe orifices.

5. The preſſure of the air againſt the pharynx and larynx, produce the apprehenſion of ſuffocation.

6. Deglutition is rendered very difficult, or is totally ſuppreſſed, from the diſtenſion of air overcoming the voluntary and involuntary muſcular motions neceſſary for ſwallowing.

7. What-

7. Whatever is attempted to be drank during the paroxyſm is forced back from the ſame cauſes.

8. Diſtenſions of the œſophagus, ſtomach, and inteſtines, compreſs the *diaphragm*, *lungs*, *aſpera arteria*, the *glottis* and *epiglottis*, and all the thoracical and abdominal *viſcera*, nerves, arteries, veins, lymphatics, and thoracic duct.

9. Compreſſions on arteries, or the ſtimuli of acrimonious blood acting on the heart, retard or quicken the blood's motion through the lungs, or the head, or ſuperior and inferior extremities: hence the changes obſerveable in the pulſe.

10. Compreſſions on the returning veins, particularly the external and internal jugulars, or the occipital veins, may produce dangerous congeſtions of the blood, either in the venal ſyſtem of the brain, or in the ſinuſes of the dura mater.

If the lymphatics ſhould be obſtructed in their courſe, the ventricles of the brain may be turgid with lymph; hence, likewiſe, dilatation of the pupils, &c.

11. The arteries receiving freſh blood from the heart, and the veins being incapable of returning it, may occaſion irritation or compreſſions in the nervous ſyſtem.

12. Irritation on the nerves will produce convulſions;

vulſions; but compreſſions on the *cerebrum* and *cerebellum*, ſtupor, comatoſe ſymptoms, and even apoplexy, an imperceptible pulſe, and *lypothymia*, or faintings.

13. Compreſſions of the lymphatics, lacteals, and ductus thoracicus, will prevent or retard nutrition; hence debility, depreſſions, or lowneſs of ſpirits, and a diminution of the moving muſcular powers.

14. Compreſſions of the viſcera pervert all the ſecretions, and hinder excretions, digeſtion in the ſtomach, bile in the liver, pancreatic juice in the pancreas, urine in the kidneys; and the veſſels in the abdomen, more or leſs, ſhare ſimilar effects with thoſe of the ſuperior parts of the body.

15. The *hepatic* ſyſtem of blood veſſels is principally concerned; for the conflux of blood from the principal abdominal viſcera being conveyed to the *vena portæ*, the branches of which have no valves, ſtagnations and congeſtions ariſe, not only in that viſcus, but in the ſtomach, inteſtines, omentum, pancreas, ſpleen, meſentery, the uterus and its appendages, kidneys, and bladder; where ſchirrous tumors, adheſions, cancers, ulcers, and mortifications generate. *Stahl*, in his Diſſertation de *Vena Portæ*, not inaptly called this vein *porta malorum*.

Vitiated

Vitiated blood received from the diſeaſed abdominal viſcera into the *vena portæ*, will produce an ill-ſecreted, black, vitiated *bile*; and this being conveyed to the *duodenum*, cannot unite the oleaginous with the pancreatic and ſerous juices, nor has it power to expel the groſſer aliments; hence coſtiveneſs, ill-prepared chyle, &c. &c.

16. The perverſion or retardation of the *ſecretions* and *excretions*, either diminiſh the quantity of chyle, pancreatic juice, bile, or urine; or change their qualities: hence the aliment paſſing from the ſtomach, receives not its proper changes in the duodenum. A depraved chyle is the conſequence.

17. Depraved *chyle* produces a morbid ſtate of the blood.

18. Vitiated *blood* generates impure and acrimonious fluids, and diſeaſed, weak ſolids; theſe are conſtantly irritated by the ſharp ſtimulating qualities of the fluids.

19. The urine is ſecreted copiouſly, and diſcharged without thoſe conſtituent particles which are evacuated in health, and dependent on ſalutiferous digeſtion, chylification, and ſanguification.

20. The fluids once in a ſtate of depravation, act with increaſed energy on the nervous ſenſible ſyſtem and muſcular fibres; the ſenſible

nervous ſyſtem re-acts on the mind and organs of digeſtion: hence the cauſe becomes the effect, and the effect the cauſe of all the diſtreſſing evils, obſtructions, &c.

21. The *cauſes* of convulſions in various parts are eaſily conceived. The free admiſſion of the nervous influence to all muſcular parts, conſtitutes regular action, voluntary and involuntary; but irritations produce the ſame effects as punctures, or ſtimuli of acrid preparations in muſcles, or in the heart; compreſſions on the brain or nerves are ſimilar to ligatures ſurrounding nerves. The former excite contractions even after death in muſcular parts; the latter, a diminution or deprivation of the moving powers during life: hence ſtupor, coma, ſyncope, &c.

Theſe convulſive effects, in part, are produced, although the communication with the brain is intercepted, or the principal deſcending nerves are compreſſed; hence partial convulſions.

The total and continued compreſſion of the nerves, however, produce palſy; but the blood circulates in the part, unleſs the artery is compreſſed.

* Theſe cauſes of ſymptoms are not ſo methodical as they might be delivered; but whoever wiſhes for a more accurate account, may conſult my *Schola medicinæ univerſalis nova*.

A liga-

A ligature on the arteries deſtroys animal heat, by the deſtitution of the arterial contractions, and the free circulation of the blood; hence animal heat depends chiefly on the circulation of the blood.

The circulation of the blood depends on the nerves communicating with the heart from the brain; for though the heart and other muſcles contract after death, on being ſtimulated, it only demonſtrates, that thoſe parts ſtill contain ſome of that *nervous principle* which exiſted in life, and of which they are not deprived of even *poſt mortem*.

As this *nervous principle* evidently exiſts in muſcular fibres in death, it is eaſy to conceive its powers were more energetic and active in life, and therefore more capable of contraction. It muſt appear rational, that convulſions may happen in various places, while others are at reſt, not being ſtimulated; and the mind at the ſame time loſe its perceptibility, by compreſſions on the brain, as in the epilepſy, &c.

22. All the ſenſations nominated nervous, are perceptions in the brain, or *ſenſorium commune*, conveyed by the irritated nerves of parts, and owing to the communication and ſympathy of the nervous ſyſtem.

In hyſteric complaints, the *par vagum* and *intercoſtal nerves*, their branches and communi-

cations,

cations, are particularly irritated and affected. Whoever reflects on the importance of the parts diſeaſed; the ſtructure and diſtracted ſtate of the nervous filaments and ganglions for conveying the alarm to the ſenſes; with the various exertions to oppoſe the formidable enemy thus attacking the principal and vital parts, muſt be ſtruck with wonder and admiration at the uncommon wiſdom of nature in the conſtruction of this curious ſyſtem of the human body.

The nervous *conſenſus partium* eaſily explain the palpitations of the heart, the difficulty in reſpiration and hiccups, from the efforts produced by obſtructed circulation, and compreſſions in the lungs, or irritation on the diaphragm, &c. &c.

The moſt ſuſceptible minds being the greateſt victims to this diſorder, demonſtrate clearly the ſurpriſing effects of the mind on the body: for it often happens, that the compaſſionate ſpectators, from ſurpriſe, fear, and ſenſibility, are attacked with theſe complaints, as happened lately at Paris by animal magnetiſm; and it is common in families, to ſee a female attendant attacked in the ſame manner from a perturbed imagination. Thoſe who poſſeſs leaſt feeling, are leaſt affected by this diſeaſe, and can hardly conceive its poſſibility; are too apt to conclude

on the feelings of others by their own ſenſations: but this is a partial and falſe concluſion.

This extreme nervous ſenſibility ſeems to ariſe from the blood, or fixed air, acting as a ſtrong ſtimulus on the nervous ſyſtem, and the re-action of the *nervous influence* on the circulating powers.

Perſons of ſtrong health never experience the diſorder, even though the mind be violently affected; it happens to the delicate in mind and body, whoſe blood is in an acrimonious ſtate from the cauſes already enumerated. That the mind is very ſenſibly affected by the diſeaſes of the body, no ſtronger proofs need be adduced, than the change of the diſpoſition under any chronic diſeaſe; where the moſt placid, tranquil minds, become peeviſh, ill-natured, and often iraſcible.

The ſtate of the blood, form of body, their acting powers on the nervous ſyſtem, and this again on that immaterial part called the mind, cauſe all the diverſity of character amongſt human beings, and has a great influence in the moral conduct of human life. Envy, generoſity, illiberality, liberality, fortitude and timidity, placidity and iraſcibility, happy or unhappy ſenſations, very much depend on the ſtate of the blood; and the phyſician who moſt

reflects,

reflects, and beſt comprehends theſe diverſities in human nature, will always be moſt capable of relieving diſeaſes. To the diſcerning and obſerving, the phyſiognomy will convey much knowledge of human character, and it may direct a proper choice of remedies, more adapted to the various conſtitutions, than is apprehended by thoſe who idly fix one method or ſtandard of cure to all objects that offer. He who acts more by the exigency of the individual caſes in phyſic, than by the written directions of medical authors, will always beſt ſucceed in conquering diſeaſes. There is an alertneſs in preſcribing acquired by long experience, repeated reflection, and extenſive practice, that no books can communicate.

The hiſtory of medicine furniſhes us with many inſtances in hoſpitals and orphan houſes, of transferring convulſive epileptic diſorders from one affected patient to another by ſight, and the force of imagination *.

The

* Baglivius, in his Praxis Medica, cap. 14. §. 2. mentions a young man of Dalmatia, who, from looking at a perſon in an epileptic fit, was himſelf affected in the ſame manner.

The late Dr. Whytt, of Edinburgh, ſays in his book on nervous diſorders:

"It frequently happened in the royal infirmary here in "Edinburgh, that women have been ſeized with hyſteric fits "from ſeeing others attacked with them."

One of the moſt remarkable inſtances of this kind happened

The *prognoſtics* of this complex diſorder are to be formed from the force or magnitude of the different paroxyſms, and conſtitution of the patients.

1. The

in the poor houſe at Haerlem, in the time of the famous Dr. Boerhaave, and is recorded by his nephew in the following manner:

In domo, qua pauperes ex eleemoſynis publice aluntur in civitate Harlemenſi, perterrita puella incidit in morbum nervorum convulſivum, certis paroxyſmis reducem: adſtantium & adjuvantium in eam intenta, itidem corripitur eodem morbo; poſtridie altera, deinde tertia, quarta, imo fere omnes, tam pueri quam puellæ; ſtatus miſerrimus! corripitur hæc, corripitur illa, imo fere omnes eodem tempore, dum unum alter aſpicit, proſternuntur.

Medici ſolertes fruſtra adhibent quæ dictat ars, ſaluberrima antiepileptica remedia.

Confugitur tandem ad Boerhaavium, qui miſertus infelicis pauperum ſortis, petiit Harlemum, & dum rem examinat, invadente in unum paroxyſmo, vidit convelli plures ſpecie epilepſiæ.

Datis incaſſum optimis remediis a medicis ſapientibus & ad imaginationem ex uno in alterum traducto morbo, his rite perpenſis, hanc avertendo, credidit poſſe curam obtineri, & obtinuit.

Scilicet præmonitis ephoris, præſentibus omnibus, juſſit per cameram diſponi fornaces portatiles, prunis ardentibus inſtructas, atque iis imponi ferreos hamulos ad certam figuram adaptatos, tum ita mandavit:

Quia omnia fruſtra forent, ſe aliud neſcire remedium, quam ut qui primus, puer foret vel puella, infauſto morbi paroxyſmo arriperetur, locus quidam nudati brachii candente ferro ad os uſque inureretur; utque gravitate pollebat dicendi,

per-

1. The *flatulent hyſteric paſſion* is rarely attended with any immediate or even future danger;

perterriti omnes ad crudele remedium, dum inſtare ſentiunt paroxyſmum, omni mentis intentione & metu dolorificæ inuſtionis, eidem reſiſtunt fortioris oblatione ideæ.

Et certe quantum valeat hic ab objecto animæ intentæ revulſio, docet epilepſia diverſimode curata, ut quidem ipſe terror eandem ſuſtulerit, febris epidemica, quartana, ptyaliſmus, matrimonium, virga.——*Abr. Kaaw Boerhaave, Impet. faciens Hippocrati dictum*, §. 406.

There is a wonderful ſympathy between the nervous ſyſtems of different perſons, whence various motions and morbid ſymptoms are often communicated from one to another, without any corporeal contact or infection.

The ſight of one perſon vomiting has often excited the ſame action in others.

Yawning is propagated from one perſon through a whole company.

While I was at Paris in 1784, which city I have viſited many times, to examine medical improvements, *animal magtiſm* was in great vogue. Though I had every reaſon from common ſenſe to ſuſpect this *charletanerie*, I ſtudied the affair with the greateſt accuracy, being acquainted with the famous *Dr. Franklin*, one of the commiſſaries, appointed by the French King to examine the matter. Several converſations with this philoſopher ſatisfied me, that the whole was impoſition. In the *Rapport des Commiſſaires*, which was preſented me in a pamphlet by my eſteemed friend, Dr. Franklin, is the following hiſtory, as an illuſtration of magnetic deceptions.

" Le jour de la ceremonie de la premiere communion, faite " en la paroiſſe de St. Roch, l'an 1780. Après l'office du " ſoir, on fit, ainſi qu'il eſt d'uſage, la proceſſion en dehors. " A peine les enfans furent ils rentrés à l'égliſe, & rendu a " leurs places, qu'une jeune fille ſe trouva mal, & eut des

ger; it is more troubleſome to the patient, than alarming to the ſkilful and experienced phyſician.

2. The *convulſive hyſteric paſſion* is more difficult of cure than the preceding, but rarely ever dangerous. I have known it continue many years, and at laſt has entirely quitted the patient.

" convulſions. Cette affection ſe propagea avec une telle ra-
" pidité, que dans l'eſpace d'une demie heure, cinquante ou
" ſoixante jeunes filles, de douze a dix neuf ans, tomberent
" dans les mêmes convulſions; c'eſt à dire, ſerrement à la
" gorge, gonflement à l'eſtomac, étouffement, le hocquet &
" convulſions plus ou moins fortes.

" Ces accidens reparurent a quelques dans le courant de la
" ſemaine; mais le Dimanche ſuivant, etant aſſemblées chez
" les Dames de Sainte Anne, dont l'inſtitution eſt d'enſeigner
" les jeunes filles, douze retomberent dans les mêmes con-
" vulſions, & il en ſeroit tombé d'avantage, ſi on n'eut eu la
" précaution de renvoyer ſur le champ chaque enfant chez ſes
" parens. On fut obligé de multiplier les écoles. En ſépa-
" rant ainſi les enfans, & ne les tenant pas aſſemblés qu'en
" petit nombre, trois ſemaines ſuffirent pour diſſiper entiere-
" ment cette affection convulſive epidemique.

" Voyés pour des exemples ſemblables le naturaliſme des
" convulſions par M. Hecquet."

How ſhocking it is to reflect on the dreadful effects of the *animal magnetiſm* ariſing merely from apprehenſion! On numbers have been entailed *convulſive fits*, where none before exiſted, which may remain through life. Theſe fits were knaviſhly called *les criſes*, but aroſe from fear or ſurpriſe: perhaps a *female actreſs* or two were hired for the purpoſe of mimicking fits and diſtortions, &c.

Thoſe,

Thoſe, however, who can *curb* and beſt command the *emotions* of the mind, are moſt eaſily cured.

After the diſorder has ravaged in the habit, any ſlight affection of the mind can reproduce the hyſteric fit, nor is it always in the power of the patient to avoid being affected; reaſon and reflection often coming too late for the purpoſe, and paſſion predominating with an ungovernable ſway.

The art of phyſic, ſhould not be accuſed of defect, when the cauſes of a diſeaſe are chiefly reſident in the mind, ever ready to burſt forth with impetuous violence on the moſt trivial occaſions; yet a judicious medical management, very often changes the natural, accidental, or acquired diſpoſition of the patient. In proportion as the body is advanced from debility to firm ſtrength, ſo proportionably will the diſeaſe decreaſe, and the mind become more tranquil.

The *ſtertoroſe*, or *apoplectic hyſteric paſſion*, is more ſerious than the former two ſpecies, becauſe it indicates compreſſion in the cerebrum, or cerebellum; but this rarely proves fatal; after profoundly ſleeping and ſnoring, the patient gradually recovers: it is moſt alarming, if the reſpiration be ſhort and difficult; becauſe it ſhews, generally, an impeded or obſtructed circulation of the blood through the lungs.

The *effects* of the diſorder maniſeſt obſtruc tions in the viſcera of the abdomen and thorax; for congeſtions in the parts, or dilatations and ſtagnations in the veſſels, particularly thoſe that communicate with the *vena portæ*, have been obſerved by diſſections after death.

In the hyſteric affections, with difficulty of breathing, the lungs have been found putrid and diſeaſed.

In other caſes, the abdominal viſcera, particularly the omentum, meſentery, inteſtines, ſpleen, pancreas, uterus, ovaria, and the ſtomach itſelf, has been forced out of its ſituation even towards the pubis *.

All

* *Hyſteris ſeu paſſio hyſterica.*

Anatomical Examinations after Death.

Sectiones cadaverum exhibent ovaria mole ampliora, aliove modo labefactata: continent laticem, materiam ſebaceam, caſeoſam, pilos, oſſa, &c. ex organis ſcirrhoſis erumpunt, tubercula, hydatides, tumores cyſtici, &c.

Contaminantur etiam uterus, tubæ fallopianæ, vaſa ſpermatica, cervix uteri.

Ventriculus depulſus, duodenum ampliatum, colon, rectum, infarcta, obſtructa; meſenterium, pancreas, aliaque viſcera abdominalia, inflammata, ſcirrhoſa, hydatica, purulenta, putrida.

Herniæ epiploicæ, pulmones læſi, cor nonnunquam ampliſſimum, turgidum, cum polypoſis concretionibus.

Stagnationes, obſtructiones in abdomine, pectore & in cerebro.

In the courſe of above thirty years full practice, I have ſeized every opportunity to examine human bodies after death; for

All theſe appearances after death cannot be called cauſes of the diſeaſe, although they are the

for from this ſource of intelligence, the real cauſes and effects of diſeaſes are diſcoverable. This knowledge is the ſureſt to purge the mind of viſionary hypotheſes, and points out the moſt rational cure for diſeaſes. In nervous hyſteric caſes, I have found, more or leſs, the viſcera diſeaſed; and in convulſive caſes, the veſſels of the brain extremely turgid, or effuſions of blood. This laſt ſhews the danger of giving *emetics* to nervous people.

Symptomata.	*Extiſpicia.*
Hyſterica multum & grayſoribus paroxyſmis vexata, cum doloribus acerbiſſimis & animi defectionibus.	Ventriculus ad hypogaſtrium delapſus.
Hyſteria, cum ventre tumido reſpiratione difficili, tuſſi ſicca.	Tumores in ovariis & meſenterio.
——— invadit mulierem hæmoptyſi obnoxiam & menſtrua ſuffiaminat.	Pulmones & lien putridi.
——— ſuccedit delirium melancholicum.	Ovaria ſcirrhoſa.
——— ex improviſo enecatur hyſterica.	Ut ſupra.
——— cum variis abdominis tumoribus hydropem accerſit.	Tumores in ovariis.
——— ſtipatur hypochondriorum intumeſcentia, febre veſpertina.	Pulmones tuberculoſi, inteſtina & omentum inflammata, uterus inculpatus.
——— epilepſia.	Pancreas putridum.
Inſultus hyſterici cum convulſionibus, tumore indolente	Uterus ingens intus materiam purulentam recondit.

the effects of the hyſteric paſſion, and the cauſe of death; but the preventing ſuch effects ſhould

Symptomata.	*Extiſpicia.*
uteri oborto fugantur, ſed dein hæmorrhoides pertinaciſſimæ eveniunt & his mors ſuccedit.	
——— ſtipantur tumore & dolore in hypogaſtrio poſt partum creſcente.	Ventriculus ad pubem delapſus.
——— cum dolore ſtomachi poſt partum recrudeſcente.	Hernia epiploica, ventriculus e ſede depulſus.

Highmorus, Sylvius, and Sydenham, accuſe the ſtomach, pancreas, meſentery, and vena porta, as the genuine ſeat of the diſeaſe. Carolus Piſo, in Selectioribus Obſervationibus, conceives the ſeat to be in the cerebrum, or in the beginning of the nerves. Hoffman, in the uterus and its veſſels, from ſpaſmodic conſtrictions, after in the nerves about the ſacrum and loins; and from ſympathy of parts, communicate their effects to the nervous membranes of the medulla of the ſpine, and gradually from the inferior to all the ſuperior parts. Hoffman. De malo hyſterico.

Appearances in Bodies after Death.

Meſenterium plurimis glandulis ſcirrhoſis, duriſſimis & variæ magnitudinis & figuræ obſeſſum: vix ob duritiem diſcindi poterant. Uterus & ovaria cum tubis, recenti quaſi coagulato lacte turgebant. Blancardi LV. obſervatio anatom. pract. rational.

Morgagnus, de ſedibus & cauſis morborum, relates the appearances of a woman after death, whoſe menſes had been ſuppreſſed four months, accompanied with violent hyſterics and madneſs.

Venter jecur habuit eo colore quo, elixum eſt: bilis tamen

quæ

ſhould be the principal object in the treatment of the diſorder: it will, however, appear, that phy-

quæ ex ejus veſicula exſudavit, croceo colore vividiſſimo proxima infecerat inteſtina. Teſtes albi, duri, ſcirrhoſi, æquo majores, & ſuopte pondere quaſi pone uterum tracti. Uterini fundi interior facies, ſanguinolento quaſi muco non ſecus oblita videbatur, ac ſi menſtrua, jam inſtarent, aut nuperrime fluxiſſent: præterea in illa ipſa facie ex ſubſtantia uteri parvula, & perpauca prominebant tubercula, verrucarum ſimilia.

Another inſtance of an hyſterical woman, remarkably timorous, of a corpulent body, addicted to wine, &c. who had been ſubject to tremblings and faintings from the moſt trifling cauſes. She vomited often, and could bear nothing ſolid on her ſtomach. She was at laſt ſeized with moſt grievous hyſteric affections, and died within an hour or two. Epiſt. XLV. 23.

Thorace recluſo, ſiniſter pulmo aliquo loco & leviter: dexter autem ferme undique, ſuperiore excepta particula, arctiſſime ad pleuram adhærens inventus eſt per quandam membranam, quæ præter naturam tunicæ pulmoni inducta erat. Pulmones ambos cum ſecaremus, duros, & quaſi tendineos pluribus offendimus locis; ſpumoſo præterea humore, quaſi ſaliva quadam, paſſim ſcatentes.

Pericardium non paucam habuit aquam ex fuſco turbidam.

Cordis autem uterque thalamus nigrum ſanguinem, & fluidum.

Dexter inſuper modicam polypoſam concretionem, albam, ſed mollem, cui ſimilis altera in pulmonari fuit arteria, plurimo cum ſanguine. Hoc turgidiſſima erat auricula dextera; ſtrigoſa autem ſiniſtra. Verum huic auriculæ annexus ventriculus, naturali amplior, non unum obtulit animadverſione dignum. Namque, ut tendineas omittam fibrillas quæ inter mitrales valvulas, columnaſque ducuntur, viſas eſſe plures quam ſoleant; certe eæ columnæ erant æquo craſſiores, durioreſque, ut multo potius tendineæ, quam carneæ, viderentur, ſive colorem

phyſicians have more conſidered the palliation of ſymptoms, than the radical cure of this difficult and diſtreſſing diſeaſe.

The

rem ſpectares, qui albus erat, ſive renixum attenderes quem ſecanti ſcapello objiciebant. Præterea in ejuſdem ventriculi parietibus hic illic paſſim quædam occurrebant loca in quibus carnea ſubſtantia cordis aut alba, aut ex rubro alba ita erat, ut a primo glandularum quaſi quarundam ſpecie imponerent; ſed eodem illo peculiari renixu, diſſecantibus ſimilem ſe columnarum oſtendit. Vitium hoc carnis cordis, in tendineam naturam degenerantis, quo magis ab interiore ventriculi facie ad exteriorem pergebat, eo fiebat evidentius, pertinebatque exterius ad eum quoque locum cui ſeptum cordis reſpondet. Quin pinguedo ipſa huic viſceri impoſita non omnis ſecundum naturam ſe habuit. In poſteriore enim facie cordis per duos non parvos ſecundum longitudinem tractus inæqualis erat, ibidemque ex fuſco rubeſcebat. Arteria magna a corde ad curvaturam uſque propemodum totam, non valde quidem, ſed evidenter tamen dilatata, prope ſeptum tranſverſum æquo anguſtior viſa eſt. Inciſa, & ſanguine, quo non carebat, effuſo, oſtendit tota interiore facie a corde ad ramos ſaltem uſque emulgentes, particulas quaſdam albidiores, & lineas nonnihil extantes: præterea non eo ſolum quem modo dicebam, tractu, ſed & alibi quantum ex diſſectis ſuperioribus quibuſdam ejus ramis, cognovimus, intimam tunicam facile adeo a proxima ſejungendam, ut leviſſimam ſcalpelli frictionem magna ejus fruſta ſequerentur. In ventre autem hæc videramus. Omentum lienem verſus retractum. Perturbatos inteſtinorum ſitus. Hæc, colon præcipue, & rectum, aere multum diſtenta. Meſenterium quidem, ventriculum, ſplenem, & jecur, cujus veſicula bile turgebat, ſana. Pancreas autem, quod ut nonnulla tenuia inteſtina decliviore præſertim parte rubebat, glanduloſis acinis juſto firmioribus, & inter ſe magis diſtinctis. Uterum

The hyſteric and nervous diſorders will be much eaſier cured when recent, than when they

rum denique, tubas, & non parvam vaginæ partem, cum ibi ſic ſatis, tum præſertim poſtridie, ut plus temporis, & diuturnum lumen haberemus e cadavere adempta, diligentius examinantes, hæc adnotavimus. Poſteriori fundi uterini faciei exterius circa medium adnatus erat per brevem pedunculum globulus, nihil magis albedine, forma, & magnitudine referens, quam parvum ceraſum immaturum: quem ſecantes, ex fibroſa quidem, ſed calloſa ſubſtantia, confuſiſque fibrarum ordinibus, factum deprehendimus: cujuſmodi alter globulus intra ipſam parietum uteri craſſitudinem erat conditus. Mox apertus uteri fundus multo apparuit ſuberuento muco fœdatus: quo deterſo, cum appreſſis ſubtus digitis, undique ex fundo quidem; non ex cervice, multoque minus ex vagina; prodeuntes mediocri expreſſione ſanguineas guttas oſtendiſſem; tam diſplicuit Santorino quod pro certo ſcire non potuiſſemus, an mulier prope abeſſet a menſtruis, quam ſe antea * horum ſcaturiginem in vagina potius eſſe, quam in utero, credidiſſet. Cervicis ſuperiore parte excepta, reliquum longe alio rubore infectum erat, quaſi ab inflammatione videlicet, qui ab altero latere magis ad fuſcum inclinabat, nec tamen uſquam cervicis ſubſtantiam alte pervadebat. In tubis quoque mucoſus humor fuit; ſed albus. Utraque erat aeri, per majus orificium immiſſo, in uterum pervia: nec deerant prope id orificium hydatides. Teſtium uterque ab incluſis cellulis tumebat; ſed alter magis, qui præter magnam, minores quoque plures habuit cellulas, omnes fere plenas, una excepta in qua pus album fuit. In altero ſimul cum cellulis, & veſiculis ſerum continentibus, alias vidimus cellulas intus nigricantes. In utriuſque autem ſuperficie oſcula animadverteramus, tenue ſpecillum admittentia: præcipue vero in membranis per quas cum teſtibus tubæ nectuntur.

* Opuſc. med. 4. n. .

have continued many years: becauſe in the former the viſcera may not be diſeaſed; but in the latter, affections of the viſcera are always to be apprehended.

When the diſeaſe has originated in the body, it is eaſier removed than where the mind has been primarily affected; becauſe the bodily complaints often yield to the power of medicine; but the paſſions of the ſoul are too often above all ſkill and remedies. The emotions of the mind cannot be eaſily ſuppreſſed, becauſe they are often *ab origine* in delicate and ſuſceptible conſtitutions. There may be obſerved a promptitude in nervous patients to torment themſelves on moſt occaſions without any reflection on the injury and ſhocks they give their tender habits.

The indications for the *cure* of the hyſteric paſſion and nervous affections may be formed from the *ſymptoms*, *cauſes*, and *effects* of thoſe diſeaſes.

The *ſymptoms* ſhould be palliated, the *cauſes* removed, and *effects*, ſuch as ſcirrhoſities, congeſtions, and obſtructions of the viſcera, prevented.

The treatment is to be conſidered under two diſtinct heads; the palliation of ſymptoms, and the removal of cauſes.

The palliation of ſymptoms is chiefly applicable

cable during the paroxyſm or hyſteric fit; and this is beſt determined by its degree of violence.

While the radical cure is attempted, the urgent ſymptoms are likewiſe to be mitigated.

The *flatulent* or *windy* hyſteric fit is alleviated by fetid and volatile medicines the moment deglutition is poſſible. Tincture of *aſſafœtida* and *ſpiritus ſalis volatilis*, or *cornu cervi*, 20 or 30 drops of each in water or valerian tea; a few drops of oil of amber, or *oleum animale*.

In faintings, the fumes of vinegar, ſpirit, æthereus, or any volatile ſpirits, or ſalts, are to be applied to the noſe; burnt feathers, oil of amber, &c.

If theſe ſhould not ſucceed in recovering the patient, a clyſter is to be injected, compoſed of ſome bitter or aloetic purgative, and tincture of aſſafœtida; not only to empty the *rectum*, but to ſolicit the inverted periſtaltic motion of the inteſtines to its natural action, and promote the expulſion of the diſtending air, or wind downwards.

No. 46. ℞. Decoct. com. pro clyſter ℥vj.
Ol. olivar. ℥iſs.
Syr. e ſpin. cerv. ℥vj. M. f. enema, ſtatim injiciendum, repetendumque pro re natâ.

No.

No. 47. ℞. Decoct. com. pro clyſter ℥vj.
Tinct. ſacr. ʒvj.
——— aſſafœtid. ʒij.
Ol. olivar. ℥ſs. f. enema.

No. 48. ℞. Aq. pur. tepid. ℥vj.
Sal. com. ʒvj.
Syr. e. ſpin. cerv.
Ol. olivar. āā ℥j. f. enema.

In the *paſſio hyſterica convulſiva*, or convulſive hyſteric paſſion, the fit muſt be treated in the foregoing manner: but if the patient be plethoric, or the veſſels of the face full, turgid or red, bleeding during the fit will be neceſſary when the operation can be performed. Bleeding certainly weakens the force of the fit, and ſhortens its duration; probably, by diminiſhing the force of blood aſcending to the head during the paroxyſm, and rendering the circulation through the internal and external jugulars, vertebral and occipital veins, more free. The former are greatly compreſſed, by the dilatation of the œſophagus and ſtricture on the fauces in the fit; and there have been inſtances, though very rare, in which an effuſion of blood on the *cerebrum* or *cerebellum*, or of *ſerum* in the ventricles of the brain, have proved fatal *.

* In my diſſections after death I have met with two inſtances; though theſe are ſufficient to prove the poſſibility. In the firſt, the patient died in ſtrong convulſions, after a violent paſſion of anger; in the ſecond, ſtrong convulſions and a ſtupor ſucceeded after a violent vomit.

In

In languid pale habits, with great debility, and eſpecially when the diſorder has been of long duration, bleeding in *paroxyſmo vel extra paroxyſmum* is improper, and ſometimes hurtful.

The patient during the convulſions ſhould be placed as erect as poſſible in a chair, to favor the deſcent of blood through the veins of the head and neck.

In the *paſſio hyſterica ſtertoroſa*, or hyſteric paſſion, with ſnoring and ſtupor ſimilar to apoplexy; bleeding, except in very relaxed patients, ſhould be always preſcribed; there is more danger to apprehend, and leſs to hope in this than in the other ſpecies.

Sharp, irritating clyſters ſhould be uſed, No. 46, &c.

Volatile ſalts or ſpirits ſhould be applied to the noſtrils; bliſters to the neck, back, arms, or legs; and ſinapiſms to the feet.

If the patient is able to ſwallow, evacuations by ſtool ſhould be procured by active cathartics.

Drinks of all ſorts are to be very ſparingly admitted, leſt the *veſſels* continue *diſtended*.

After evacuating the feces, perſpiration ſhould be promoted by *camphor*, and the *tartarum antimonii*, or other antimonials, in ſuch ſmall doſes, as never to excite nauſea; or by the

the *ſpiritus mindereri* and camphor; or by *ſal volatilis ammoniacus*, *nitrum*, and *camphora*, in the more florid and plethoric habits.

Theſe are the general modes of treatment neceſſary for the three principal ſpecies of the hyſteric paſſion during the fit: but they muſt be varied aecording to the conſtitutions of patients, circumſtances of caſes, and cauſes from which they originate.

In the firſt attacks the *lancet* may be uſed with more freedom than when the diſeaſe has continued. More *blood* may be taken from thoſe, where the paſſion of anger, or extreme quickneſs of temper, predominate, than in grief, melancholy, anxiety, and deſpondency.

The *indications* to obtain a *radical cure* in theſe complaints conſiſt,

1. In determining the ſuperabundant air downwards, and directing the inverted periſtaltic motion of the inteſtinal canal to its due and natural condition.

This is produced by gentle laxatives of the bitter and aloetic kind, joined with fetid remedies and carminatives.

By diminiſhing the quantity of air, and preventing effervеſcences, or fermentations in the ſtomach; therefore all vegetables of the green kind, ſallads, and ſweetened food, peaſe, beans, &c. ſhould be avoided.

Plain

Plain lean meats are moſt proper, and ſuch drinks that occaſion no fermentation: ſmall beer, ale, and all liquors, either in a ſtate of fermentation, or likely to produce fermentation, increaſe the diſorder.

The patient's feelings, however, ſhould direct the choice; and this is eaſily determined by obſerving what foods and drinks beſt agree, or occaſion leaſt flatulency.

Spirits and water, check fermentation more than any other liquors; but they hinder nutrition. Though the generation of a large quantity of air may be very troubleſome and injurious, yet a moderate portion is not only uſeful but neceſſary.

Old hock and Seltzer water, or other wines of a proper age and water, commonly agree.

The *London porter*, is an excellent liquor for ſeveral hyſteric patients; but, then no other drink ſhould be allowed at or after meals.

11. The over diſtenſion of the ſtomach and inteſtines is generally productive of great relaxation, loſs of appetite, indigeſtion, debility, &c. The ſtomach ſhould be braced by an abſtinence from all relaxing drinks, and ſpoon foods, which act as fomentations to the already relaxed parts; and the patient ſhould, when out of the fit, take mild chalybeate, vitriolic

preparations, bitters, and bark. See remedies from No. 2 to No. 10, No. 26 and 27.

There will be found, however, in practice many female patients, particularly thoſe who are ſlender, or whoſe fibres and muſcles ſeem rigid and elaſtic, who cannot bear the ſlighteſt tonics or bracers; owing, perhaps, to rigid fibres of the ſtomach, or having no mucus in the ſtomach to counteract the ſudden effects of bracers on the cardiac nerves: theſe commonly experience an obſtinate conſtipation.

In ſuch caſes aloetics, joined with cremor tartari, and very ſmall doſes of calomel united with the aloetica purgantia in moderate doſes, have beſt ſucceeded when taken *bis vel ter in ſeptimana.*

An over abundance of fixed air in the inteſtines has been greatly relieved by *lime water* alone; the air is acid, the lime water its powerful oppoſite.

III. The impervioufneſs of the lacteal veſſels on the ſurface of the inteſtines muſt be removed: being a principal cauſe of imperfect nutrition.

The cauſes are, an accumulation of inſpiſſated mucus, which is beſt diſlodged by aloetics and cremor tartar. or by a ſolution of borax in the *infuſum amarum.*

If the lacteal veſſels ſhould be impervious, from

from their orifices having loſt the power of abſorbtion, being filled with the coagulated chyle in their ſmalleſt tubular *villi*, mercurials are to be preſcribed; from half a grain to two grains of well-prepared calomel is to be taken twice or thrice in the week; the pilulæ mercuriales, the æthiops mineral, or cinnabar with camphor; the pilula rubra, and other alteratives. But even theſe preparations muſt be cautiouſly adminiſtered to nervous patients; becauſe metallic ſubſtances of all ſorts frequently produce tremors, and debility of the nervous powers.

If the mouths of the lacteals ſhould be impervious from relaxation, or an *atonia*, chalybeates, vitriolic acids, bark, and volatile ſalts are uſeful, in conjunction, occaſionally, with mercurials, chiefly uſed as alterants.

The *firſt* of the preceding cauſes, in which an adhering inſpiſſated mucus is apprehended, is common to the corpulent.

The *ſecond*, where the chyle coagulates in the tubes, is common to the pale, languid, and debilitated, in whom the arterial actions are diminiſhed, or to the groſſer habits, when the oleaginous particles of chyle ſuperabound.

The *third* is owing to cauſes ſimilar to the foregoing, and the cure ſhould be attempted by the ſame means.

The *fourth* cauſe of nutritious chyle not entering the lacteals, is its bad quality from various improper mixtures, and a contraction of the mouths of the *tubuli* on the inteſtinal ſurface.

This laſt caſe is more difficult to remove than the others, as it requires a better digeſtion in the ſtomach, a more pure chyle in the duodenum and ſmall inteſtines, and a removal of the ſtricture of the veſſels, without which the neceſſary abſorption cannot be readily performed.

This is commonly attendant on patients of a ſlender habit, tenſe, rigid fibres, exquiſite ſenſibility, and violent paſſions. The cure of ſuch can ſeldom be obtained, becauſe every *ſudden* and *momentary emotion* of the mind will counteract many *months labor* of the moſt profound medical ſkill. Antiſpaſmodics, deobſtruent alteratives, acids, or alcalines, as circumſtances and cauſes occur, are to be recommended; but above all other preſcriptions, *tranquillity* of mind.

It may be obſerved, that fatneſs or leanneſs, ſtrength or weakneſs, ſenſibility or torpidity, do not ſo much depend on what foods are received into the ſtomach, as their proper digeſtion, abſorption, and aſſimilation with the blood,

blood, joined with the natural ſtructure and form of the body.

Lean people are frequently great eaters, while the corpulent often eat and drink little; the ſlender in body more commonly agitate their minds on ſlight occaſions than the corpulent; becauſe they poſſeſs, in general, more ſenſibility. Digeſtion, chylification, and ſanguification, is eaſier completed in the former than the latter: but none of thoſe offices are well performed under mental perturbation; hence a vitiated nutrition. Let any one who has travelled compare the volatile, lively, good-natured French, with the torpid, ſlow movements of the Dutch, and the extremes of human character, as to levity and dull ſolidity, may be eaſily obſerved.

Theſe extremes in human nature, owing to climate, diet, or education, may be judiciouſly applied to the practice of medicine to very great advantage: the more torpid habits require the moſt powerful mercurials and antimonials; while the irritable and delicate are ſometimes much hurt by the gentleſt remedies of the mineral claſs *.

IV. As

* The different nations in Europe all exhibit to the philoſophic and inquiring mind an extraordinary variety of genius and character. A lively imagination, quick invention, and a

IV. As the *bile* is always more or leſs vitiated in nervous, hyſteric patients, it becomes abſolutely neceſſary to examine the feces or excrements.

If the evacuated feces be blackiſh, it demonſtrates that the bile has been ill ſecreted in the liver, retained too long in the gall bladder, or in the duodenum; by which it often loſes the neceſſary qualities for attenuating or mixing the chyle, and its ſtimulus on the ſurface of the alimentary canal, for forcing towards the greater inteſtines the groſſer parts of the aliments.

The coſtiveneſs from the inert bile is beſt removed by *aloetics*, *infuſum ſenæ* and *cremor tartari*.

The more powerful cauſe-removing remedies are waſhed calomel, to a quarter or half a grain, every or every other night, joined with three or five grains of ſome aloetic purgative, as the pilula rufi, &c.

refined taſte in all the delicacies of life, I have obſerved, characteriſe the French; perſeverance, patience, and indefatigable ſlow induſtry, the Dutch; gravity, ſolemnity, and manlineſs, the Flemiſh and Germans; petulance and iraſcibility, ſome of the Italians and Neapolitans, blended with good humor, and a deſire to pleaſe. The different branches of arts and ſciences ouriſh according to the climate, genius, freedom, laws, and religion of each people.

The

The *infuſum amarum* and the *ſal diureticus* ſhould be taken two or three times in the day, provided they are not rejected by the ſtomach.

No. 49. ℞. Merc. dulc. ſub. ppt. & lot. gr. vj.
Extract. cathart. ℈ij. f. pilulæ No. xxiv.
quarum ſumat unam omni nocte.

No. 50. ℞. Infus. amar. ℥vj.
Julep. e camph. ℥iſs.
Spt. lavend. c. ℥ſs.
Sal. diuret. ʒij. f. miſtura, de quo capiat coch.
iij. bis vel ter in die.

This blackiſh bile very probably generates a great quantity of mephitic air; for no human fluid ſo ſoon putrifies as the bile: an injurious air is extricated from human ſubſtances verging to a ſtate of putrefaction, in great quantities, as may be obſerved in the tympanites from viſceral putridity; and the bile particularly haſtens the corruption of all the human fluids in the yellow malignant fever of the Weſt Indies, ending quickly in death; to many inſtances of which I have been a ſpectator, without the power of affording relief, in the advanced ſtages of the diſorder.

It muſt, then, plainly appear, 1. that healthy chyle cannot be expected when the bile is ill

* See my medical advice for the army and navy ſerving in hot climates.

ſecreted, and *vitiated* blood is ſent to the *liver* from diſeaſed viſcera.

2. From the bile being long retained in the gall bladder.

3. From the conveyance of an impure bile through the hepatic duct, ſo that the mixed bile in the *ductus communis cholidochus* does not enter the *duodenum* in a fit ſtate for producing thoſe proper mixtures; not only dedicated to carry freſh nouriſhment to the body, but to protude the fecal parts of the aliments through the inferior part of the inteſtinal canal.

The correction of the vitiated bile includes not only a removal of obſtruction in the liver itſelf; but likewiſe of infarctions, congeſtions, obſtructions, and retarded circulation of the blood veſſels, and of all the abdominal viſcera, which ſend their blood into the *vena portæ*.

To effect ſuch important purpoſes, three conditions of great magnitude and difficulty preſent themſelves.

1. The removal of ſchirroſity, tumefaction, or obſtruction in the liver or ſpleen and their dependent veſſels.

2. The acquiring a free, eaſy circulation in the lymphatic, arterial, and venal ſyſtems of the viſcera, and all their lymphatic glands, whether of the meſentery or other parts.

3. The

3. The changing the vitiated, acrimonious blood to a pure ſalutary ſtate.

The accompliſhing theſe grand objects may lay the foundation for a *radical* cure of hyſteric and nervous complaints; but doing leſs is only a *palliation* of the miſerable ſymptoms.

If the powers of nature are not too much debilitated to co-operate with judicious medicine, ſucceſs may crown medical endeavors: but if the remedies moſt effectual cannot be adminiſtered from *contraindications*, the cure will be very doubtful, and ſometimes impoſſible: *ſed nil deſperandum, omnia tentanda*, with the utmoſt circumſpection.

The removal of infarctions and ſchirroſity in the viſcera can alone be expected by metallic preparations uſed as alteratives. In liver ſchirroſities of hot climates, mercurials uſed as unguents, or preſcribed internally, have cured the complaint. Nervous, irritable, and hyſteric patients, however, very ſeldom can bear mercury alone in the modes uſually preſcribed; the doſes are generally too large, and tremors, with other complaints, are the conſequence of their uſe.

Though mercurials given in the *large doſes*, formerly too much in vogue, may have produced miſchief; yet it does not follow, that very

very ſmall portions, as alteratives, repeated at proper diſtances, or combined with ſome ſtomachic laxative, will be injurious; on the contrary, excellent effects are produced.

If mercurials alone be found too ſtimulating and hurtful to the ſtomach, yet when united with ſulphureous antimonials, their active, irritating particles on the ſtomach and inteſtines are obtunded; they become mild and efficacious.

No. 51. ℞. Pulv. antimon. cum merc. dulc. ℈ſs.
Pil. gummos. ℈ij. M. accurate, f. pilulæ No. x. quarum ſumat unam mane & nocte, ſuperbibendo coch. ij. miſturæ ſequentis.

No. 52. ℞. Julep. e camph. ℥iijſs.
Aq. pur. ℥iv.
Spt. lavend. c. ℥ſs. M. f. miſtura.

To palliate nervous ſymptoms while the above remedies are adminiſtered,

No. 53. ℞. Tinct. fœtid.
Spt. volat. aromat. āā ℥j. capiat gtt. xxxx. vel lx. ex coch. ij. infus. rad. valerian. vel infus. zingiberis ad libitum.

No. 54. ℞. Sulph. aurat. antimon. gr. x.
Cinnab. antimon. ppt. ℥iſs tere ſimul, deinde adde
Conſ. cynoſbat. q. s. f. pilulæ No. xxxx. de quibus capiat iij. mane & nocte.

No,

No. 55. ℞. Pulv. rad. valerian. ʒij.
Julep. e camph. ℥iij.
Aq. pur. ℥iv.
Tinct. ſtomach. ℥j. M. f. miſtura, de quo capiat coch. iij. ter vel quater in die.

No. 56. ℞. Æthiop. min.
Pulv. camphor. āā ʒj.
Conſ. cynoſbat. q. s. f. pilulæ No. XXIV. quarum ſumat. iv. mane & nocte.

No. 57. ℞. Julep. e camph. ℥v.
Spt. volat. foetid. ʒijſs.
—— lavend. ʒiſs.
Aq. pur. ℥ijſs. f. miſtura, cujus ſumat coch. iij. ad libitum in languore.

No. 58. ℞. Kerm. min. gr. xij.
Merc. dulc. ſexies ſub. ppt. & lot. gr. vj. tere ſimul, deinde adde
Pulv. camph. gr. xvj.
Conſ. cynoſbat. q. s. f. pilulæ No. XXIV. de quibus ſumat ij. mane & nocte.

No. 59. ℞. Julep. e moſch.
——— e camph. āā ℥iv.
Confect. cardiac. ʒij. f. miſtura, cujus capiat coch. ij. ter vel quater in die.

Theſe are the moſt decided remedies in congeſtions of the abdominal viſcera, in diſeaſed lymphatic veſſels and glands, and, generally, in all impurities of the blood: but as their preparations, and conjectures or demonſtrations of their actions and utility, are inveſtigated in the part of this treatiſe which contains the management of the cancers of the breaſts

breaſts and uterus, to thoſe ſubjects is the reader referred.

In every ſtate of obſtruction from relaxation, and an irregular circulation of the blood through the abdominal and viſceral veſſels, chalybeates perform wonders, after the *ſordes* on the ſurface of the inteſtines are removed by proper laxatives, with or without the nervous fetid gums, or half a grain of merc. dulc.; their uſe ſhould be perſevered in twice or thrice a week; at the ſame time chalybeates ſhould be taken with bitters twice or thrice a day, or wine, and ſome nervine, appeaſing, carminative remedy to alleviate the ſymptoms.

No. 60. ℞. Pil. ruf. ℈ijſs.
Merc. dulc. ppt. & lot. gr. iv. M. accurate, f. pilulæ No. xx. quarum ſumat unam omni nocte, vel mane & nocte.

No. 61. ℞. Limatur. mart. ʒſs.
Pulv. flor. chamæmel. ʒij.
—— zingib. ʒij.
Conſ. roſar. ʒij. ſyr. ſimp. q. s. f. elect. cujus capiat Q. N. M. ante prandium coenamque, quotidie ſuperbibendo coch. ij. infus. amar.

Fetid and volatile drops may be taken in lowneſs, or depreſſions of ſpirits, or agitations of the mind.

Theſe plans of cure muſt be perſiſted in for many

many months, or a radical cure of nervous diſeaſes will never be attained.

The preventing or removing obſtructions in the lymphatic veſſels or glands require a ſimilar treatment. The lymphatic, or abſorbent veſſels, can convey *poiſons* into the conſtitution; but they can likewiſe convey *remedies*. Venereal *miaſma*; the bite of a viper, or mad dog; animal putridity, and other deſtructive matter of the moſt ſubtile nature, are conveyed to the blood by means of theſe veſſels *. Mercurials externally applied purſue the ſame courſe through the lymphatic veſſels and glands to the thoracic duct, and mix with the blood; thus many excellent remedies may be conveyed without diſturbing the ſtomach.

The lymphatics of the abdominal viſcera having loſt their powers of abſorption, an effuſion of the coagulated lymph will be the conſequence; coagulations of lymph, and tumefactions in the lymphatic glands, will likewiſe ariſe from obſtructions of lymphatic veſſels or glands nearer the thoracic duct. Hence con-

* Theſe facts are at preſent but little known except amongſt the lateſt and moſt learned anatomiſts. Boerhaave, nor any of his diſciples, well underſtood theſe ſubjects; their *pathology* and methods of *cure*, are in many inſtances ſtrikingly defective: but ſo tenacious are many at this preſent time, of the leſſons they received early in their youth, that they

congeſtions in the inferior parts will be formed, ſcirrhoſities and tumors ſimilar to the ſcrophula externally; and by repeated diſſections of diſeaſed perſons, who have been long afflicted with hyſteric, nervous, and other chronic diſeaſes. I have always found tumors of this nature in the *iliac*, *meſenteric*, or other lymphatic glands. Theſe were, it muſt be acknowledged, often more the effects of the diſeaſe than the cauſe; but yet, to prevent theſe congeſtions and obſtructions muſt certainly be a more rational mode of cure than the common treatment. There is reaſon to ſuſpect they do or will exiſt; and to prevent or remove ſuch accumulations, is a more determined and ſenſible practice, than merely to palliate ſymptoms. The alleviation of ſymptoms, particularly by *opiates*, renders the diſeaſe ſometimes more difficult and incurable.

To prevent or remove theſe congeſtions in

they are frequently offended at later diſcoveries, and offer inſolent and unmerited oppoſition, from no other cauſe than becauſe they are *new*. For my own part, I have endeavored to apply all the new doctrines to diſcover the defects of our art, and to make permanent improvements; and am happy in making grateful acknowledgments to Doctors Monro, Hunter, Meckell; to Meſſrs. Hewſon, Hunter, Sheldon, Cruikſhanks, ſurgeons, for their very uſeful diſcoveries. I have, I hope, purſued the ſame ſubjects not without ſome ſucceſs, in applying moſt modern diſcoveries to practice.

the

the lymphatic ſyſtem, *mineral alteratives* ſhould be judiciouſly preſcribed, and long continued; urgent ſymptoms ſhould likewiſe be cautiouſly mitigated *.

The *pilula rubra*, the æthiops mineralis, cinnabar with valerian, muſk or camphor, ſolutions

* The whole practice to be found in authors for hyſteric or nervous complaints, when we except air, exerciſe, and a few tonics and mineral waters, are chiefly *palliative*; and it is for this reaſon *cures* are frequently not produced. *Cordials*, as *confectio cardiaca*, *ſpirits of lavender*, *myrrh*, *ſagapenum*, *opoponax*, &c.; *fœtid gums*, *aſſafœtida*, *caſtor*, *ſaffron*, *volatile ſpirits* and *ſalts*, *valerian*, *camphor*, *ſoot*, *animal fœtid oils*, *plaſters of galbanum*, or *aſſafœtida*, &c., to different parts; *chamomile flowers*, *elder flowers*, *carminative ſeeds*, *angelica*, *ginger*, *wormwood*, *rue*, *centaury*, *orange peel*, *balm*, *mint*, *ſage*, *pennyroyal*, *roſemary*, *lavender*, *birthwort*, &c. &c. Some of theſe remedies are excellent palliatives, particularly camphor, valerian, aſſafœtida, volatiles, &c. but theſe laſt often are too hot. The major part are by no means adequate to remove the diſorder, and muſt have been founded in ſuperſtition, or a very ſuperficial knowledge of the powers of remedies, or magnitude and reſiſtance of diſeaſes. Writers, in general, have only copied one anothers credulity, and often abſurdities.

Emetics are preſcribed. Nothing certainly can be more rough, irrational, and hazardous. The periſtaltic motion of the inteſtines is inverted, and its inverſion is ſeconded by the phyſician contrary to common ſenſe: but beſides, very few nervous perſons bear vomiting; their ſickneſs or nauſea is ſymptomatic, and the forcing a quantity of blood to the head by the violence of vomiting, to my own knowledge, has proved *fatal*;

tions of argentum vivum in mucilage of gum arabic, with very ſmall portions of tartarum

fatal; and yet vomits are daily ordered without any reflection on conſequences.

Bleeding may in ſome inſtances be uſeful when the diſorder is recent, or where plethora abounds.

Nitre is ordered by many writers. Scarcely any very hyſterical or nervous perſon can bear nitre on the ſtomach. It is a favourite medicine of mine in many caſes; but ſhould ſcarcely ever be preſcribed to the nervous: and, if it ſhould be adviſeable in plethora, great heat, ſtrong pulſe, &c. camphor or volatiles ſhould be united with it; in general, however, it diſagrees.

Opiates, as laudanum, &c., are extremely improper. Nervous patients are often convulſed, or a *delirium* and *madneſs* are produced by opium, when there is already an affection on the mind, or an irritation in the brain. There are other objections.

Opium is very uſeful on many occaſions; but it produces coſtiveneſs, detains the flatus or wind frequently, retards the circulation of the blood, and may be the cauſe of various congeſtions, from its known property of diminiſhing, not only the moving powers, but the ſecretions, and, in general, the excretions. In the Weſt Indies, I never ſaw it ſucceed in the *locked jaw*. Opium, therefore, though it might palliate in ſome inſtances, and is excellent on many occaſions, yet it is hazardous. Camphor, valerian, ſnake root, or aſſafœtida, are more ſafe and efficacious. The opinion that opium ſhould be given in large doſes, if it irritates in ſmall, is a doctrine replete with danger: I have known it prove fatal.

Steel preparations are in many caſes uſeful, after inteſtinal obſtruction is removed.

Dr. Mead's remedy of valerian and cinnabar is one of the moſt rational for removing cauſes.

anti-

antimoniale, always preſcribed as alteratives, are efficacious remedies.

By ſuch modes of practice, morbid, lymphatic glands, diſeaſed in the meſentery, or other viſcera, are cured: caution is neceſſary, to adapt ſmall doſes of mineral alteratives to the individual conſtitution, and to perſevere many months in their uſe. Impatience never conquered a chronic nor difficult diſeaſe; and flying from one remedy to another with an impetuous reſtleſſneſs, neither demonſtrates penetration, judgement, nor ſkill in the phyſician. Plans of cure ſhould be coolly and maturely contemplated, and ſteadily purſued, unleſs they diſagree; or all endeavors to eradicate nervous and hyſteric diſeaſes muſt prove abortive.

III. The changing the vitiated blood to a more balſamic and leſs acrimonious ſtate, conſiſts in the removal of the foregoing obſtructions. Afterward, tonics, as bark, ſteel preparations, chalybeate waters, and whatever can ſtrengthen the relaxed body, will be eſpecially uſeful.

Air, exerciſe, and diverting the mind with a variety of amuſements, ſhould be ſtrenuouſly recommended; to prevent thoſe dreadful apprehenſions which ariſe from bodily indiſpoſition, ſeizing the ſoul with ſomething verging on deſpondency.

The foregoing methods are not neceſſary in ſlight, recent, nor accidental caſes; but in thoſe inveterate indiſpoſitions that have long tormented and reſiſted the common attempts to cure. Heavy bodies cannot be moved without a force ſuperior to their weight or reſiſtance; nor diſeaſes be conquered but by remedies more effectual than their morbid oppoſing powers.

IV. In recent, nervous, and hyſteric affections, cures are frequently obtained by palliating the ſymptoms, and bracing the relaxed habit.

Theſe modes of cure are applicable to caſes in which general relaxation preſents itſelf; for by great debility, the ſecretory and excretory organs have all their powers diminiſhed; the leaſt bodily or mental efforts produce languor and faintneſs, and the patients feel ſenſations, as though they were hourly expiring.

In ſuch circumſtances of morbid diſtreſs the following preſcriptions have well ſucceeded.

No. 62. ℞. Pil. gummos. ʒj.
—— Ruf. ʒſs. M. accurate, f. pilulæ No. xxx. quarum ſumat unam mane & nocte.

No. 63. ℞. Pulv. flor. chamæmel. ʒij.
Colcoth. vitriol. benè pulv. ʒvj.
Pulv. zingib. ʒij.
Conſ. roſar. ℥ij. ſyr. croc. q. s. f. elect. cujus ſapiat Q. N. M. ante prandium & cœnam quotidie

tidie ſuperbibendo coch ij. infus flor. chamæmel.

Or the electuary, No. 61, is excellent for removing debility.

No. 64. ℞. Gum. aſſafœtid. ℈ij. ſolv. in julep. e camph. ℥v. deinde adde
Aq. pur. ℥ij.
Tinct. ſtomach. ℥j.
Sal. c. c. ℥ſs. f. miſtura de qua capiat coch. ij. in languoribus ter vel quater in die.

No. 65. ℞. Tinct. flor. mart. gtt. xxx. vel ℥j.
Aq. pur.
—— cinnam. ten. āā ℥j. f. hauſtus. mane meridie & veſpere ſumendus.

No. 66. ℞. Extract. flor. chamæmel. ℥j.
Sal. mart. gr. x. M. f. pilulæ, No. xx. quarum ſumat iij. ante prandium & cœnam.

No. 67. ℞. Spirit. lavend. c.
——— volat. fœtid. āā ℥j. M. cujus capiat gtt. lx. ex coch. ij. infus. rad. valerian. & zingiberis, languore moleſto, vel ſpiritûs defectu.

No. 68. ℞. Pulv. cort. Peruv. gr. xv.
—— rad. valerian. ℥ſs.
Aq. pur ℥xiv.
Tinct. amar. ℥ij. f. hauſtus, bis vel ter in die ſumendus.

No. 69. ℞. Liquor. anodyn. Hoffm.
Sp. lavend. comp. āā ℥j. M. cujus capiat ℥j. ad libitum in coch. ij aquæ, vel. aquæ menth. pip. ſimp.

No. 70. ℞. Pulv. rad. valerian. ℥ij.
Decoct. cort. Peruv. ℥vij.
Tinct. ſerpent. virg. ℥j. f. miſtura, cujus capiat coch. ij. ter vel quater in die.

No. 71. ℞. Pil. gummos. ʒiſs.

— ex colocynth. ſimp. ʒſs. f. pilulæ, No. xxxx. ſumat unam mane & nocte.

No. 72. ℞. Decoct. cort. Peruv. ℥vij.

Extract. ejuſdem. ʒj.

Tinct. ſtomach. ʒvij.

Elix. vitriol. acid. ʒj. M. f. miſtura, de qua capiat coch. iij. ter in die.

No. 73. ℞. Tinct. fuligin.

—— aromat. āā ℥j. M. cujus capiat gtt. lxxx. ter vel quater in die ex coch. ij. infus. rad. valerian. in languoribus ſpirituſve defectu.

The preceding forms of preſcriptions indicate their curative intentions; which are, the removal of congeſtions, or obſtructions; the mitigation of all the grievous ſymptoms, and invigorating to the relaxed and debilitated habit. Theſe methods, however judicious, will prove fruitleſs in many inſtances, unleſs the patients will be determined to ſuppreſs all violent emotions of the mind.

Hyſteric affections ariſing from various cauſes, as the chloroſis, fluor albus, a retention or immoderate flow of the menſes, or other diſeaſes, or paſſions of mind, ſhould be treated according to the circumſtances of caſes and habits of patients. Primary cauſes being removed, effects of courſe will ceaſe.

On the Diet of nervous Perſons, &c.

Debility, or delicacy of body, and ſuſceptibility of mind, are the principal cauſes of theſe diſorders. The diet moſt likely to ſtrengthen the weakened habit is of that nutritious kind, which is digeſted and aſſimilated with leaſt labor to the ſtomach, or inteſtines.

Flatulency is produced by all vegetables, as greens, ſallads, &c. and leguminous food, ſuch as peas, beans, &c. and many fruits; theſe, in general, ſhould be ſparingly allowed, or altogether avoided.

Animal food affords the beſt nouriſhment; therefore meats of all ſorts, eaſy of digeſtion, are preferable to any other aliments. Low diet will never ſtrengthen the debilitated; but the ſtomachs and cuſtoms of individuals ought always to be principally conſulted.

Gelatinous ſubſtances, as jellies of hartſhorn, iſinglaſs, calves feet, &c. muſt not be too freely allowed, as they with difficulty paſs through the lacteal ſyſtem of nervous patients. Strong gravy, broths of lean meat, or beef tea, in ſmall quantities, with toaſted wheaten bread, is eaſily digeſted, and received into the conſtitution, affords moſt nouriſhment to the body, and produces a compacter coherence in the relaxed ſyſtem.

Punch, lemonade, and moſt vegetable acids, are improper.

Tea ſhould be very ſparingly uſed, or rather avoided, as it relaxes the coats of the weakened ſtomach. Coffee and chocolate are better, provided they agree.

Porter with ginger, or a glaſs of red port, are beneficial; but all flatulent ales, ſmall beer, or whatever is found to generate wind, ſhould be ſtrictly abſtained from.

A clear, dry air is preferable to moiſt. Where electricity moſt abounds, the animal ſpirits are moſt lively; where it is moſt diminiſhed by moiſture, a phlegmatic dulneſs, or languid ſpirits, may be obſerved. The country is better than town air.

Exerciſe and amuſements are efficacious remedies; for whatever can gently agitate the body, and divert the mind from the preſent diſtreſs, or future apprehenſions, will alleviate the diſmal effects of the diſorder.

Sleep ſhould be indulged, but ſcarcely ever ſolicited by opiates.

When reſtleſſneſs ariſes from indigeſtion, very light ſuppers are neceſſary, and a ſmall portion of ſpirit and water may be uſed to check fermentation.

All ſecretions and excretions ſhould be gent-

ly

ly promoted, as the circulation of the blood will then be more regular.

The retention of feces, urine, or perſpiratory fluids, are always productive of depraved humors.

The mind ſhould be preſerved, as much as poſſible, in a ſtate of tranquillity; very trifling cauſes irritate the nervous, and excite emotions not eaſily ſubdued.

The nervous and hyſteric are accuſed of peeviſhneſs and iraſcibility; but this apparent violence is more cauſed by the miſerable ſtate and ſenſations in the body, than any predetermined malignity of the mind, and therefore merit compaſſion and indulgence. The melancholic ſhould be rouſed by amuſements and proper exerciſe; the irritable and overactive ſhould be calmed by reſt and cool reflection.

Practical Cautions, Admonitions, and Obſervations.

Nervous diſeaſes frequently aſſume the appearances of almoſt every diſorder incident to the human body; in the head and ſtomach, breaſt and ſides, are pains; in the bowels, cholicky complaints, and flatulent gripes; in the kidneys and bladder, acute affections like the

gravel and ſtone; but caution is neceſſary in their treatment.

If nervous affections be miſtaken for acute inflammatory diſeaſes, and profuſe evacuations by bleeding, purging, and cooling, are uſed, dangerous conſequences will ſucceed to ſuch an imprudent practice.

Vomits are often preſcribed to nervous patients, which is too violent a method; the nauſea, or ſickneſs, is commonly *ſymptomatic*, and no judicious phyſician would apply ſo coarſe a remedy as vomiting to a delicate feeble conſtitution, when the ſtomach is ſecondarily in fault; but he would rather attempt to remove the primary cauſes by lenient means.

3. In thoſe complaints denominated *bilious*, which term ſeems of a vague and unſettled ſignification, vomits are univerſally preſcribed at random; but nothing certainly can be more improper or dangerous.

An accumulation of bile in the ſtomach, cauſing great ſickneſs, headach, &c. may be termed a *bilious diſorder*; it is more known in hot than in European climates, and vomits are the uſual remedy.

The adminiſtration of vomits in ſuch caſes originated in the times of ignorance; but cuſtom and faſhion have ſtill erroneouſly continued their uſe to the preſent period, notwithſtanding the

the modern knowledge in anatomy and phyſiology is directly againſt ſuch a practice. Innumerable other inſtances might be adduced, where the principles of practical medicine have by no means held pace with the many uſeful and important diſcoveries of the moderns in anatomy, chemiſtry, and phyſiology.

Bile is never in the ſtomach naturally, nor was it ever deſtined, according to the laws of the animal œconomy, to be an inhabitant of the ſtomach.

It is poured by the biliary ducts into the *duodenum*, or firſt of the ſmall inteſtines, where it unites with the oleaginous and aqueous particles of the digeſted food deſcending from the ſtomach.

Its purging, cathartic, or ſtimulating qualities, aſſiſt the deſcent and excluſion of the groſſer parts of the food.

The *bile*, therefore, has *no office* or function to perform in the ſtomach; nor is ever there but in a ſtate of diſeaſe, occaſioning great ſickneſs.

By an overabundance of bile irritating the *duodenum*, or from other cauſes, eſpecially nauſea, the bile is forced into the ſtomach by the inverſion of the periſtaltic motion of the *duodenum* and *pylorus*; in ſhort, by thoſe parts forcing the

the bile upwards, inſtead of purſuing its natural courſe downwards.

The bile, then, being forced by this inverted action of the *duodenum* and *pylorus* into the ſtomach, cauſes nauſea, ſickneſs, or vomiting. If the flow of the bile upwards be prevented, all thoſe ſymptoms, and the ſuppoſed neceſſity of throwing the *bile* off the ſtomach, would be unneceſſary.

Vomits bring the *bile* upwards into the ſtomach, and cauſe an increaſe of the bilious diſeaſe; conveying the bile downwards, then, by gentle laxatives, is the moſt rational and ſafe prevention and cure for bilious accumulations in the inteſtines. *Bile* and other matter is brought to the ſtomach by *vomits*; but ignorance ſuppoſes, what is thrown off was the *cauſe* of the irritation, whereas it is the mere *effect* of vomiting.

Vomits certainly give temporary eaſe, but lay the foundation for future indiſpoſition: inſtances there may be in which they are neceſſary, but they certainly ſhould as much as poſſible be avoided, for they always promote the aſcenſion of the bile, and cauſe a *future* neceſſity of vomiting.

Gentle aloetics, with ſoap, or other laxatives, not only prevent the retention of bile in the inteſtine,

teſtine, but generally exclude it through the inferior inteſtinal canal.

Vomiting is violent, the laxative plan gentle; neither reaſon nor experience can juſtify *rough* practices, when *mild* methods can anſwer every medical intention.

It is impoſſible to know what injuries vomits may produce, by forcing a quantity of blood to the *brain*; this has proved deſtructive in many inſtances, and the ſtomach has been forced out of its ſeat by this violent vomiting action *.

* A young man, named Bowles, in St. James's ſtreet, was ſeized with a violent vomiting: Mr. Gent, ſurgeon, of St. James's ſtreet, was called, and afterwards I was conſulted, and preſcribed antiemetics and gentle ſtomachic laxatives, and motions were procured. The patient raiſed himſelf from his bed, ſeemingly in good ſpirits, and had not been in an erect poſture one minute before he died.

I opened the body in the preſence of *Mr. Gent*, and *Mr. Tronſon*, of *Harley ſtreet*, and found the ſtomach had forced itſelf into the cheſt, puſhing the lobe of the lungs on the ſide it occupied to the ſuperior part of the cavity of the thorax. In the ſtomach was contained about a pint and half of liquid of a darkiſh colour, but not fetid; the remainder of the cavity of the ſtomach was inflated with wind. It appeared clear to me, why the young man died ſuddenly in an erect poſition; for the ſtomach not deſcending into the abdomen, but laying on the *diaphragm*, reſpiration was totally impeded by the heavy preſſure of the ſtomach; from hence ſyncope and death.—Here is an inſtance in which vomiting forced the ſtomach out of it place, and proved fatal ſuddenly.

Vomits,

Vomits, therefore, to all delicate, nervous, or bilious patients, ſhould be cautiouſly preſcribed, or rather wholly omitted.

4. In the *convulſive* hyſteric paſſion, *bleeding*, in general, is neceſſary, particularly in young plethoric patients. In the pallid, languid, and debilitated, it ſhould certainly be omitted.

5. Palpitations of the heart, a difficulty of breathing, and acute pains in the cheſt, may ſometimes require bleeding: but the milder remedies ought firſt to be adminiſtered; as volatile liniments, with *oleum aniſi*, or *oleum terebinthinæ ætheriale*. Similar applications have availed in flatulency, when rubbed on the abdomen.

Internally, likewiſe, the *oleum aniſi* to forty drops, with *tinctura rhei*, or ſuch ſtomachic laxatives, have ſucceſsfully expelled wind, when other remedies were not ſufficiently warm nor ſtimulating for the purpoſe.

6. Amongſt the palliatives, camphor, valerian, oleum animale, and caſtor, are leſs heating than the fetid gums. In fever and heat, or in a plethora, where red particles of blood much abound, the former are preferable to the latter.

In the hyſteric fit approaching neareſt to the apoplexy, *bleeding* is abſolutely neceſſary in all patients,

patients, except the old, pallid, dropſical, gouty, and extremely debilitated.

The *pulſe*, as too *low*, *weak*, and almoſt *imperceptible*, is a fallacious guide; the *lower* the pulſe, the *greater* neceſſity for bleeding. No learned man would depend on the pulſe, but be governed entirely by the other evident ſymptoms. The low and nearly imperceptible pulſe ſhew the height of *obſtruction* in the heart, veſſels of the *lungs*, or a *compreſſion* of the *cerebellum*.

Bleeding in the *occipital* or *jugular veins*, or in the *temporal artery*, are moſt eligible, becauſe they immediately empty the blood from the part affected, namely, the brain, and the turgid face, and ſecures the patient, above all other means, from the danger and *ſudden* fatality of the apoplexy. Not a moment ſhould be loſt; for loſs of time in bleeding is the certain loſs of life.

Since the diſcovery of the circulation of the blood, a dangerous prejudice has prevailed againſt *local* or *elective* bleedings.

The chief argument againſt local bleeding is, that in the courſe of an *hour* or *two*, let the blood be taken from whatever part of the body, the effect will be the ſame, as though it were taken from the vein ſituated neareſt the diſeaſe: but many diſeaſes, according to my reaſoning, are too rapid to wait an hour or two; as *con-*

cuſſions,

cuſſions, or *compreſſions* on the brain, *fractures* of the ſcull, convulſions, apoplexy, epilepſy, &c. &c.

The reaſoning againſt *local* bleedings appears very plauſible; and it may be true, that in the courſe of two hours circulation, the whole habit may ſenſibly feel the loſs of one or two pounds of blood taken from the arm, or any part.

Apoplectic attacks, however, are too *rude* and *ſudden*, to wait an *hour* or *two* for this *gradual* depletion. The blood is forced from the heart, with reſiſtleſs violence, to the head, through the carotids, by which all the veſſels in the membranes of both *dura* and *pia mater*, and the whole ſubſtance of the brain, are turgid and diſtended with blood.

If the veins do not carry, with equal celerity, the blood back, thus forced into the arteries of the brain, ſome of the ſmall capillary arteries burſt, the blood pours out, and death may immediately enſue.

In a diſorder ſo fatally rapid, and where death is produced by a ſudden and over diſtenſion of blood, would any reaſonable perſon heſitate at electing the moſt effectual and *immediate* remedy, in preference to that which is *dubious* and *ſlow* in its operation?

The rupture of the over-charged blood veſſels

veſſels in the membranes of the brain is to be apprehended, and death is the conſequence: the emptying theſe veſſels with more rapidity by the temporal artery, the jugular, or occipital veins, is the moſt rational cure. The practice is decided; and it has often, to my knowledge, preſerved life in numerous caſes of the moſt dangerous apoplexy: at all hazard, in deſperate caſes, blood by a large orifice muſt be evacuated, if not from thoſe afore-mentioned veſſels, by the veins of the arm, &c.

Let it be acknowledged, that bleeding in the arm might in an hour or two, or ſooner, empty theſe diſtended veſſels of the brain: but the patient is often *dead* in a *few minutes*; the diſeaſe does not wait the ſlow progreſs, nor tardy effects of a remote bleeding. Remedies ſhould ever hold pace with the rapidity of the diſeaſe.

To illuſtrate this ſubject more clearly; let it be ſuppoſed that a man had fallen into a large reſervoir of water, and was in immediate danger of being ſuffocated, or drowned.

To ſave life, emptying the reſervoir was immediately neceſſary: but for this purpoſe two methods preſented themſelves; the one by pulling out a large plug from the reſervoir itſelf; the other, by running a mile to turn a cock

fixed

fixed at the end of a long communicating tube. In the former, by the ſudden diſcharge of the water, death is prevented; in the latter, by delay it is inevitable. Which meaſure would common ſenſe, or humanity, purſue, under ſuch a circumſtance of preſſing and immediate danger?

The communicating ſmall tube at a mile diſtance would in time certainly empty the reſervoir, but not ſoon enough to ſave a human life; nor will emptying a blood veſſel remote from the brain, rationally anſwer the alarming and rapid exigency of an apoplectic caſe.

A much ſpeedier method preſents itſelf. A few drops of blood from the noſe in the *phrenitis*, or *delirium*, has inſtantaneouſly recovered the patient's ſenſes, when cupping, bleeding, or leeches have proved ineffectual.

A prejudiced and unexamined opinion, dangerous error, and pertinacious obſtinacy, defend bleeding in a remote vein, or even ſolemnly *forbid* the operation in moſt apoplectic caſes; while the practice of bleeding in the temporal artery, the *jugular*, or occipital veins, has anatomy, phyſiology, pathology, ſucceſsful experience, and common ſenſe for its ſupport *.

If

* Neither the temporal artery, nor external jugulars, immediately communicate with the cerebrum and cerebellum, but

If the banks of a river were overflowing, and threatening devaſtation to the neighbouring country, would a prudent man loſe time in running to a diſtant ſluice to remove the danger, when a ſluice was near, capable of carrying off the water immediately? Or would any one employ a ſnail, inſtead of a fleet horſe, on any occaſion which required expedition? There are ſeveral caſes in phyſic that require a quick, penetrating diſcernment, and rapid execution, in which the tardy determinations of ſolemn dulneſs, or ſlow ſtupidity, would moſt aſſuredly fail.

In the ſanguineous apoplexy, during the firſt force of the paroxyſm, ſudden death is to be apprehended; there is no other alternative, than to bleed immediately; ſhould an effuſion of blood in the brain even happen, ſleepy ſymptoms, cold ſweats, or ſtupor, and death, ſucceed: the phyſician is conſcious of having performed his duty, and this to every feeling mind is an infinite ſatisfaction.

The principal ſymptoms which determine the neceſſity of bleeding are plethora, a turgency of the veſſels of the face, *tunica conjunctiva* of the eyes; inflation, redneſs, or livid-

but they are neareſt, and empty immediately the diſtended veſſels of the face, eyes, &c. and prevent ſtagnations in the veins.

neſs of the face; difficult and ſtertorous reſpiration; floridity and diſtenſion of the veſſels in the lips; and the operation ſhould be performed promptly; for the blood once coagulating in the veins, all hopes of reſtoring life are at an end *.

There

* I have opened ſeveral apoplectic caſes after death, and always found effuſions of blood in different parts of the brain, or its ventricles, &c.; and theſe appearances, which cannot be diſputed, determined me to recommend and practiſe bleeding in the *jugular*, &c.

About ſixteen or ſeventeen years ago, I was called to a perſon who appeared dead from an apoplectic ſtroke. There were two practitioners in the ſurgery line before I arrived, they had attempted bleeding in both arms without ſucceſs, and conſidered the patient as dead, or paſt all hopes of recovery. Perceiving a lancet in the mouth of one of the ſurgeons, I ſnatched it, and made a large orifice in the jugular vein, againſt the united voice and clamor of the relations, who ſuppoſed their friend's throat cut; blood immediately iſſued forth, and in two or three minutes both the veins in the arms began to bleed. During the loſs of two or three pounds of blood, the patient began to ſneeze, and faintly breathe, and, in ſhort, ſoon after recovered. This gentleman lodged at that time at a Mr. Shield's, ſhoemaker, in the middle of New Street, Covent Garden; he lived many years after, and, perhaps, is alive at this time.

Another gentleman, well known in the great world, had frequent apoplectic attacks; the blood uſed to force up through the carotids with an amazing pulſatory violence; the face was firſt red, then blackiſh. I happened to be in the houſe three ſeveral times, and always ſaved him by taking away an immenſe quantity of blood. After the operation he dozed, and

gra-

There are, however, two diſtinct ſpecies of apoplexy to be accurately diſtinguiſhed from the natural conſtitution, or patient's health.

The *ſanguineous*, happening to the more florid, robuſt, plethoric, and corpulent; the other, the *pituitous*, is common to the pale, gouty, and exhauſted. The prognoſtics of both are nearly the ſame as to danger, but the treatment ſhould be different; for the former requires a profuſe, the latter a ſmaller veneſection. Theſe methods of cure ſhould be adapted more to the exigence of the caſe, habits, ways of life, and peculiar individual circumſtances of the patient, than to thoſe fallacious guides, general ſymptoms; which conſtitute, indeed, the definition or character of a diſeaſe, but rarely point out the various individual, or beſt curative intentions.

6. Before phyſicians preſcribe for nervous, hyſterical patients, the length of time the diſorder has ravaged in the conſtitution ſhould be conſidered; the methods of cure already

gradually the next day recovered. He knew very little of his dangerous ſituation.

A ſervant who had lived formerly with this very gentleman, and lives with Lady W—, near my houſe, in Harley Street, had an apoplectic attack, and appeared dead. I directed Mr. Humpage, of Cavendiſh Street, Cavendiſh Square, to bleed profuſely, which reſtored the man immediately.

Profuſe purging, antimonial diaphoretics, volatiles, ſinapiſms, and bliſters, are likewiſe neceſſary.

adopted, and their effects: it is abſurd to repeat, what has already failed.

a. In recent and accidental attacks, when there is no reaſon to conclude the viſcera in a diſeaſed ſtate, light ſtomachic laxatives and antiſpaſmodics will often ſucceed.

b. When the nervous affection has been of longer duration, or when it is more owing to delicacy of body, and exquiſite ſenſibility of mind, than to any accidental cauſes, the antiſpaſmodics will not only be neceſſary, but tonics, or ſtrengthening medicines; ſuch as bark, ſteel, vitriolic preparations, abſtinence from watery diet, as tea, &c. and an indulgence, according to the ſtrength of the ſtomach, in the moſt nutritious animal food.

c. When the nervous diſorder has continued many months or years, and it may be juſtly concluded, that neither antiſpaſmodics nor corroborants will prove ſerviceable, owing to the *viſcera* being too *deeply* diſeaſed; then a long courſe of mild alteratives ſhould be inſtituted, and long continued; while the moſt urgent ſymptoms ſhould be alleviated with palliating antiſpaſmodics.

There are few nervous caſes, unleſs the *viſcera* be very *unſound*, that will not yield to one of the antecedent modes of treatment; this, abun-

abundance of practical experience has amply proved.

The alteratives which have moſt ſucceeded are from No. 51 to 59 of the preſcriptions, and likewiſe the following:

No. 74. ℞. Sulph. aurat. ant. ʒij.
Merc. dulc. ſexies ſub. ppt. & loti ʒj. tere ſimul in mortario vitreo per viij. horas f. pulvis.

℞. Hujus pulver. ℈j.
Conſ. roſar. q. s. f. pilulæ No. xx. quarum ſumat unam mane & nocte ſuperbibendo coch. ij. miſturæ ſequentis.

No. 75. ℞. Tart. antimonial. gr. j. ſolve in
Aq. pur. ℥j.

℞. Hujus ſolutionis ℥ſs.
Julep. e camph. ℥viſs.
Tinct. valerian ʒj. M.

Or,

No. 76. ℞. Cinnab. antimon. ppt. ʒvj.
Pulv. e tragacanth. comp. ʒij. M. f. pulvis dividendus in xx. doſes, quarum capiat unam ter de die in coch. ij. julep. e camphora.

Or,

No. 77. ℞. Æthiop. min. ʒij. ſyr. balſam. q. s. f. pilulæ No. xxiv. quorum ſumat iv. bis vel ter de die ſuperbibendo coch. ij. miſturæ, No. 62.

Many other preſcriptions may be invented, as cauſe-removing remedies.

Coſtiveneſs during the adminiſtration of theſe, and all other remedies, ſhould be prevented,

not by ſalts, but ſtomachic laxatives *; the alteratives require to be continued many months, nay, ſometimes years, before a radical cure can be effected †.

7. There is nothing more erroneous than the aſſertion, that mental perturbation cannot be relieved by the art of medicine. A number of diſeaſes, not perfectly curable, can be mitigated; the art extends no farther: but to deny relief becauſe we cannot effect a radical cure, is inhuman. Mental affections are often relieved by a compaſſionate and ſincere ſympathy in affliction, by fetid, antiſpaſmodic remedies, air, exerciſes, and diverting the mind from the depreſſing objects. It is the office of medicine to unite theſe endeavors, and all others, that can rationally alleviate human mi-

* Some phyſicians even of eminence preſcribe *ſalts*, as though we had no other laxative. Salts are more proper for the athletic, robuſt and florid, and in inflammatory fevers, than for pale, nervous, and relaxed patients.

† One very remarkable caſe of a lady, a patient of Mr. Hogarth's, Swallow Street, who had laboured under all the miſerable nervous ſymptoms ever experienced for above fifteen years, and who had travelled all over Europe to obtain advice of the firſt phyſicians, and who went to moſt of the water-drinking places; but all without any good effect. I being conſulted, concluded the failure to be owing to diſeaſed viſcera, and immediately purſued an alterative courſe, which was continued ſeveral years. The lady obtained the moſt perfect health, which at preſent ſhe happily enjoys.

ſery,

ſery, even where no poſitive cure can be expected.

8. Air, exerciſe on foot and horſeback, or in a coach, according to circumſtances and ſeaſons, amuſements, and diverſions, greatly contribute to aſſiſt the operation of medicine, and ſhould never in nervous hyſteric diſeaſes be omitted.

9. All diſtreſſing objects, all melancholy ſtories, ſhould be concealed from the nervous and ſuſceptible; their tender frame is agitated by the mereſt trifles from ſympathy. The effects of ſympathy are aſtoniſhing. The moſt amiable and philanthropic minds, ſhocking to reflect! are moſt puniſhed through life; while the unfeeling and worthleſs ſcarcely ever experience ſympathetic concern. A great part of the miſeries of the nervous are certainly imaginary; preſent ſorrow, future apprehenſions, occupy the mind with an uncontrolled ſway. The diſorder to the afflicted is as real as any other the human body is ſubject to, and equally merits a ſedulous attention, and humane compaſſion.

A recent inſtance of the effects of ſympathy has appeared in the public prints; which ſhews the ſurpriſing power of imagination from ſudden horror, in producing convulſive, or epilep tic fits, and their eaſy communication from one

female to another, ſimilar to thoſe already mentioned *.

It appears, the ſame effects have been produced

* There is no occaſion to credit myſterious and concealed, or falſe cauſes, promulgated by knaves and jugglers; for every experienced practitioner in medicine muſt have ſeen numerous inſtances in families, where the lady's hyſteric complaints have been communicated, or transferred to a female attendant; this again has communicated the faintings, fits, &c. to other females in the kitchen, who have been ſuſceptible, timid, and compaſſionate. Such attacks originate in the mind being affected with terror, ſurpriſe, or ſome frightful impreſſion, and the fits often continue through life; which by every day's practice in this great town is fully proved, without pretended *magnetic* powers, &c. How are theſe effects produced? People are agitated, walk, and propheſy in their ſleep; give divine anſwers to earthly queſtions, fall into ſtrong convulſions, foam at the mouth. I anſwer; by ignorance and credulity people perſuade themſelves of any impoſſibility: in all ages it has been the ſame, from times moſt ancient. *Lucian* had his falſe *prophet*, who deluded the Emperor and all Rome. Bruſſels boaſts of the man who brought all the world together to ſee him walk, in imitation of Our Savior, on the water. The bottle conjuror, the Cock-lane ghoſt, the oyſter which *walked* when *aſleep*, are all recent in every one's memory. Learning and good ſenſe condemned theſe follies with reaſon and ridicule: but credulity and ignorance bore down, like a torrent, every ſober reflection before them. While the rage and folly laſted, mankind were deaf to the voice of truth; and nothing but the experience of being *duped*, which few like to acknowledge, brought them to their ſober ſenſes again; then the myſteries drop, and the impoſtors are deſpiſed, until ſome new impoſition appears.

Hoff-

duced in different countries: amongſt the volatile and chearful French; amongſt the cold, phleg-

Hoffman and the German writers have faith in perſons being poſſeſſed by the devil, and have written grave, medical treatiſes on the ſubject. The power of witchcraft is chaſed away from this and other countries by the lights of philoſophy, very lately. The ſuperſtitions of ghoſts, apparitions, hobgoblins, and departed ſpirits re-appearing, ſtill are believed by vulgar minds. *Ridicula ſuperſtitio!*

Extract of a Letter from Preſton, Lancaſhire, March 8, 1787.

"The manufacturers employed by Meſſrs. Pedders and Emett, in their ſpinning works, at Hodder bridge, near this town, were lately much alarmed by an uncommon diſtemper breaking out, and ſpreading amongſt them with great rapidity.

"Upon Wedneſday, February the 14th, a healthy young woman dropped down ſuddenly in ſtrong convulſions, and remained in that ſituation near twenty-four hours, with only a few ſlight intervals of about ten minutes each. After this time the convulſions returned for ſeveral days, in fits of a quarter of an hour, and of four hours continuance, but with much longer intervals. Upon the Friday following, another perſon, who had worked with this woman, was alſo affected in the ſame manner; upon Saturday, eight more; upon Sunday, ſix; and upon Monday, four.

"The patients had little or no warning of the approach of the fits, but fell down ſpeechleſs, and remained perfectly delirious during their continuance, with the body bent backwards; and ſo powerfully convulſed, that five or ſix people were ſcarcely ſufficient to prevent a young girl from biting or tearing herſelf, or daſhing her head againſt the walls or floor. Upon Sunday, the terrors of theſe people, and all around them,

phlegmatic Dutch, who are ſurrounded with large ſwamps, canals, and the ſtupifying fumes of

them, were increaſed to the higheſt pitch, by the ſpreading of the complaint; and ſtill more, by the inefficacy of all the means yet tried for their recovery, and the dreadful idea, that their diſeaſe was the plague, or ſome ſimilar infection introduced by the cotton.

"A phyſician of this place being conſulted, diſcovered that the diſeaſe was entirely nervous; that the perſon firſt affected had been thrown into that ſituation by the wanton application of a living mouſe to her cheek, an animal which had always excited in her a kind of horror; and that the reſt, who were chiefly young women, had been affected merely by a kind of ſympathetic contagion. The application of electricity, of nervous medicines, but, above all, the ſeparation of the patients, and the quieting of their apprehenſions, by aſſurances of ſpeedy recovery, ſoon put a ſtop to the progreſs of the diſorder, and effected a cure: inſomuch, that they are all at work again, and have had no return of the complaint ſince."

The above is a ſtriking inſtance of the powerful influence of fear, and other paſſions of the mind, upon the body, well known, indeed, to gentlemen of the faculty, but ſcarcely credible to thoſe who have not had opportunities of obſerving their effects.

Such hiſtories ſhould guard mankind from ſuffering children, but girls in particular, from the ſight of all objects that can produce ſuch effects; for epileptic fits, and even loſs of ſenſes, have been the conſequence for life. One of the *magnetic amuſers* has perſuaded a credulous, nervous young man, that he can by magnetiſm render his hand as tranſparent as glaſs, and no arguments can operate ſo as to make him believe the contrary.

"*Fools* are the game which *knaves* purſue." Any impu-

dent

of tobacco; amongſt the Engliſh, likewiſe, the ſame phenomena have appeared. The ſudden force of imagination at terrible ſights, then, of perſons apparently dead, in fits, or convulſed, have produced ſimilar effects, which naturally aroſe from timidity, have been infamouſly by the *magnetic* impoſtors called *les criſes*; and they have impudently aſſerted, in France and elſewhere, that ſome unperceived, undiſcovered *magnetic fluid* produced theſe ſtrong ſymptoms; whereas they aroſe from weak, credulous minds, abounding in fear, and put in ac-

dent pretender, who can bring his mind to act an infamous part, has only to be determined to conclude all mankind fools: let a bait be hung out, the more improbable the better, and folly will always enliſt under his ſtandard. A man who was groom to a riding maſter in this town, turned urine doctor, and has ſucceeded to admiration, by having an artificial *worm* put into a bottle of ſpirits, by which ſtood a miſerable-looking meagre Frenchman, pretending that the Doctor had brought the worm away from him. This was ſcarcely ever ſuſpected, till the *Doctor* and *Worm manufacturer* quarrelled, and then the roguery was expoſed. Thouſands of theſe deceptions have ever been practiſed; and they muſt ever ſucceed in large cities, where freſh fools always arrive. People do not know, that the powers of the mind are often ſo weakened by the diſeaſes of the body, that men appear to penetrating obſervers, quite different perſons in health, or when under diſeaſe. Hope and fear are the grand movers of the human mind; deceivers ſtudy how to apply properly to them both; and they ſucceed.

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tion by ſudden ſurpriſe, or tedious, pre-alarmed expectation.

On ſeveral nervous Symptoms.

Nervous people are, by the nature of the diſeaſe, fickle, giddy, inconſtant, diffident, and impatient, and often become their own enemies, by flying from ſkill and ſincerity to any ignorant pretender of medicine. They often attribute their miſerable ſymptoms to the remedies given. They ſhould be told, the difficulty of curing this diſeaſe, and the neceſſity of a ſteady adherence to what is preſcribed; for they often do irreparable evil by changing their phyſicians. If in any part of *medicine* the proverb of "*ſine fide nulla ſalus,*" can be applied, it is to the nervous. Where there is no faith, there is no cure.

The innumerable ſymptoms afflicting the nervous and hyſteric patients ariſe chiefly from ſympathy. The nervous conſent of parts is truly wonderful, and extremely curious; but can be demonſtrated by diſſecting for the nerves, and particularly the *par vagum* and intercoſtal; their ganglions and connections. Thoſe who aſſert medicine is in the dark with regard to nervous diſeaſes, are deceived, and betray an inexcuſable ignorance of the extent of the art; they are eaſily accounted for, though their cure

may

may prove difficult. There is through the whole human frame a ſurpriſing nervous conſent and ſympathy. A ſcratch in the feet, hands, or wriſts, I have ſeen produce, in the Weſt Indies, that horrid, fatal diſorder, the *locked jaw*. Hippocrates ſaid very juſtly of the human body, "that there was one conflux, one "conſpiration, and, that all the parts con-"ſented."

Galen ſuppoſed all hyſteric complaints to ariſe from a retention of the *ſemen*; he ingeniouſly and plauſibly accounts for ſympathy by the property of the *magnet* attracting iron, though they be not in immediate contact.

The medical philoſophy of the ancients was, in general, aſſertions without proofs; ingenious reaſonings without demonſtrations, or concluſive experiments. I, who have waded through the maſſy volumes with unremitting ardor many years, am thoroughly convinced, if the major part of the ancients were deſtroyed, nothing would be loſt to the republic of letters. An inquiry into the ancients, and the progreſs of ſcience, are curious; but the important diſcoveries and ocular demonſtrations of the moderns are infinitely more uſeful*.

Nei-

* Whoever wiſhes to ſee a full account of ancient medical learning, may conſult my *Hiſtoria* and *Schola Medicinæ*, in which

Neither much reading, claſſical learning, nor meditation, forms the complete practical phyſician, without a happy *genius* to direct judiciouſly the application of medicines from vegetables, minerals, chemicals, and a proper uſe of the nonnaturals.

The hyſteric ſymptoms may be arranged under the claſſes of natural, vital, and animal functions, their ſeveral cauſes, and general remedies.

A dry Skin.

If ariſing from debility in the minute arterial ſyſtem, it is beſt removed by tonics; if from obſtructed pores, by the retention of the perſpirable matter, by antimonial, and other diaphoretics, tepid water or dry vapor baths; if from the loſs of the contractile arterial powers, ſimilar to palſy, by volatiles, ſtimulating liniments, bliſters, and frictions; which laſt remedy is very uſeful in all caſes of impeded perſpiration. The pores of the ſkin are ſo minute, that a grain of ſand, according to Leuwenhoek's calculation, will cover 125,000 of the perſpiring pores. According to Sanctorius, out of eight pounds of food, five paſs off by perſpiration: this, however, is very diffi-

which the whole is arranged in ſo conciſe a manner, as to be comprehended with very little labor.

cult

cult to aſcertain, as it varies in all people, and in all climates *.

If a dry ſkin ſhould ariſe from profuſe evacuations of urine, alvine feces, or the menſes, theſe require checking by vitriolic acids, aſtringents, or tonics.

Profuſe Sweating, or increaſed Perſpiration.

Profuſe ſweating is commonly a ſign of great debility. It is attendant on conſumptive diſeaſes and hectic fevers; therefore, unleſs the cauſe can be removed, which is frequently impoſſible, the increaſed and weakening perſpirations cannot be checked without danger of purgings, increaſed fever, or difficult breathing.

When acrimony in the perſpirable matter is the cauſe, cinnabarine alteratives and correctors of the prevailing acrimony, and inſpiſſating the blood, are uſeful.

If from laxity of the pores, and too large a portion of ſerum, corroborants, abſtinence from weak liquids, and preparations which ſtrengthen the relaxed fibres, are neceſſary, bark, ſteel, vitriolic preparations, &c.

* Gorter, in Holland, makes forty-ſix to fifty-ſix ounces; Keill, in England, between thirty-one and forty-two ounces, which paſſes off daily.

By

By proper evacuants of urine and the feces.

Cool dry air, cremor tartar, moderate exercise, but, above all, an extremely rigid abſtinence from liquids of all ſorts, will moſt avail.

Wind, or Flatulency in the Stomach.

There is always a quantity of air in the ſtomach and inteſtines; but it may collect ſometimes in one part, ſometimes in another, and cauſe a painful over diſtenſion; this ſuperabundance fixing in any part, or in the ſtomach particularly, cauſes what is called oppreſſion with wind.

The ſtomach often attempts to force it up or downwards; but the termination of the œſophagus, or gullet, or the beginning of the pylorus, being contracted, wind is retained there ſome time, occaſioning painful hiccups, ſickneſs, tremors, and convulſions.

It is impoſſible to determine how far the ſtomach may be diſtended by the elaſticity of the air. It is known, that what was detained in a cubical inch, may expand ſo as to fill a ſpace of 146 inches *.

Atmoſpheric air has been reduced into 1838 times leſs ſpace than it before poſſeſſed; and it

* Hales.

has

has been rarified and ſwelled ſo as to fill a ſpace 4000 times greater *.

Air may be deprived of its elaſticity by the burning of brimſtone, as is known in vinous fermentations.

Muſſchenbroek obſerved, that a particle of air in boiling water expanded itſelf to 46,656,000,000 greater than it appeared before.

Without adverting to calculations, I have made experiments upon all ſorts of vegetables, and find that leguminous foods, as beans, peaſe, &c. ſend forth the greateſt quantities of air in digeſtion; boiled vegetables, fruits, and ſallads, leſs; animal foods, unleſs in a ſtate of putrefaction, the leaſt of all.

It is almoſt certain, that an immenſe quantity of air paſſes through the minute veins of the ſtomach and inteſtines; for there is always a great quantity tranſpiring through the ſkin, and air is mixed with all the human fluids and ſolids.

The air being detained in the ſtomach or inteſtines, either by the impervioufneſs of the minute imperceptible veſſels, or by the debility of the ſtomach and inteſtinal canal, are the probable general cauſes of all the diſmal and painful ſenſations ariſing from wind †.

As

* Muſſchenbroek.

† Deſtructo inteſtinorum tono, alvina evacuatio recte ſe

As leguminous food, fruits, and vegetables, are productive of flatulency, they ſhould be avoided by weak, nervous patients, and animal foods ſhould be preferred.

Stimulating cordials and carminatives palliate the ſymptoms ariſing from wind, as ſpirits, ginger, carraway ſeeds, aniſeeds, *confectio cardiaca*, cinnamon water, &c.: but medical intentions are beſt anſwered by forcing the flatus downwards, by carminatives, and laxatives of the bitter ſtomach kind.

Aloetics and ſoap, ginger, and rhubarb, before meals, or ſuchremedies; or lac ſulphur, magneſia, and ginger, are proper, and prevent coſtiveneſs.

To correct and counteract the air itſelf, lime water and abſorbents often ſucceed; but nothing anſwers the purpoſe ſo well as drinking not above a ſmall diſh of tea or coffee in the morning and evening, avoiding all vegetables, and living chiefly on animal diet, and well fermented bread *.

Hiccups

non habet & flatulentiæ & ſpaſmi multas moleſtias creant.—*Hoffman.*

* See my treatiſe on diet, and the effects of different foods, &c.

Anatomical diſſections after death in flatulency.

The ſtomach has been found highly inflamed ! burſt in ſome inſtances, and immediately proved fatal

Inteſtina,

Hiccups.

Hiccups may happen without any ill conſequences from a full ſtomach, and it is cured by ſurpriſe, a draught of cold water, vinegar, or a little ſpirits; which remedies, likewiſe, remove the diſorder when ariſing from ſmall particles of food ſticking to the œſophagus, &c.

Hiccups, though in health they often happen without diſeaſe, yet in the laſt ſtage of putrid and other fevers, diarrhœa and dyſentery, they are accounted a fatal ſymptom.

Singultus or hiccups depend principally on the diaphragm, which, by an irritation of the œſophagus, ſtomach, &c. by conſent of parts, aſcends and deſcends in a convulſive manner,

Inteſtina, flatibus diſtenta callo arctata, verminoſa, tumoribus multis obducta. Stupendæ dilatationes cœci & coli. Vermes, flatus in abdominis cavo, aeris maſſa a peritonæo cohibita, inculpatis inteſtinis.

Hepar ſcirrhoſum, putridum, contractum, induratum cum cyſtide fellea atrabile ad crepaturam turgente.

Lien ampliſſimus, nunc valde exiguus.

Epiploon quibuſdam inflammatum, vel putredine abſumtum.

Pancreas ſcirrhoſum, tabidum, putridum.

Meſenterium infarctum.

In abdomine colluvies ſeroſa, parca tamen copia ſtagnans.

and not according to regular inſpiration and expiration *.

If hiccups ſhould ariſe from the flatulent ſtomach during digeſtion, it ſhould be treated as flatulency, by carminatives, and directing the flatus downwards, and removing the antiperiſtaltic motion of the inteſtines, which often force up the wind.

The inflated ſtomach acting on the diaphragm from diſtenſion, cloſes the tube towards the œſophagus; this contraction reſiſts the air which the ſtomach attempts to expel.

Aſſafœtida, camphor, valerian, ginger, and antiſpaſmodics, volatile alcalies, &c. are excellent palliatives, and often remove the complaint, eſpecially if joined with carminatives.

Stricture

* The ſingultus or hiccups are accidental or chronical, and may ariſe from a variety of cauſes, as ſuppreſſions of common evacuations, gout, ſaburra in the ſtomach, worms, violent emetics, or cathartics, poiſons, a prolapſus of the *cartilago xiphoidea*, luxation or fracture of the ribs, or by any tumors preſſing or impeding the diaphragm in its action. Internally it may ariſe from inflammation of any of the viſcera, ileus, cholera, dyſentery, hæmorrhages, &c.

† *Anatomical Diſſections after Death.*

Inveniuntur innumeræ *pectoris* læſiones, *pulmones* inflammati, purulenti. *Stomachus* bile vel ſaburra ſcatens, gangræno ſus, ſcirrhoſus, inflammatus ultra modum dilatatus; cujus

nervi

Stricture in the œſophagus.

The wind forced from the ſtomachs of nervous patients ſometimes remains in the œſophagus or throat, and threatens ſuffocation, by compreſſion on the windpipe, and large veins returning blood from the head. This is relieved by antiſpaſmodics, ſpirit of lavender, and ſpiritus volatilis fœtidus, drank in ginger tea.

An oily mixture, in which the water is united to the oil by ſpt. c. c., will often remove the ſtricture, when other remedies fail.

If the difficulty of ſwallowing ariſes from inflammations, ſpaſms, or tumors about the fauces, œſophagus, or neighbouring parts, or ulcers, the primary cauſes muſt be removed. The ſame is to be obſerved, if by conſent of parts it ſhould happen, as inflammation of the diaphragm, ſtomach, inteſtines, liver, or other viſcera, the ſtomach has been forced from its

nervi nonnunquam a tumore in vicinis partibus premuntur: a ſede depulſus.

Hepar ampliſſimum, inflammatum, æque ac alia inteſtina, renes, veſica, aliave abdominis viſcera.

Omentum ſcirrhoſum, craſſum, ventriculum deorſum, trahens peritonæo agglutinatum.

Paſſim annotantur, putredines, gangrenæ, &c.

ſeat by relaxation of its connecting parts, or by an overweight of fat.

The Cardialgia, or Heartburn,

Is a hot, pungent pain in the ſtomach, cauſed by ſome acrimony irritating its nerves; or it originates from other viſceral diſeaſes, by conſent of parts.

If acidity in the ſtomach is the cauſe, which is known by acid, ſharp eructations, abſorbents are uſeful, as chalk, prepared oyſter ſhells, &c. magneſia, and lac ſulphuris; or any of the volatile alkaline ſpirits, as ſpiritus ſalis ammoniaci volatilis; the ſal ſodæ, or ſal and lixivium tartari, to ten drops, with bitter ſtomachics, lime water, &c. Theſe neutraliſe acidity. Rhubarb and ginger are proper before meals.

The *limatura martis præparata* is likewiſe excellent, eſpecially when debility and pallor accompany theſe ſymptoms.

In the acid cardialgia, milk and ſweetened food increaſe the violence of the pain; for milk coagulates by the contact of the acid in the ſtomach; and all ſweets are converted into a ſharp acid humor, when acidities abound.

Cinnabarine preparations with magneſia are ſometimes uſeful.

A *rancid acrimony* is likewiſe amongſt the cauſes

cauſes of the heartburn, which is perceived by oily, rancid, putrid, and ſulphureous belchings. In this ſpecies, aloetic elixirs, and ſtomachic ſpirituous tinctures; vitriolic acids, with or without bark; Hoffman's anodyne liquor, and ſimilar preparations, are uſeful.

In the rancid heartburn, eggs, oil, and fat meats, are highly improper.

In many caſes in which death has enſued, where the heartburn ſeemed to be the predominating complaint, various parts of the thoracical and abdominal viſcera have been tumified, ſcirrhous, or otherwiſe diſeaſed. In theſe inſtances the heartburn was only a ſymptom *.

* *Anatomical Diſſections after Death.*

Bilis acerrima vel æruginoſa in ſtomacho, lapilli biliares, ſanguis extra vaſa.—Ventriculus flatulentia vel cibis in immenſam molem diſtentus, a ſede depulſus; ejus tunicæ craſſiores, occalleſcentes, inflammatæ, purulentæ, ulceratæ, intus & extra exeſæ, putridæ, gangrænoſæ, ſcirrhoſæ, cancroſæ, tumores, ſarcoſes, verrucæ, puſtulæ, vermes, lapides, extranea deglutita, metallica, lapidea.

Pylorus tumidus ſcirrhoſus, ulceroſus, aut valde relaxatus.

Duodenum morboſum, diſtenſum flatibus.

Hepar ſcirrhoſum, inflammatum, purulentum, putridum, morbidus lien, pancreas, meſenterium, omentum, &c.

Veſicula fellea ad crepaturam referta; concretionum biliarium ſtupendus numerus.

Herniæ epiploicæ, procidentiæ ventriculi, lienis, &c.

Aneuriſma aortæ vel coeliacæ arteriæ.

Cordis immenſa moles.

Mediaſtini & pericardii phlogoſis.

The terrene abſorbent earths, if not diſſolved in the ſtomach by the aëreal acid, or acid humor, they remain in the ſtate they were taken, and lay heavy.

In chronic caſes, with debility, mineral waters have ſucceeded; for acidities, the chalybeate; for the rancid acrimony, Seltzer, and ſimilar waters, are to be preferred.

The cure, then, of the heartburn, chiefly depends on different modes of treatment, by acids and alkalies; ſtomachics and tonics; carminatives and aloetics, æthiops, or cinnabar: but in the uſe of either acid or alkali, great judgment is neceſſary in preſcribing the proper quantity to *ſaturate*, or correct the offending matter.

Voracious Appetite, or Bulimus,

Is an unnatural and keen appetite for food.

The patient has a continual craving for food, and eats with uncommon eagerneſs, but receives little nouriſhment.

The *cauſes* are, a ſharp gaſtric acrimonious juice, poured into the ſtomach by the arterial orifices, or exhaling arteries; from depraved blood, depraved exhalations in the ſtomach, and other parts.

Worms

Worms are likewiſe the cauſe of this hungry ſenſation.

There are examples of men, at one meal devouring above forty pounds of meat, with an almoſt incredible quantity of bread and wine *.

Aloetic purges, and correctors of acidity, are the remedies; but, above all, changing the acrid ſtate of the blood by æthiops mineral, cinnabarine, and other metallic alteratives; theſe have cured where all common remedies have been uſed in vain. The viſcera are commonly diſeaſed, and ſtomachic remedies cannot rationally be expected to ſucceed, though they may act as auxiliaries during the radical cure, which requires patience and perſeverance in the remedies †.

Worms.

Anthelmintics are neceſſary for worms, as calomel and aloetics, aſſafœtida, or garlic, or purges; to which are added the *ſal ſodæ*, borax, or

* I remember a man ſome years ago, who was a German, and famous for ſwallowing ſeveral pounds of large pebble ſtones, which could be rattled one againſt the other, by ſtriking the ſtomach. This man could eat ſix or eight pounds of meat every meal; but he always appeared very meagre and pale.

† Sectiones cadaverum.

Stomachus ultra modum turgens: in ejus cavo cruor ſtagnans colluvies atramenti inſtar nigra; bilis æruginoſa, & quaſi vitri-

or pulvis ſabinæ; for theſe laſt remedies, by diſlodging part of the *mucus* adhering to the inteſtinal canal, oblige the worms, which ſtick like leeches to the inteſtines, to let go their hold, and by this means they are effectually evacuated. Cremor tartar and aloetics effect the ſame. Peruvian bark and chalybeate preparations.

Depraved Appetite, &c.

A diſinclination or loathing of food is called a depraved appetite.

Authors give many names to this diſorder, according to the degree or peculiarities of affection, as dyſorexia, anorexia, *pica*, *malacia*, &c. &c.

It happens to pregnant women; and it is ſurpriſing what ſtrange fancies have poſſeſſed their imagination, in deſiring abſurd things for food, as roſin, pitch, tar, greaſe, ſtone, brimſtone, ſhells, dirt, clay, &c. and they often greedily eat theſe things without injury. A diſeaſed ſtomach is not only prediſpoſing to nervous hyſteric affections, but it often gives riſe to many ſymptoms.

vitriolica; pylorus laxior, ductus biliaris in ventriculum hians. Stupendus proventus lumbricorum, ſolium, ſive lumbricus latus. Lien ſtupendæ magnitudinis. Hepar ampliſſimum.

In chlorotic girls ſimilar diſeaſes are ſometimes obſerved *.

Cauſes. Debility of ſtomach and depraved blood, with a relaxing acrimonious gaſtric juice, rendering the ſtomach ſo feeble, that by repeated experience from effects of various foods, the mind abhors the very ſight or ſmell of any.

Whatever the ſtomach has repeatedly rejected, impreſſes the mind, and occaſions future diſlike; ſo that the bare mention of certain things create diſguſt, nauſea, or vomiting †.

Cure. During pregnancy, little is to be attempted; magneſia, lac ſulphuris, and ginger, are moſt proper.

In the chlorotic, the primary diſorder is to be removed.

For the nervous and hyſteric, aloetic laxatives, correctors of the particular acrimony, abſtinence from tea, and all watery relaxing

* See *Chloroſis*.

† A perſon, it has been known, who has taken one or two doſes of ipecacuanha, will be eaſily ruffled by the ſight of this drug, and feel in his ſtomach a diſagreeable ſenſation. Thoſe who remember taking jalap, or buckthorn, or any other nauſeous drug, in their infancy, will eaſily produce by recollection diſguſt in their ſtomachs at the bare recital of the drugs, &c. Diſagreeable foods or drinks produce the ſame effects.

liquids;

liquids; bark, ſteel, chalybeate, or Seltzer water, air and exerciſe, are uſeful.

Cramps in the Stomach.

An over contraction, or dilatation of the muſcular coat of the ſtomach, may be denominated a cramp of the ſtomach.

Cauſes. Whatever violently irritates the nerves of the ſtomach, ſo as to act with force on its muſcular coat. It can originate, likewiſe, in rheumatiſm, gout, and other diſorders, as a ſymptom.

The dilatation is commonly ariſing from wind.

The contraction, from the acrimony of the fluids circulating in the muſcular coat, ſhortening or contracting the fibres of the muſcles *.

Cure.

* Theſe dilatations and contractions are eaſily conceived when the action of dilatation and contraction of the ſtomach is conſidered, as being full or empty. I have ſeen many caſes of extreme diſtenſion; one in particular, from eating peaſe, where the ſtomach ſwelled in the form of a little mount, appearing rather conical. The pain and diſtreſs in this caſe were inexpreſſible: for the wind, which was its principal cauſe, increaſed in bulk to an enormous degree, and could neither aſcend nor deſcend, for both the entrance from the œſophagus and the pylorus were perfectly, for a conſiderable time, contracted ſo as to render both orifices impervious. I preſcribed ſome calomel and rhubarb in pills, and an oleaginous

Cure. The diſtenſion ſhould be removed by carminatives, aloetic purgatives with calomel, and antiſpaſmodics.

The contraction of the ſtomach is moſt difficult to remove, and requires great attention to diet; as in the former caſe a diminution of wind is neceſſary, ſo in the latter, a moderate creation of air is uſeful: the ſtomach, however, is ſo contracted, and its fibres ſo rigid, as cauſe a very painful reſiſtance to the fermentative proceſs of digeſtion. In proportion as the air extricates itſelf from the food, and diſtends the ſtomach, ſo proportionably is exquiſite pain excited. The ſtomach is ſometimes ſo violently affected, as to be incapable of bearing any ſolid, or ſcarcely liquid food.

All hot ſpirituous liquors and cordials, though they are commonly recommended, are highly improper; for though they give a little temporary eaſe, yet they cauſe an increaſe of the diſorder, which preventing nutrition, in time proves fatal.

The diet ſhould be light and very ſimple, as panada, toaſted bread ſoaked in beaf tea, or

nous mixture, with tincture of ſena, *ſpiritus cornu cervi*, &c. Theſe remedies ſucceeded; and the lady, who is now living, has never had any return of the diſorder, by obſerving a proper regimen, and preventing coſtiveneſs.

barley

barley broth; but always in ſmall quantities, and never very warm.

Meat in ſmall portions, made tender in dreſſing, by ſimmering, and bread, agree with ſome better than liquid food.

The medicines uſed internally ſhould be of the antiſpaſmodic kind, gently laxative, and oleaginous; outwardly fomentations.

The following remedies I have found uſeful.

No. 78. ℞. Julep. e camphor. ℥iv.
Ol. amygdal. dulc. ℥iiſs.
Tinct. ſen. ℥j.
Spt. c. c. ʒj. M. f. miſtura cujus capiat coch. ij. bis vel ter in die.

Or,

No. 79. ℞. Ol. amygdal. dulc. ℥iiſs.
Aq. roſar.
—— pur. āā ℥iiſs.
Mucilag. gum. arab. ʒiij. ſyr. ſimp. q. s. f. miſtura, cuj. capiat coch. j. vel ij. ad libitum.

An oily draught, with a few drops of oleum anifi, or other eſſential oils, aſſafœtida, camphor, muſk, and valerian, or other antiſpaſmodics, clyſters, or a ſemicupium, will often alleviate the ſymptoms: but if the diſorder continues long, nothing but a *mineral alterative courſe* is likely to eradicate the complaint.

The diſorder being ſeated in the minuteſt ſyſtem of veſſels, nothing but what is extreme-

ly

ly penetrating and gentle in its operation can anſwer any decided curative intention. Preſcriptions of this nature, however, ſhould be well conſidered; for whatever irritates the ſtomach itſelf, will increaſe, inſtead of curing the diſtemper. Cinnabar, æthiops, crude quickſilver, or lac ſulphur, ſhould firſt be given, and afterwards the more powerful alteratives.

No. 80. ℞. Cinnab. antimon. ppt. ʒſs.
Pulv. e tragacanth. e ʒij. M. f. pulvis dividendus in xij. doſes, quarum ſumat unam bis vel ter in die, in coch. ij. julep. e camphora.

Phyſicians who carry their ideas of medicine no farther than to palliate ſymptoms, preſcribe *opium*; this *confirms* the diſeaſe, and renders it afterward incurable: but in ſome very painful caſes, humanity demands an alleviation of diſtreſſing ſymptoms; under which circumſtances, medicine is forced to adminiſter mitigators of pain, while the other remedies are operating; the *pilula e ſtyrace*, to three or five grains, is proper.

Watry Liquid, or Phlegm riſing in the Stomach.

The accumulation of a ſerous liquid in the ſtomach originates in either an increaſed ſaliva deſcending from the mouth, or from relaxation of the orifices of the exhalent minute capillary

pillary arteries of the ſtomach, or from an increaſed ſecretion of the pancreatic juice, forced from the *duodenum* to the ſtomach.

It ſometimes occaſions nauſea and vomiting, in which efforts, a limpid liquor is thrown off from the ſtomach.

Theſe various ſpecies commonly ariſe from relaxation, or irritation from different ſtimuli, whoſe acridity ſhould be treated agreeable to their ſpecies, by diluting, changing, or evacuation; or neutraliſed, if acid or alkali, and afterwards with corroborants, as bark, ſteel, &c. An *extreme dry diet* will be neceſſary.

Stomachic purgatives are likewiſe particularly beneficial; for by conveying the offending matter downwards, an opportunity is obtained of removing the relaxation, and giving energy and vigor to the weakened veſſels of the ſtomach by tonical remedies.

Nauſea, or ſickneſs without vomiting,

Is an inclination to vomit without effecting it.

It is an attendant on cardialgia, and a variety of other diſorders, *pregnancy*, &c. occaſioning an averſion for food, an increaſe of ſaliva, diſguſted ideas at the ſight of various objects, loſs of appetite, debility, &c.

If

If arising from *acidity*, it is cured by absorbents and antacids; if from *bile*, by gentle laxatives, rhubarb, sena, cremor tartar, or infus. senæ and sal *diureticus*; if from *worms*, by the anthelmintic remedies.

If from *flatus*, or wind, by carminatives and stomach purges.

In pregnancy it frequently happens from the changes the impregnated uterus occasions; but this symptom, as likewise vomiting, vanish commonly toward the fifth month; and they should be treated with great gentleness, by venæsection, *lac sulphuris*, *magnesia*, and *rhubarb*, or the saline, or volatile saline draught. As it is symptomatic, vomits should never be used *.

If from sympathy, or consent of parts, the primary causes must be investigated and subdued; these exist, more or less, in the *viscera*.

If from nervous irritability, by antispasmodics, volatile alkaline draught with confectio cardiac. bitters, Hoffman's anodyne liquor, spirits of lavender, &c.

Vomits in these cases are dangerous, though very commonly prescribed. In many diseases of the viscera, vomits are absolutely *contra-*

* See my *treatise* on The *Causes* of *Death* in Childbed investigated, and treatment of females during pregnancy, lying-in, &c.

indicated; the irritating cauſe in the ſtomach, therefore, ſhould always be conveyed through the inteſtines, and evacuated downwards, particularly in nervous caſes. Violent practices are proper or uſeful to ſtrong conſtitutions, and violent diſeaſes; in delicate nervous females, the gentleſt methods ſhould be preferred, leſt the effects of the remedy might prove more injurious than the diſeaſe.

Vomiting.

A forcible ejection of food, or any other ſubſtance, from the ſtomach, through the œſophagus and mouth, is nominated vomiting.

It is either *idiopathic*, when ariſing from a cauſe in the ſtomach itſelf; or *ſymptomatic*, when originating from diſeaſes ſeated in any other part of the body.

Its immediate cauſe is an antiperiſtaltic, ſpaſmodical, convulſive conſtriction of the ſtomach, preſſure of the diaphragm and abdominal muſcles.

It is an effort of nature to expel whatever moleſts, or is troubleſome in the ſtomach.

The ſpecies of vomiting are alimentary, bilious, pituitous, acetous, lacteous, atrabilious, urinous, or verminous, &c. requiring different treatments, according to their reſpective cauſes.

The

The *cauſes* are numerous, and ſhould always be well conſidered before any remedy is adminiſtered *.

In

* Vomiting may ariſe from the following, and many more cauſes: but theſe will be ſufficient to ſhew the *inefficacy* and *danger* of giving *vomits*; which are too frequently and raſhly preſcribed by the vulgar, and particularly by perſons quite ignorant of medicine.

1. From hard drinking.
2. Saburra, or foul ſtomach.
3. Errors in diet during lactation.
4. Dentition.
5. Worms.
6. Hunger.
7. Poiſons.
8. Calloſity of the pylorus; † ſpaſms, or convulſions; hiccups, or contraction of the ſtomach.
9. From hypochondriac and nervous affections, and depraved imagination.
10. Ulcer in the ſtomach.
11. Steatoma in the ſtomach, abſceſs, tumor, or ſcirrhus.
12. Pregnancy.
13. Stony or calcareous concretions in the ſtomach, as in ſome gouty caſes.

† A remarkable inſtance of this ſort happened to the child of Mr. *Marchant*, Sutton Street, Soho, who rejected its food conſtantly for many weeks, and was continually in convulſions whenever any food was received into the ſtomach. After many remedies were preſcribed without ſucceſs, the child died, and I opened it in the preſence of Mr. Mainwaring, of the Strand, and Dr. Huber. The *pylorus* was found perfectly callous, imperforate, and greatly thickened. The cauſe of the convulſions and death were clearly inveſtigated; and it ſeemed the ſtomach had abſorbed nutrition a conſiderable time without the lacteal ſyſtem.

In nervous and hyſteric complaints, vomiting originates in the diſorders and affections of the head, leſions of the nerves, perturbation of the mind, or vitiated viſcera.

The ſubſtances forced from the ſtomach

14. Bite of a mad dog, from the putrid infection received.

15. Black or yellow bile forced into the ſtomach.

16. Obſtruction of the duodenum and inteſtines.

17. Obſtruction, and various diſeaſes of the liver.

18. Stony concretions in the gall bladder, or paſſage through the biliary ducts.

19. Pancreas diſeaſed.

20. Hernias, of various ſpecies.

21. Inflammation of the ſtomach.

22. Several affections of the inteſtines, as colica, cholera morbus, diarrhœa, dyſentery, piles, &c.

23. Gravel or ſtone in kidney or bladder.

24. Abſceſs, inflammation, obſtruction, or ulcer of the œſophagus.

25. A prolapſus of the xiphoid cartilage.

26. Sailing at ſea, riding in a coach, turning the head quickly round, vertigo, &c.

27. Concuſſions, contuſions, fractures, and all diſorders of the head.

28. Every ſpecies of malignant fevers, in particular jail and putrid fevers.

29. *Metaſtaſis*, or tranſlation of morbid fomes from other parts.

30. Suppreſſed menſes, or too great evacuations.

31. Every diſorder almoſt of the womb.

32. Various collections of ſubſtances or matter in the ſtomach, or relaxation.

34. Diſeaſes of the heart and organs of reſpiration.

ſhould

ſhould be examined; for they are more frequently brought from the inteſtines, than originating in the ſtomach itſelf.

Yellow, or dark-colored bile is certainly forced from the *duodenum*; *blood* appearing, from retention, of a blackiſh color, may be effuſed from the rupture of ſome ſmall blood veſſels, by the force of vomiting; or, perhaps, in ſome inſtances, when the exhalent arteries opening on the internal ſurface on the ſtomach are greatly relaxed and irritated, red blood may be forced through their orifices, which are naturally deſtined to carry a limpid ſerum *.

* In the inflammations of the eyes, the increaſed action of the arteries frequently force red particles, where ſerum ſhould only paſs in the minute arteries.

In the laſt ſtage of malignant putrid fevers in the Weſt Indies, red blood in a putreſcent ſtate is forced through the pores of the ſkin in every part of the body. This, though rarely, I have ſeen in 1762 and 1763 at the Havannah, and other parts of the Weſt Indies and America. From this circumſtance, independent of the reports of other authors, I am inclined to believe the ſame poſſible on the whole internal ſurface of the ſtomach and inteſtines, occaſioning the moſt vehement colliquative and putrid purgings.

In health, a conſiderable quantity of ſerous fluid is exhaled through the arterial orifices in the ſtomach, conſtituting part of the *ſuccus gaſtricus*, or ſtomach juice to aſſiſt digeſtion. Any contamination of the blood will certainly change the fluid exhaling in the ſtomach; and this will affect digeſtion, chylification, nutrition, &c. The blood, more or leſs prone to a lax ſtate, may pour out liquids in the ſtomach capable of producing putrid eructations, &c. &c.

The *cure* of nervous vomitings conſiſts in conveying the offending matter downward by gentle ſtomachic bitter laxatives, by antiſpaſmodics; and afterward to give tone and vigor to the relaxed ſtomach, by bracing remedies; as vinum chalybeatum, with ſimple cinnamon water, ſweet elixir of vitriol, Hoffman's anodyne liquor, infuſions or decoctions of bark, chalybeate waters, &c.

The *Hampſtead* water is excellent for this purpoſe.

If from acidity, by abſorbents, lime water, magneſia, ginger, and rhubarb; if from alcaline matter, by acids of the vitriolic kind and ſtomachics, Mynſicht's elixir of vitriol, &c.

To palliate, æther, naphtha of nitre, ſpirits of lavender, oil of mint or cinnamon on ſugar, ſaline draughts, or the volatile ſaline draught made in the following manner.

No. 78. ℞. Sal. ammoniac vol. ℈ſs.
Succ. limon. q. s. ad ſaturationem, deinde adde aq. cinnam. ſimp. ℥j.
Confect. cardiac. ℈j. f. hauſtus, bis vel ter in die ſumendus.

Or the following mixture may be given.

No. 79. ℞. Sal. volat. c. c. ℥ſs.
Succ. limon. q. s. ad ſaturationem deinde adde
Aq. cinnam. ſimp. vel flor. aurant.
—— —— pur. āā ℥ijſs.

Tinct.

Tinct. rhei ſpirit. ℥j. M. f. miſtura, cujus capiat coch. j. vel ij. ter vel quater in die.

No. 80. ℞. Sal. c. c. gr. v.

Aq. aneth. vel menth. vulg. ſimp. ℥ſs.

Confect. cardiac. ℈j. f. hauſtus ter in die ſumendus.

Vel, bibat ægra ante prandium & cœnam ℥ij. tincturæ rhei ſpt. cum cochl. ij. aquæ pur.

In every ſpecies of vomiting, *coſtiveneſs* ſhould be carefully prevented or removed, that the inverted periſtaltic motion of the inteſtines may be directed to take its natural courſe, in propelling the contained matter or ſubſtances through the inteſtines; this is effected by clyſters, &c.

When the vomiting is cauſed by diſeaſed viſcera in general, or the womb and its appendages in particular, it muſt be removed by applying remedies to the primary cauſes *.

In

* Anatomical diſſections after death.

Raro occurrit ſtomachi mala conformatio, ſed nonnunquam mole portentoſum; e ſede ſua depellitur, tum a propriâ herniâ, tum à herniâ epiploica, ſcirrhoſus in multis invenitur ventriculus. Pylorus huic vitio magis obnoxius eſt, in nonnullis cartilagineus, oſſeus, contractus, obſtructus fuit a nummo, aliove corpore extraneo; ventriculus puſtulis, tumoribus obſitus, phlogoſi, purulentia, exulceratione & gangræna tactus, dilaceratus.

In no caſes, however, are *vomits* neceſſary to nervous hyſteric patients, unleſs the matter already in the ſtomach cannot be propelled through the inteſtines; or if any poiſonous ſubſtance ſhould have been ſwallowed, as opium, hemlock, preparations of lead, &c.

When the viſcera are chronically diſeaſed, all vomits are contraindicated; for no one can foreſee their dangerous conſequences: in acute diſorders of the ſtomach and inteſtines they may be occaſionally neceſſary; but ſhould never be preſcribed without the utmoſt caution.

As palliatives, in nervous nauſea and vomitings, aſſafœtida, ſagapenum, opopanax, caſtor, myrrh, ſaffron, and ſimilar medicines, have

Hepar inter cetera viſcera abdominalia frequentius fœdatur, inflammatum, purulentum, ſcirrhoſum, ſteatomatoſum, gangrænoſum, ſtomacho accretum, aridum, durum, & quaſi elixatum.

In veſicula fellea concretiones; & copia magna bilis; inſertio inſolita ductus communis.

Inteſtina valde diſtenta, & alibi quaſi filo conſtricta: extra abdomen una cum epiploo depulſa; putrida, accreta, intusſuſcepta, vermibus plena, obſtructa, diſrupta, gangrænoſa.

Lien, pancreas, meſenterium, omentum, varie læſa, calculi renum.

Tumores ſtomachum & inteſtina comprimentes.

Cartilaginis xiphoidis prolapſus.

their

their advantages, and may ſafely be preſcribed, while the deeper and more important cauſe-removing preparations are taken.

Bile in the Stomach.

There are two ſpecies; the one yellow, bitter, and very irritating; the other livid and blackiſh, and in a great meaſure inert, until it has obtained a diſpoſition to putrefaction.

Theſe ſpecies are forced up from the firſt inteſtine by the inverted periſtaltic motion of the inteſtines.

When in the ſtomach, the former ſpecies occaſions great ſickneſs, and, by conſent of parts, ſevere headach.

The cure and prevention have already been explained; which conſiſt in conveying the offending matter through the inteſtines by mild ſtomach laxatives, and by ſupplying the defective inert qualities of the bile with ſoap and aloetics, rhubarb, infuſions of ſena, cremor tartar, or ſal diureticus. Coſtiveneſs ſhould be prevented with great care.

Wind in the Stomach and ſmall Inteſtines.

It is known to be in the ſtomach by a tumor, diſtenſion, hiccups; in the ſmall inteſtines, by being

being ſeated moſtly in the centre of the abdomen, and a particular hardneſs or tenſion.

Its emiſſion from the ſtomach is called eructation; this is promoted by carminatives with tinct. rhei, &c. Theſe warm remedies gently ſtimulate the coats of the ſtomach, to a due contraction; by which the exit of wind is procured upwards.

When wind is ſeated in the ſmall inteſtines, it is to be promoted downwards. This is to be effected by warm carminative ſtimulants, with aſſafœtida, bitter ſtomachic laxatives, as infuſions of ſena, chamomile, &c.; or carminative clyſters, &c. See wind in the ſtomach.

Wind in the large Inteſtines.

Is known by the diſtenſion and pains being more in the circumference of the abdomen; to be ſimilarly treated.

Wind and hardened feces are eaſier evacuated from the large than the ſmall inteſtines, in this caſe emollient clyſters do great ſervice in a ſhort time.

Coſtiveneſs.

Coſtiveneſs is a too long retention of feces in the inteſtines.

The *cauſes* are multiplex, which ſhould be conſidered before the removal can be effected.

1. *Tumors*,

1. *Tumors*, or diſeaſes of the viſcera, particularly indurated meſenteric glands, by compreſſing the inteſtinal canal, retard the free paſſage of the feces.

This is frequently incurable; but the moſt probable means of cure are by mineral alteratives, calomel in ſmall doſes, and bitter cathartics.

2. *Obſtructed biliary ducts*, which are beſt opened by calomel, aloetics, ſal diureticus, ſoap, and oleaginous cathartics, or the *oleum ricini*; almond oil, manna, and tincture of ſena, &c. emollient clyſters, &c.

3. If from a ſpaſm in the *ductus communis cholidochus* by an over diſtenſion of the duodenum; by the foregoing means, and antiſpaſmodics.

4. *Debility* in the moving or muſcular powers of the inteſtines, is a cauſe of coſtiveneſs; laxatives gently ſtimulant ſhould be conſtantly ordered, and at intervals ſtomachic bracers, electuarium lenitivum, with ginger, *electuarium* e ſcammonio, aloetic pills, &c., ſhould be daily uſed until the cauſe be removed.

5. *Dryneſs* of the inteſtines, from obſtructed exhaling arteries, or abſence of pancreatic juice; known by dry hardened lumpiſh feces; is beſt removed by caſtor oil, mutton and veal broths, oleaginous cathartics, and vegetables boiled.

6. *In-*

6. *Inſpiſſated mucus*, covering the internal ſurface of the inteſtinal canal, ſo diminiſhes irritability as to require alcaline ſalts, ſoap, ſal ſodæ, or borax with bitter laxatives; as infuſions of ſena, with chamomile and carminative ſeeds of aniſe, carui, &c., to extricate the adhering matter. The alcaline remedies are to be uſed with caution, in ſmall doſes and well diluted; leſt they abrade the *villous* inteſtinal coat. They are contraindicated, whenever the patient has formerly labored under diarrhœa, hæmorrhoids, or bleeding piles, &c.

7. *Paralyſis* of the inteſtines rarely happens, except by preparations of lead, or *lead* in *wines*; which by ſlow degrees, though ſmall in quantity, proves fatal. The remedies are oil and volatiles, cordials, ſtomachics, and irritating clyſters; ſtomach purges, and afterwards invigorating tonics.

8. The tumors and other affections of the womb; the ſtone or gravel frequently cauſe obſtinate conſtipation: remedies ſhould be directed to remove theſe complaints, in conjunction with mild eccoprotics and emollient cathartic clyſters, daily repeated.

9. *Coſtiveneſs* ariſing from a ſedentary life and much contemplation, as amongſt the ſtudious and literary, ſhould be removed by exerciſe of body and relaxation of mind. Many

other

other cauſes might be aſſigned as productive of conſtipation; but theſe are ſufficient for the preſent purpoſe.

All aſtringent diet and acid auſtere wines are to be avoided: roaſted apples, prunes, or French plumbs, accelerate the deſcent of the feces.

Glauber and *Rochelle* ſalts, the ſal *polychreſt*, *tartarum ſolubile*, and ſuch ſaline purgatives, are more effectual than any of the foregoing laxatives; but they ſeldom agree with the ſtomachs of the nervous, old, gouty, or debilitated: in ſome inſtances, however, their aſſiſtance muſt be ſolicited *.

Bilious

* Diſſections after death.

Inteſtina repleta, fæcibus induratis, materiaque quadam mucida, intricata, ultra modum diſtenta flatibus, concreta, obſtructa, lapides continentia.

Colon & craſſiora inteſtina fæcibus duris & quaſi lapideſcentibus obſtructa.

Repertum fuit colon nucleis ceraſorum, & perſicorum ad trium librarum pondus infarctum, dilatatum ventriculi inſtar & in fine ampliationis coarctatum, ac annulo carnoſo ſphincteris ad inſtar conſtrictum.

In illo inventæ fuerunt ſarcoſes ingentis molis: occaleſcentiæ, tumores, tubi coalitus ab exulcerati lateris contactu.

Viſa organa hæc putrida, gangrænoſa vel dilacerata, a ſtagnatione collectarum materiarum.

Sæpe ventriculus & inteſtina a ſitu dimota, ſcirrhoſa.

Hepar ſcirrhoſum, veſicula fellis, nunc inanis, nunc turgida vel lapideis concretionibus foeta.

Pancreas

Bilious excrements.

An overabundance of bile ſecreted in the liver and poured into the *duodenum*, will irritate the inteſtines, occaſion great pain and bilious purgings.

Theſe evacuations are not to be *checked* by *aſtringents*, but gently promoted by rhubarb and cremor tartar, decoctions of tamarinds and ſena: theſe acid and ſtomach purgatives correct the bile, and facilitate its evacuation with little pain.

When the bile is thoroughly evacuated, gentle *tonics* are proper; but great caution ſhould always be obſerved, never to cloſe the bile duct opening in the *duodenum* by aſtringents; for inflammations and ſcirrhoſities of the liver have been the conſequence. I have ſeen *bark* and *elixir of vitriol* produce theſe effects, the war before laſt at the Havannah in 1762, and other Weſt India iſlands. Theſe affections of the liver are cured by antimonials and mercurials given as alteratives.

Pancreas induratum, ingens; lien magnus, pendulus; omentum, craſſum, putridum, inteſtinis accretum.

Paſſim tumores, e ventriculo, meſenterio, utero, vagina, aliiſque partibus exſurgentes comprimunt tubum inteſtinalem.

Læſiones cerebri & medullæ ſpinalis ſæpe inteſtinorum paralyſim poſt ſe trahunt.

The

The bile may be forced into the inteſtine by an over diſtenſion of the ſtomach, either from wind, or too great a quantity of food; this latter proves ſalutary, for it promotes a temporary purging, and removes the effects of over repletion.

When the bile is increaſed by paſſions of the mind, which is no unuſual concomitant of anger, or violence of temper; ſerenity of mind muſt be earneſtly recommended. Perſons who poſſeſs the beſt and moſt noble ſentiments are often too irritable, they expect more integrity than the world poſſeſſes: but if their perturbations of mind ariſe from human villainy, vices, or errors, no reformation will be produced by rage or angry paſſions. Thoſe who are capable of infamy, ſeldom bluſh at the recital of it: the benevolent and worthy, however, do not owe the deſtruction of their own health, when it can anſwer no important purpoſe; it is too precious a ſacrifice. Foreſight to prevent, or calmneſs and acquieſcence under temporary misfortunes, ſhould be ſtrongly inculcated to the nervous.

Black excrement, or feces.

Theſe appear to originate in an ill ſecreted bile, or its too long retention either in the gall bladder, or duodenum.

It

It is inactive to a certain degree, and by not ſtimulating the inteſtines from its deſtitution of purgative qualities, coſtiveneſs is produced; its long retention is followed by a tendency to putrefaction; for the *fixed air* being extricated, flatulency is the conſequence.

The deſcent of this black bile ſhould be promoted by *tinctura ſacra* and *cremor tartar*, or any acid laxatives; its ſtagnation in the inteſtines ſhould always be prevented, as it would aſſiſt in producing a vitiated chyle, and a bad habit of body.

Oranges, the ſummer acid fruits, or roaſted apples are proper, if they agree well with the ſtomach; theſe check the putrid tendency of the vitiated bile in the inteſtinal tube, and prove gently laxative.

When the cauſe is in the liver, mineral alteratives are the moſt proper medicines to remove obſtruction, or ſcirrhus.

Blackiſh ſtools may likewiſe ariſe from effuſions of blood in the ſtomach, or inteſtinal canal, from the exhalent arteries; or from chalybeate medicines: theſe circumſtances therefore ſhould be well aſcertained, before medicines are preſcribed.

Pale-colored argillaceous excrements.

This is a common ſymptom of the *icterus*, or jaundice,

jaundice, and happens from the want of bile in the inteſtinal tube.

The *cauſes* are,

1. An obſtruction in the biliary ducts.

2. A diſeaſe in the liver, by which the bile is not properly ſecreted.

3. The bile is conveyed into the blood inſtead of the gall bladder, or inteſtines, cauſing a yellow diffuſion in every part of the body.

Gall Stones obſtructing the biliary ducts, are commonly known by exquiſite pain in the part, argillaceous or clayiſh feces, vomitings, &c. This is to be treated by venæ ſection; oleaginous purgatives, and manna, emollient clyſters, warm baths, &c.

If the cauſe ſhould exiſt in a diſeaſed liver, productive of the jaundice; aloetics and calomel in ſmall doſes; ſal diureticus, and the bitter infuſion, frequently cure the complaint.

Saponaceous remedies and rhubarb, are leſs efficacious than the antecedent.

A mineral alterative courſe afterwards, will often prevent the return of the diſeaſe; as it is moſt likely to remove gradually obſtructions in the liver, or ducts without irritation.

Acids are recommended both by practitioners and authors in the jaundice; but very erroneouſly.

The *bile* is diffuſed through the whole habit; acids, as generally preſcribed, cannot follow it; for they are neither received by the lymphatic ſyſtem, nor inhalent veins, unleſs exceedingly diluted; conſequently cannot counteract by neutraliſation, or ſolution in the whole body, the alcaleſcent quality of the yellow-coloured fluid; but when the bile is in the inteſtines, acids, and acid laxatives are very beneficial; becauſe they more probably come in contact, and correct, or expell the offending matter.

Boerhaave, and Van Swieten, recommended the *vernal herbage*. Stony concretions in oxen, are removed by the ſpring graſs, eſpecially thoſe who have lived upon hay, &c. in the winter: Upon this principle, the *ſuccus graminis* is preſcribed as a powerful detergent and deobſtruent.

Purgings.

Purging is a too frequent, or inordinate evacuation of feces, or excrements.

The *cauſe* is a ſtimulating matter, or too great irritability of the inteſtines, by which frequent contractions of the fibres are excited; thus all the ſecretions are more abundantly produced, and by the increaſed periſtaltic motion, the contents are quickly evacuated in a liquid

liquid ſtate, the thinner parts not having time to be taken up by the abſorbent veſſels.

The ſubſtances capable of ſtimulating the inteſtines, from the materia medica, are cathartics, and other acrids; various ſorts of foods particularly of the vegetable and fruit kind; ſome meats, as pork and pig; ſudden cold, ſuppreſſed perſpiration; but ſome of theſe being accidental, and others peculiar to individuals, little is to be preſcribed by medicine, except the abſtinence from whatever can produce the effect. In the *hypercatharſis*, diluents, emollients, cardiacs, anodynes are indicated.

Purging ſhould never be *haſtily* checked, and particularly if attended with pain; the cauſe ſhould always be removed by gentle laxatives, of rhubarb, ſaline purgatives and manna, oil, &c. before either aſtringents, or opiates are adminiſtered.

The ſmall doſes of *ipecacuanha* recommended for purgings, are very unpleaſant and rarely neceſſary; to occaſion a continual nauſea, when milder methods preſent themſelves, is a more violent practice than nervous purgings in particular require.

Pain, though a great enemy to human tranquillity, is a favorable ſymptom in purgings; its ſuppreſſion ſhould very cautiouſly be attempted by opium; for mortifications of the

inteſtines have been the conſequence: therefore griping pains ſhould in general, be born patiently until their irritating cauſe be removed. I have known many inſtances, where the injudicious uſe of *opium* and warm cordials, formerly recommended by Sir *John Pringle* and others, has proved inconteſtibly *fatal*; particularly in the diarrhœa of armies, hoſpitals, and hot climates.

Bile or any other ſtimulating matter exciting frequent ſtools, muſt be evacuated, or corrected. A ſmall quality of vitiated matter can alter and change a conſiderable maſs, and ſoon contaminate the whole body; an example of which is evident from the admiſſion of any putrid matter in diſſection, by a ſlight ſcratch, &c.

The purgings of nervous people, however, are more commonly owing to laxity and ſenſibility of the inteſtinal canal, than to any violent irritating matter, bile excepted.

If the purging ariſe from debility of the ſtomach or inteſtines, after a doſe or two of rhubarb; tonics of the *gentle* aſtringent kind are uſeful; the julep. e creta, Hoffman's anodyne liquor; the pulvis terræ japonicæ, the *extractum ligni campechenſis* diſſolved in aq. cinnam. ſimp. Confectio cardiaca, or in nervous

pains

pains the confectio Damocratis may be administered.

Antiſpaſmodics often remove the colicky purgings of the nervous claſs by allaying irritability; and theſe remedies ſhould always be preferred to opiates, as aſſafœtida, camphor, and ſal. c. c. in mixtures, &c.

Nervous Tabes, or waſting of the Body.

The *cauſes* of conſumption are various; as ulcerated lungs, and it is then called *phthiſis pulmonalis*; chronic diſorders of the viſcera; or debility of the organs of digeſtion and nutrition; great evacuations from hæmorrhages; fluor albus, obſtructed or profuſe menſes, increaſed ſaliva, or too copious perſpiration, lactation, diabetes, diarrhœa, dyſentery, lientery, obſtructed meſenteric glands, ſcrophula, &c.

All theſe *cauſes* require a different mode of treatment according to indications, violence, or acuteneſs of the complaint, fever or other circumſtances.

A *nervous tabes* is a waſting of the body without any remarkable fever, cough, or difficult reſpiration; it is accompanied with inappetency, depraved digeſtion, and want of proper nutrition.

The *primary cauſes* of the nervous atrophy, are violent paſſions of the mind, love, grief, &c.; frequent drinking of ardent ſpirituous liquors, or unwholſome air.

The *cure* conſiſts in calming mental violence; the avoiding cordials, or ſpirituous liquors; the removal from inſalubrious, to a purer and more elaſtic air, and the adminiſtering remedies adapted to the particular or occaſional cauſes.

If from debility or a depraved ſtomach, gentle ſtomachic evacuants, tonics and bitters are proper.

If from obſtructed meſenteric glands, or diſeaſed viſcera, mineral alteratives.

If worms are the cauſe, they muſt be evacuated by anthelmintics, mercurials, purges, &c.

Nervous cholic.

Griping pains in the inteſtines of nervous patients, flying from one part to another without either purging or vomiting, is called the nervous cholic.

The *cauſe* is moſt probably fixed air, or the *aërial acid*, or inflammable air, retained in the inteſtines, vellicating, or ſtimulating the nervous ſyſtem, expanded all over their internal ſurface.

The

The *cure* is ſimilar to that already recommended for wind in the ſtomach, or inteſtines. Stomachic laxatives, carminatives, antiſpaſmodics, and lime water, oleum aniſi, carui, cinnamomi, warm carminative fetid clyſters, and ſometimes a light opiate may be uſeful.

Worms.

Worms of different ſpecies have been found in the ſtomach, or inteſtines of perſons of every age; but from conſtipation, are very common to the nervous and hyſteric.

They are diſtinguiſhed into the *lumbrici* or *teretes*, like earth worms; *tænia*, ſimilar to tape; *cucurbitini*, like gourd ſeed; and *aſcarides*, a very minute ſpecies like maggots, not thicker than a ſmall pin.

They are generated either by different foods, or deſcend with vegetables, cheeſe, farinaceous, or leguminous foods.

The *lumbrici* and *tænia* are commonly in the ſtomach and ſmaller inteſtines; the *aſcarides* in the larger inteſtines, and particularly in the rectum, occaſioning itching and irritation.

Tape worms have been found many *yards* long; and it is eaſy to conceive what injury they muſt occaſion to the patient, by ſucking a large quantity of nutriment for their ſupport.

Innumerable ſymptoms accompany worms; as pallor of the face, eyes ſunk in the orbits with a livid hue underneath; gnaſhing of the teeth, fetor in the breath, voraciouſneſs, wind, indigeſtion, pricking ſenſations, uneaſineſs in the ſtomach and inteſtines, hard ſwelled belly, hiccups, dry cough, ſtarting in ſleep, convulſive and other fits; frequent itching and picking the noſe; abſceſſes and a vomiting, or purging of ſlimy purulent pus; anxiety, feveriſh heats and fluſhings, faintings; the voiding worms by the mouth or *anus*; but nothing ſo obviouſly determines their probable preſence in the inteſtines, as ſome having been perceived from the ſtomach, or evacuated in the excrements; all other ſymptoms are equivocal, or doubtful. Many verminous ſymptoms are common to the *hydrocephalus internus*, or watry head of children, the diagnoſtic ſign, however, of which, is a dilatation of the pupils.

It is aſtoniſhing how firmly worms adhere to the coats of the ſtomach, or inteſtines, much like leeches; from whence they draw their nouriſhment by continual ſuction; which in the larger worms, when in great quantity, muſt prove a conſiderable loſs to the human body, by defeating the nutrition of the body, cauſing great waſte, languor, worm fevers, and many other bad conſequences; often occaſioning violent

lent cutting piercing pains and conſumption of fleſh.

The ſmaller worms are, perhaps, oviparous, the *lumbrici* are certainly viviparous; I have in my poſſeſſion ſpecies of theſe large worms, which were diſcharged at the time they were caſting forth a young brood. Worms frequently perforate the coats of the inteſtines.

The cure conſiſts in diſlodging the worms from their holds on the villous coat of the inteſtines.

It is evident that the excrements paſs through the inteſtines without the excluſion of worms; and it frequently happens, that the moſt approved purges are ineffectual: cathartics are, however, proper, after remedies which act on the villous coat, remedies which are particularly offenſive to the worms, as aſſafœtida, whoſe ſmell is ſaid to force the worms from their faſtening, mercurial and martial preparations, cort. peruv., and oblige the worms to looſe their hold.

To cleanſe the internal ſurface of the inteſtines, and diſlodge worms from their faſtening, ſolutions of alcaline ſalts, as the *ſal ſodæ*, *ſal tartar*, *ſal abſinth.* cremor tartar, &c. are proper; or borax with bitter infuſions; ſoap, aloetics, and Indian pink. The alcaline ſalts ſhould not be uſed *ſtronger* than to excite a *pungency*

on

on the tongue, leſt they *abrade*, and too much *deſtroy* the inteſtinal mucus. The *pulvis ſabinæ* externally deſtroys warts, and internally is a powerful detergent and diſlodger of worms; the *ſem. ſantonic.* &c. During the adminiſtration of ſuch remedies cathartics of aloes and cremor tartar; calomel at night, and any approved purge the next morning; jalap and cremor tartar are as effectual as any; or the *pulvis e ſena comp.* with *ſem. ſantonic.* or with *pulvis ſabinæ, vin. aloeticum alcalinum*, &c. mercurials and aloetics; or the juice of freſh ſquills ſo diluted, as not to excite vomiting, has an irritating detergent quality in diſlodging and evacuating worms. Garlic cut ſmall and given in milk or juice of rue are excellent and ſafe vermifuges, particularly for children. The *ſuccus graminis* has, often, the power of diſlodging worms.

When worms are in the rectum, aloetic clyſters are excellent, which may be made by aloes boiled in milk, &c. or with tinctura ſacra and *decoctum commun.* pro *clyſtere*, ſalt, &c. Oily remedies continued, or the *oleum ricini*, fetid gums, ſulphureous waters, æthiops mineral, and cinnabarine preparations, and even the bark, frequently diſlodge and evacuate worms.

The ſolution of mercurius corroſivus ſublimatus has cauſed the expulſion of worms, and its preparations are likewiſe recommended; the former,

former, unleſs much diluted, is a rough medicine, and the latter contains frequently *poiſonous* particles. The *mercurius ſaccharatus* of the Edinburgh diſpenſatory is ſafer; and as an evacuant, the vermifuge troches are very effectual, when milder methods do not ſucceed.

Mercurius ſaccharatus Edinb.

No. 81. ℞. Hydrargyri
Sacchar. candi rubr. ā ʒſs.
Ol. ſtill. juniper. gut. xvj.
Tere ſimul in mortario vitreo donec penitus evaneſcant globuli.

Trochiſci vermifugi.

No. 82. ℞. Calomel opt. lævigati
Pulv. ſcammon. ā ʒij.
Sacchar. alb. ʒij.
Bene triturentur & cum ſolutione gum. arabici in aq. roſarum fiant trochiſci ℈j. pond.

No. 83. ℞ Calomel, limatur. mart. and cort. peruv. pulv. with honey, made into an electuary, is a very powerful anthelmintic.

The decoctum mercuriale is much recommended by ſome.

In the flat kind of worm.

No. 84. ℞. Stanni pulv.
Corall. rub. ppt. ā ʒj.
Syr. ſimp. q. s. f. bolus bis in die ſumend. cum ʒiſs. infuſ. amar.

No. 85. ℞ Aſſafœtid. ʒſs.
Mercur. dulc. ℈j.
Extr. rhæi ℈ij.
M. f. pill. gr. j. doſis x. mane & veſpere.

There

There was given daily ſeveral ſpoonfuls of honey under the courſe of this medicine, according to Redi and Le Clerc's obſervations, which had a very good effect.

All ſteel preparations are very uſeful.

Some years ago there was at Paris, and all over France, an *arcanum* in the higheſt eſteem, and recommended as infallible in the cure of the tape worm; the inventor, Herrenſchwand, kept it many years as the greateſt ſecret, and it ſold well as long as it was in his poſſeſſion. The great fame it acquired, encouraged ſeveral gentlemen of the faculty to diſcover the contents, but without ſucceſs; till at laſt Dr. Herrenſchwand was pleaſed to preſent the genuine compoſition to a particular friend, with leave to make it public, which is here given with pleaſure as an excellent medicine to diſlodge worms.

No. 86. ℞ Gum. gutt. Gamb. gr. iij. ad vj.
Sal abſinth.
Carbon. fraxini āā gr. xv. ad xxv. f. pulvis mane & veſperi ſumendus in cochl. ij. aquæ.

Hæmorrhoids or piles,

Is a varicoſe tumor and painful ſenſation in the rectum, or its external orifice, particularly in voiding the excrements.

The cauſes are: 1. Varices or dilatations of the hæmorrhoidal veins; blood is brought by

the arteries, but obſtructed, and ſtagnated in the venal ſyſtem.

2. An abraſion of the mucus in the rectum; or

3. Excoriations in and about its external orifice from acrimony, acrid cathartics, aloes, &c.

4. Compreſſions on the *iliac* veins from pregnancy, tumors, &c.

Piles are either ſanguineous, bleeding; or blind, as they are called, in which no blood iſſues.

A *prolapſus ani*, or falling down and elongation of the rectum, and excreſcences about the anus, are often miſtaken for the piles by the females; it is neceſſary, therefore, that the phyſician ſhould be certain of the caſe before he preſcribes; or all efforts of cure may prove fruitleſs.

Perſons once having piles, without great attention in avoiding conſtipation, and coldneſs in the feet, or other occaſional cauſes, frequently are troubled with recidives.

The *cure* muſt be accommodated to the ſpecies of the diſeaſe.

The veſſels being turgid, and the parts inflamed, are relieved by bleeding in the arm, feet, or hæmorrhoidal veins, or by leeches repeatedly applied, until the inflammatory ſymptoms

toms are removed by antiphlogiſtic and very abſtemious diet.

Sitting over, or in, tepid baths of flores ſambuci and warm water; or any emollient ſoft fomentations of mucilages, milk, &c. aſſiſt in removing venal obſtruction, or retardation; emollient cataplaſms of farin. ſemin. lini, with or without aqua vegeto mineralis, are very uſeful.

Coſtiveneſs muſt in every ſpecies be prevented by electuarium lenitivum, oleum amygdalinum, by æthiops, lac ſulphuris, magneſia, manna, ſtewed prunes, French plums, *electuarium e caſſia*, or ſuch mild eccoprotics; avoiding red wines, and aſtringents.

Pediluvia of warm water and common ſalt, as they promote a freer circulation in the extremities, contribute to remove the piles, which are known frequently to ariſe from cold in the legs and feet. When the violence of the inflammation is reſolved to a certain degree, the *aqua vegeto mineralis* joined with camphor is an excellent preparation to aſſiſt the contraction of the veſſels, and allay irritation. Vitriolic lotions are preſcribed for the ſame purpoſe. An abſtinence from all liquid food is particularly uſeful in preventing and removing the turgency of the veſſels.

The excoriations about the rectum are removed

moved by ſoft unguents, mucilaginous and oleaginous applications, preventing the contact and friction, as much as poſſible, of the paſſing excrements.

A liniment compoſed of litharge ʒj. well levigated, acet. com. ʒij. and ol. amygdal. dulc. ʒxiv. is excellent after the inflammation. The *aqua vegeto mineralis* may be preſcribed as a deſiccative.

The *ſanguineous* or *bleeding piles* have been conſidered ſalutary in all ages, and perhaps if moderate, this may be true; but they are certainly diſagreeable; and, contrary to received opinions, I have known theſe hæmorrhages, when *profuſe*, lay the foundation of dropſy and other grievous diſorders.

The bleeding piles are commonly owing to plenitude of the hæmorrhoidal veſſels from obſtructed menſes, or other ſuppreſſed excretions, and hard, retained excrements: therefore a cool, moderate regimen, the promoting the ſuppreſſed excretion, whether by ſtool, urine, or perſpiration, dry diet, and the removal of conſtipation, are the principal remedies.

If the hæmorrhage originates in relaxation, which moſt frequently happens to the nervous, tonics will be beneficial; at the ſame time coſtiveneſs muſt be prevented by the mildeſt methods.

The

The treatment of the hæmorrhoids or piles arising from compreſſion of the iliac veins during pregnancy, is conſidered in another place*.

All *aloetics* and *ſtimulating purges* muſt be avoided; for by irritation they increaſe the pain and inflammation; occaſion teneſmus, or a conſtant and fruitleſs deſire to evacuate the excrements.

Prolapſus ani,

Is the falling down, or protruſion of the rectum externally, particularly in voiding alvine excrements.

Cauſes are, hardened excrements, or conſtipation, a conſumption or depravation of the adeps ſurrounding the anus, and a relaxation of the elevatores muſcles, ſometimes conjointly with the ſphincter ani.

It is moſt commonly an attendant on relaxed habits and the nervous; or may ariſe from hæmorrhoids, teneſmus, calculi, ulcers of the bladder, womb, &c. This diſorder is very difficult to remove, and frequently incurable.

The *cure* depends on circumſtances.

If the anus has deſcended and cannot be returned, from ſwelling or inflammation, and

* In my treatiſe, The Cauſes of Death in Childbed inveſtigated, &c.

ſtricture,

ſtricture, emollient fomentations, ſitting over warm water, ſhould be uſed. Leeches muſt be applied, or ſometimes it is neceſſary to extract blood by the puncture of a lancet externally, to evacuate the contents of the tumor. Afterward, by the gentle preſſure of the fingers on each ſide of the tumor, the rectum aſcends, and ſhould be retained by compreſſing bandage.

The aqua vegeto mineralis, or weak ſolutions of white vitriol, cold bathing the part in a *bidée* may then be uſed to prevent a future *prolapſus*.

Coſtiveneſs in all inſtances ſhould be prevented by emollient laxatives; the diet ſhould be light and nutritious.

The tumor of the anus is ſometimes very conſiderable; becauſe the arteries continually force blood to the part; but from the contraction of the *ſphincter ani*, the veins cannot carry it back; the neck of the tumor is ſurrounded as with a ligature, and the returning veins are intercepted and ſtrangulated.

Gangrene and *mortification* have ſometimes been the conſequence; therefore, to prevent theſe direful effects, the tumor, when violently inflamed, muſt be ſcarified, as much externally as poſſible, the blood evacuated, and the

veſſels liberated from the threatening danger. This treatment is moſt neceſſary, when the diſorder is recent, and the inflammation runs high.

Emptying the veſſels of the lower extremities by venæſection in the feet, and bark ought not to be ſpared, to prevent gangrene: it is better by a judicious foreſight to avert misfortune, than to wait until it has happened and becomes irremedial.

The *prolapſus ani*, which has been of long continuance, and owing to the repeated relaxation of the part, or from fiſtula, piles, &c. is ſeldom cured.

Patients are in the practice of returning the tumor themſelves after every evacuation of excrement: if, however, the rectum always deſcends when the body is in an erect poſture, it ſhould be prevented by a bandage, and compreſs made of ſoft linen ſtuffed with wool.

The weight of all the inteſtines, fat of the omentum, and near the kidneys; the tenderneſs of a relaxed, weak tela celluloſa; the communication of its cells, which receives the gravitating humors from all the ſuperior parts; which by ſtagnation or diſtenſion in the lower, weaken the elater of the fibres in and about the anus; all account for the pain and obſtinacy of the diſorder.

The

The difficulty of curing the *prolapſus ani* is very obvious: the part is daily in action, the very cauſe therefore of the protruſion of the inteſtine conſtantly remains: check the ſtools, their hardneſs then will be a ſufficient cauſe; give laxatives conſtantly, and the repeated action of expelling the feces confirms the complaint, or produces a teneſmus, or ſtraining by the abraſion of the mucus, or from the acrid diſcharge which iſſues inſtead of mucus.

The cure, though difficult, has been in many inſtances effected, or the diſorder has been much mitigated, by the following or ſuch like remedies, conjointly with a moderately dry nutritious diet, cold bathing the part frequently in the *bidée*, and by aſtringent lotions applied to the part.

No. 87. ℞. Elect. lenitiv. ℥ij.
Æthiop. min. ʒvj.
Pulv. crem. tart. ʒij.
Syr. ſimp. q. s. F. electuarium de quo capiat Q. N. M. mane & nocte ad adſtrictionem alvi præveniendam.

℞. Tinct. cort. peruv. Huxham ʒij.
Decoct. ejuſdem ʒx.
Elix. vitriol. acid. gutt. xv. F. hauſtus, horis duabus ante prandium & cœnam ſumendus.

Opiates are contra-indicated; becauſe they retard the deſcent of the feces, and create coſ-

tiveneſs; but in great pain and abſence of reſt, a few drops of laudanum in an oleous draught may be proper.

Preventing conſtipation, and bracing the relaxed ſtomach and inteſtines, are the moſt rational methods of cure; but there are ſometimes *contra-indications*, eaſily perceived by an experienced phyſician, that will effectually forbid, or abridge our expectations, from theſe ſources of ſalutiferous practice.

The *prolapſus* originating in the conſumption, diminution, or depravation of the adipoſe ſubſtance ſurrounding the *inteſtinum rectum*, can only be cured by removing the cauſes; which are commonly great weakneſs from hectic or other diſeaſes; depraved digeſtion, chylification, ſanguification, and nutrition, œdema, anaſarca, diarrhœa, dyſentery, &c. &c.

In the fiſtula in ano, ulcers of the womb or bladder, ſtone, gravel, &c., the cauſes of the prolapſus from theſe ſources muſt be particularly attended to and removed, or no cure need be expected.

Spaſmodic

Spaſmodic ſtricture of the bladder,

Is an involuntary contraction of the *ſphincter veſicæ* reſiſting the expulſatory power of the *muſculi detruſores urinæ*, and obſtructing the free evacuation of the urine *.

This ſymptom may ariſe in the early months of pregnancy from the compreſſion of the uterus; or from ſtone, gravel, ſcirrhus, and ulcers of the womb, diſeaſes of the rectum, a thickening of the neck of the bladder, diſeaſed kidneys and ureters, &c.; abſceſs, ulcer, or tumors, cantharides, &c.; therefore no inconſiderable attention is neceſſary, leſt the caſe be miſtaken and improperly treated †.

The

* Anatomical examination after death.

Aperta cadavera ſubſtantiam viſcidam & mucoſam, lutum gypſeum, arenulas, calculos in veſica & ureteribus exhibent; non ſecus ac in renum pelvi, quæ etiam cruſta lapidea obducitur: ureteres obſtructi, calloſi, exſiccati. Renes inflammati, purulenti, putridi, lacerati, corrugati, depreſſi, aridi, tuberculoſi, compreſſi a tumoribus in partibus vicinis.—In veſica ſarcoſes, tumores ſcirrhoſi, cancroſi; vel veſica fuit contracta, calloſa, cartilaginea, lapidea, cruſta obducta; prolapſus uteri, vaginæ, recti. Veſicæ mala conformatio.

† Among the numerous poor who come for aſſiſtance on public days, I had a very remarkable inſtance of a young woman ſent by Mr. *Hardie*, ſurgeon in Weymouth-ſtreet, for advice. The urine had been totally ſuppreſſed 48 hours, occaſioning the moſt inexpreſſible pain. The cure was per-

If the urine has been long retained in the bladder, it can be drawn off by the catheter *.

The *cure* is effected by removing the ſpaſm with antiſpaſmodics; camphor in large doſes, oleaginous laxatives, warm bathing, either general or partial, and in caſes of conſiderable pain opiates may be added to the camphor. Medicated bougies to the urethra, and warm fomentations to the lower part of the abdomen are frequently neceſſary.

Incontinentia urinæ or *involuntary emiſſion of urine.*

This may ariſe from a variety of cauſes; but the relaxation of the ſphincter of the bladder

formed by a ſtrong ſolution of camphor with oil of almonds, nitre, and manna, in a few days.

Many other inſtances have occurred, in which ſimilar methods, ſometimes conjointly with opiates, have ſucceeded.

* Mr. Samuel, apothecary in High-ſtreet, Marybone, had a caſe of a pregnant woman, who could not void a drop of urine: I was conſulted, and diſcovered the cauſe to be owing to pregnancy and a relaxation of the ligaments of the womb, by which the uterus as it enlarged preſſed on the neck of the bladder. The urine was obliged to be drawn off carefully with a catheter, which I performed repeatedly, and ordered bark and other tonics, which ſoon removed the cauſe. In the later months of pregnancy this rarely happens, becauſe the uterus riſes.

is the principal cauſe in the nervous and debilitated.

As the complaint is cauſed by relaxation, corroborants of bark, ſteel, or vitriolic acids; cold bathing, and extremely *dry* nutritious diet, are the proper remedies.

This ſymptom may likewiſe ariſe from an increaſed action in the renal veſſels, by which an immoderate quantity of urine, acrid in quality, is poured forth into the weakened bladder unable to contain its contents: this happens from a ſuppreſſion of night ſweats in hectic complaints, and muſt be treated according to circumſtances.

If the involuntary diſcharge of urine be from a paralyſis of the muſcular coat of the bladder, it is rarely cured; but ſhould be attempted by tonics, volatiles, cold bath, electricity, and an extreamly dry, nutritious, warm, invigorating diet.

Pains in the Uterus or *Womb.*

Many are the cauſes of pains in the uterus; which require penetration in the phyſician to diſcover; for they are frequently miſtaken for *colics*, *gravel*, *ſtone*, &c., and of courſe treated very improperly.

Uterine pains are idiopathic or ſymptomatic, and may be owing to either diſeaſes of the ad-

jacent parts, as the kidneys, ureters, bladder or rectum, or tumors in the *iliac lymphatic ſyſtem*; or from uterine inflammation, tumor, ulcer, excoriation of the os uteri from a ſcratch, inverſion, moles, diſtenſions or collections of air, ſerum, blood, ſtony concretions, hernia, excreſcences, ſcirrhi, cancer, tumors of the ovaria, Fallopian tubes, &c. &c.

The pains of the uterus are ſituated low in the pelvis, between the bladder and rectum, and always imitate more or leſs thoſe of labor; or difficulty in menſtruation: by the ſympathy of the nervous ſyſtem, however, they ſometimes extend their influence to the ſtomach, occaſioning nauſea, vomiting, &c.

Pains from efforts to menſtruate.

Pains happening in the uterus, at or near the monthly period, are owing to the *os tincæ* reſiſting the natural efforts of menſtruation. Theſe pains ſhould not be mitigated by opiates, unleſs very violent; becauſe by ſuch a practice the menſes may be retarded or retained: camphor, valerian, myrrh, the gum pill, the pulvis e myrrh. comp., pennyroyal, and warm drinks gently ſtimulating and cordial, but not acid or flatulent, ſhould be ordered.

Pediluvia or feet baths are proper, to facilitate the menſtrual diſcharge, compoſed of te-

pid

pid water and a little ſalt, at bedtime; and the feet and legs ſhould be covered warm, either with flannel or ſtockings, particularly in the colder ſeaſons. In coſtiveneſs the pilula Rufi is uſeful.

Pains from contractions of the Uterus to force off coagulated maſſes contained in the uterus.

The pains from this cauſe are ſometimes almoſt equal to thoſe in child-bearing.

The *pulvis e myrrha compoſitus* and camphorated julep, ſpiritus nitri dulcis, or any other gently ſtimulating uterine remedy, and warm drinks, are proper to aſſiſt the expulſion of the offending cauſe.

If the pains are very violent, recourſe muſt be had to *opiates* joined with uterine remedies, if no *contra-indication* forbid their uſe.

Warm emollient injections to the vagina, and carminative clyſters greatly contribute to alleviate the ſymptoms and promote the expulſion of the coagula; but ſometimes they require an *obſtetric* extraction.

Various accumulations after death have been found in the uterus, which have weighed 100, or 80 pounds weight. I have one in my poſſeſſion filled with a ſolid maſs the color of the brain, one ovarium extremely hard, the other

filled

filled with lymph. This extraordinary caſe will be publiſhed, with other curious diſſections *.

Procidentia, Prolapſus uteri, or *falling down of the Womb.*

The *prolapſus uteri* is the deſcent of the uterus lower than uſual into the vagina; particularly when the female is in an erect poſture.

The deſcenſion of the uterus frequently occaſions impediments in the evacuation of the urine and feces from its preſſure on thoſe parts, eſpecially if the uterus be enlarged by tumor.

* Anatomical examinations after death.

A lochiorum ſuppreſſione, inflammatio, mors quinto die.

Uterus ingens ponderis 100 librarum qui aquæ ſubcruentæ octo & viginti pintas continebat, præter quatuor molas.

Uterus octoginta libras ponderans, ichore flavo, materia adipoſa & oleaginoſa infarctus.

Uterus fere univerſam abdominis cavitatem implens. Infarctus materia quadam rubicunda: ejus latera partim eroſa, adeo ut in pluribus locis ad chartæ tenuitatem diducta eſſent.

Fœmina in tertium menſem gravida vapulata marito, pedibuſque ad hypogaſtrium conculcata—Venter dein crevit inæqualiter. Inter difficillimum partum ſubita & enormi hæmorrhagia e medio tollitur.

Reperitur in ſubſtantia lateris dextri ſteatoma ingens, rotundum tredecim libras pendens.

Uterus ingens diverſibus materiebus farctus, carnoſis nempe excreſcentiis, membranis, tendinibus, oſſiculis, lapillis, & adeo ut pondus omnium ad quadraginta pondus accederet.

By

By conſent of parts it cauſes nauſea, faintneſs, and other ſymptoms of relaxation in walking, or exerciſe.

The *cauſes* are ſometimes univerſal debility; but more commonly a relaxation and elongation of the ligaments of the uterus.

The *cure*. When the *prolapſus uteri* happens from relaxation, and elongation of its ligaments; tonics, as the bark, vitriolic preparations, chalybeates, a *dry* nouriſhing diet, and pure air, will be proper. Relaxing drinks, as tea, barley water, broths, &c. muſt be abſtained from.

The cold bath, if no other diſeaſe of the viſcera forbid its uſe, will be proper; but it ſhould be *cautiouſly* preſcribed to females; for I have known inſtances of cold bathing inconteſtably producing that moſt calamitous of all diſeaſes, the ſcirrhus and cancer of the womb*.

* See my treatiſe on this ſubject, and the Letter to Dr. *William Hunter*, late phyſician extraordinary to Her Majeſty, on the dangerous tendency of *medical vanity*, occaſioned by the death of the Lady Holland, &c., in which is an extraordinary caſe of the cure of the *ſcirrhus* and *cancerous ulcer* of the *womb*, and an ulcer in the *rectum*, which had been given up as a loſt caſe by many eminent phyſicians. The mode of cure and preſcriptions are all given in the pamphlet, and afford ſufficient cauſe for humane phyſicians never to loſe hope, even in the moſt deſperate caſes.

Cold

Cold bathing is dangerous at or near a certain period.

If bracing remedies ſhould not ſucceed, the patient muſt ſubmit to uſe a cork, or other peſſary: but this will be more fully explained in the treatiſe on the Cauſes of Death in Childbed, &c.

On Pains in the forepart of the Head.

The animal functions ſuffer conſiderably and are frequently deranged in nervous diſeaſes; different pains of the head ariſe, which have been treated by medical authors more by the diſtinctions of names, than by any cloſe inveſtigation of cauſes.

Pains of the anterior part of the head are of leſs conſequence than in the poſterior; becauſe the cerebrum occupies the former, the cerebellum the latter: irritations or compreſſion of the cerebrum produce delirium, convulſions, &c.; but of the cerebellum diminiſhed, and ſlower circulation in the heart itſelf.

If *continual* pain affects the forepart of the head from plenitude, ariſing from obſtructed menſtruation, meditation, or ſtrong paſſions of the mind; venæſection, cathartics, and uterine remedies are eligible.

Depletion, however, will not avail, if the patient be ſuffered to drink large draughts of

diluting

diluting liquors, which is a ſtriking abſurdity, though the moſt common practice in the treatment of plethora *. A drier regimen in plenitude ſhould be, therefore, inſtituted.

The fumes of vinegar and embrocations are beneficial in promoting a diaphoreſis in pains of the head, and they have a vivifying nervine quality. Volatile frictions, æther, naphtha of nitre, l'eau de luce, ſmelling ſalts, &c. are all uſeful in palliating, if not in eradicating, the pain.

If the pain in the head ariſe from acrimony irritating the membranes, whether venereal, rheumatic, gouty, or ſcorbutic, &c. the remedies proper for theſe complaints are to be preſcribed; as mercurials, antimonials, or cinnabarine and other alteratives; veſicatories, cupping on the neck, pediluvia of ſalt and water, or a foot-bath compoſed of ℥ij. *ſpt. ſalis marin.* and three or four gallons of water, to be uſed for half an hour or more previous to reſt at night; which is excellent in all gouty or rheumatic attacks. Where the pain ariſes from debility and relaxation, *tonics*, and *dry*, but nutritious diet are to be ordered.

* For a more ſatisfactory demonſtration and refutation of the abſurd practice of ordering *diluents* where fullneſs abounds, or *emptying* and *filling* in the ſame moment, the treatiſe on Inflammations, and all other diſeaſes of the Eyes, Eyelids, &c. may be conſulted.

Pains

Pains in the poſterior part of the Head.

Intenſe pain in the poſterior part of the head deeply ſeated, with a low, depreſſed, and tardy pulſe, indicates compreſſion on the cerebellum.

The more ſuch pain is attended with ſtupor, or comatoſe ſymptoms and a ſlow pulſe, ſo much the more danger is to be apprehended.

The *cauſes* capable of producing ſuch alarming effects are many: but amongſt the nervous, conſtant meditation on one object, or continual anxiety of mind, with a debilitated, relaxed conſtitution, are the principal.

Perturbations of the mind, from whatever ſource ariſing, like madneſs, determine a greater flow of blood to the brain than the veins can return.

The veſſels of the dura and pia mater, the cerebrum and cerebellum, in all their various foldings become diſtended.

Diſtenſions enlarge the whole medullary and cortical ſubſtance of the brain, this being compreſſed on all ſides by the ſkull, ſeems too large to be contained in its bony cavity.

The ſenſation of the brain being too large for the ſkull is common to the deeply ſtudious, ſedentary, penſive, and nervous.

The ſinuſes of the dura mater, though extremely

tremely well calculated to prevent ruptures of the veſſels in the brain, yet are only capable of receiving a certain portion of blood.

If the ſuperabundant blood ſhould not paſs freely through the internal jugulars and occipital veins, accumulations muſt neceſſarily happen in the brain, whoſe veſſels, once over diſtended, may be liable, from future and ſimilar cauſes, to a continued ſtate of turgency.

Veſſels once diſtended may become ſo relaxed afterwards, that their coats may not be able to reſiſt the impelled fluid; relaxation is the conſequence, and a future aptneſs to continue the increaſe of their diameters, as may be ſeen in habitual or chronic ophthalmia, or inflamed eyes.

This turgency, according to its magnitude, may more or leſs occaſion ſymptoms of acute or dull pain, depreſſion of ſpirits, languor, low pulſe, faintings, apoplexy or palſy, &c.; for the nervous powers ill ſupplied, or obtunded in the brain, muſt neceſſarily diminiſh the vital powers of the heart and arteries, and all parts of the body ſuffer in proportion as theſe are affected *.

From

* Among many abſurdities, the pretended diſcovery of the *nervous fluid*, as a ſubſtance capable of ocular demonſtration, is one of the greateſt. The nervous influence is known moſtly by its effects; the true cauſes are too ſubtile, and perhaps

From the antecedent obſervations, and on reflecting that diſſections after the death of perſons long afflicted either with headach, or inſanity, demonſtrate a turgency of veſſels, particularly in the pia mater; a more rational mode of cure may be eſtabliſhed, than is hitherto invented.

Not only diſtenſion of the veſſels, but an acrimonious ſtate of the blood from the perverſion of digeſtion, conjointly with relaxation and debility, cauſe pains in the head of nervous perſons.

In all ſudden violent pains of the head, joined with a depreſſed and ſlow pulſe, bleeding in the jugular, arm, or cupping in the neck, and extracting blood, is proper; unleſs contra-indicated by ſome momentous cauſe, as dropſy,

haps will ever be hid, and inviſible to human diſcernment. I have injected arteries formerly, of ſeveral ſubjects, with a very fine, penetrating, minute injection, and have carried my injection ſo far as to tinge the nerves all through with the colored tincture. By a microſcope thouſands of fine arteries are ſeen all through the ſubſtance of nerves; where there be arteries, veins commonly accompany them and lymphatics: if this be allowed, which appears very rational, nerves will ſeem almoſt entirely compoſed of arteries, veins, and lymphatics. What a number of falſe concluſions have been promulgated on the nerves from an ignorance of their ſtructure, even as far as it is really demonſtrable? Theſe ſubjects are freely examined and diſcuſſed in the anatomical part of the *Schola Medicinæ*.

&c.

&c. in which caſe depletion by a ſmart hydragogue purge may be eligible.

The veſſels are turgid indubitably with fluids: diminiſh thoſe fluids, and the turgency cannot poſſibly continue. Neither bleeding nor purging can effect ſuch a rational purpoſe, except *pro tempore*, if patients are indulged in their uſual quantity of liquids; or, what is ſtill worſe, if *diluting liquors* are recommended.

Plenitude or fulneſs of veſſels from redundancy of liquids, and increaſed arterial action, are allowed to be the principal cauſes of inflammation, or diſtenſion of veſſels; evacuations of *bleeding*, *vomiting*, *purging*, are directed; then, *diluting*, as it is called, or rather *filling again*, in the ſame breath. How inconſiſtent! how incongruous! The blood is ſuppoſed capable of *dilution* by aqueous liquids; but a number of facts, drawn from experiments, in many diſorders, prove the contrary.

Neither in a turgency, nor overfulneſs of veſſels from an inflammatory *diatheſis*, nor from relaxation of the vaſcular coats, ſhould *diluting* or over large quantities of drinks be admitted; but in as moderate portions as poſſible to ſuſtain the patient: the leſs the patients drink, the ſooner the diſorder will be cured.

Bleeding patients repeatedly, while an inflammatory buff, as it is called, appears, and

the ſtarvation ſchemes indiſcriminately applied in varions chronic diſorders and hectic fevers, are to the full as contrary to found reaſoning, as the *diluting* projects.

Buffy blood will always appear in chronic rheumatiſm and gout; where no true inflammation exiſts, and where repeated bleedings would be attended with danger.

You may attempt to *dilute* the blood of pulmonic, hectic, gouty, chronic, rheumatic patients to eternity, were it poſſible; *bleed* daily, and allow nothing but *vegetable* diet; the blood drawn from the majority ſtill appears *ſizy* or *buffy:* a dropſy or incurable debility, and diſeaſed viſcera, may be the conſequence of ſuch ill projected practices; but no cure of the diſorders. The preceding truths have been admitted by many learned phyſicians; who have been too timid, or indolent, to aſſiſt in ſtemming the torrent of ſuch ill-founded prejudices.

Evacuation by bleeding or purging, therefore, ſhould always be accompanied with much more abſtinence from humid food, than is generally practiſed; by which means the ends of depletion may be obtained; or otherwiſe it will be, in a great meaſure, fruſtrated, and the dilatation of the veſſels will continue.

The moſt effectual *tonics* have their powers dimi-

diminiſhed by large portions of tea, which act as a fomentation on the already relaxed coats of the ſtomach and inteſtines; to admit then ſuch watery regimen is counteracting the very intentions for which *bracers* are preſcribed.

Fomentations and warm baths are externally applied to relax rigid fibres, reſolve impacted humors, and ſoften hard tumors, and indeed judiciouſly by ſurgeons; but any one would be conſidered as mad, who preſcribed relaxers and aſtringents in the ſame caſe, and in the ſame moment.

In the nervous headach, when evacuations firſt, and bracers afterwards are indicated; a *dry* diet ſhould be uniformly and ſtrictly obſerved: by theſe methods the relaxed veſſels and fibres of the body will grow more firm, and their particles be rendered more cloſe and compact.

Pain in the poſterior part of the head can originate from an effuſion of lymph in the ventricles of the brain, by which the pupils of the eyes become dilated, and ſometimes immoveable: this is rarely cured. Cauſtics or ſetons, however, behind the head may give relief in ſome inveterate caſes.

Acrimonies muſt be alſo conſidered, and whatever is irritating muſt be corrected, or evacuated.

Remitting pains in the Head.

Remitting pains in the head often accompany ſlight nervous fevers; in which caſe the fever ought to be primarily conſidered and removed, by antimonial diaphoretics without *diluents*, volatile ſaline draughts, and after, the exacerbation is to be prevented by bark, and acid elixir of vitriol, &c. during the remiſſion.

When the remitting headach is attended with a ſlight fever, and ariſing from diſeaſed viſcera, the cinnabarine alteratives and pulvis radicis valerianæ ſhould be joined with the antimonial diaphoretic, or volatile ſaline draught. The powder of bark and valerian have, in the ſlight fevers ariſing from perturbation of mind and relaxation, produced excellent effects.

Tonics, exerciſe, and amuſements, will be always beneficial.

Intermittent Headach.

The intermittent pain in the head attacks various parts; but more frequently the frontal ſinus immediately near the eyebrow.

The pain is acute, tears often involuntary flow, and a ſtrong light is troubleſome; dejection of ſpirits, and ſometimes nauſea from conſent of parts, are the vexatious attendants of this complaint. The pain commences periodically

dically every day, or every ſecond or third, in the manner of an intermittent fever, but without its regular ſtages; for the headach begins without cold ſhivering, continues without the dry or febrile heat, and terminates without increaſed perſpiration, or ſweat.

This pain, when fixed in a ſmall and any particular part of the head, is called the *clavus hyſtericus*; in general, the part it occupies may be covered with the point of a finger.

The *clavus hyſtericus* of the intermittent kind has been little underſtood and worſe treated; for vomits, bliſters, ſweating, purges, cuppings, leeches, and bleeding, have been preſcribed; all which remedies are injudicious and unneceſſary.

The one ſymptom, of regular intermiſſion of the pain, points out the type of the diſeaſe, and to what claſs it belongs.

The *cauſes* of this intermittent pain appears to be from a relaxation, or by a ſharp irritating ſtimulus, and vaſcular diſtenſion of a part of the frontal, temporal, or occipital muſcles, or ſome of their aponeuroſes; but if internally, the *dura mater* itſelf may be affected *. The *peri-*

 oſteum,

* The opinion of the late Dr. *Haller* is without foundation; when he aſſerted the *dura mater* to be inſenſible. Diſſections after death made by myſelf have demonſtrated diſeaſes of

oſteum, likewiſe, may be diſeaſed in a ſimilar manner, which every practitioner of experience knows to be irritable and capable of acute pain, *exempli gratia*, in old venereal attacks, particularly of the nocturnal ſpecies.

The cure of the intermittent head-ach ſhould be conducted by the methods the intermittent fevers are cured; but there is a ſtrong objection to *vomiting* in diſorders of the head: indeed I am thoroughly convinced ſuch a rough practice is quite unneceſſary in every ſpecies of intermittent fever, or what is called vulgarly the *ague*.

If *milder* methods than vomiting can be ſubſtituted, and the cure with equal certainty be performed; they ought to be adopted by every candid, unprejudiced, and humane phyſician.

The ſucceeding methods have cured intermittents in ſeveral thouſands of inſtances, and in many, when all the uſual preſcriptions have failed, though repeated many months.

Inſtead of vomiting, the firſt remedy preſcribed is a ſtomachic purgative to clear the ſtomach and inteſtines. This may be compoſed of rhubarb and ginger, tinctura ſacra, vi-

of this membrane, which during life cauſed the moſt exquiſite pain. The great Haller's experiments and reaſoning on this ſubject are by no means concluſive to inquiſitive minds.

num

num aloeticum, or infuſion and tincture of ſena. All ſaline purgatives are improper. Afterward, every other night, to prevent coſtiveneſs, or remove viſceral obſtruction.

No. 88. ℞. Merc. dulc. ſexies ſubl. ppt. gr. iij. vel vj. Pil. Rufi vel extract. cathart. ℈ij. M. accurate f. pilulæ No. xij. quarum ſumat j. omni vel alternâ quâque nocte.

On the firſt intermiſſion of the fever, or headach after clearing the inteſtines,

No. 89. ℞. Pulv. cort. peruv. ʒij.
Decoct. ejuſdem ℥vij.
Tinct. amar. ʒvij.
Elix. vitriol. acid. ʒj. f. miſtura, cujus coch. iij. larga, ſecundâ, tertiâ, vel quartâ quâque horâ ſecundum violentiam morbi ſumenda, in doloris capitis intermiſſione.

This plan has ſucceeded in numerous inſtances of the intermittent headach, and even intermittent fevers. A *dry* nutritious diet ſhould be recommended, *tea*, and all ſlops, or broths, gruels, &c. ſhould be abſolutely avoided; but porter, or ale with ginger; or a glaſs of red port or other wine may be allowed at meals.

If the bark thus preſcribed ſhould fail, then the following preſcription will remove the inveteracy and obſtinacy of the complaint:

No. 90. ℞. Spec. aromat. ʒj.
Pulv. cort. peruv. ʒiij. Syr. ſimp. q. s.
F. electuarium de quo capiat Q. N. M. largæ

ſecundâ vel tertiâ quâque horâ in intermiſſione doloris capitis, vel febris, ſuperbibendo coch. iij. miſturæ ſequentis.

No. 91. ℞. Decoct. cort. peruv. ℥vijſs,
Spt. lavend. c. ℥ſs.
Vitriol. alb. gr. j. ij. vel iij. M. f. miſtura.

It has been lately remarked by our learned Preſident of the London College, Sir George Baker, that the bark has not ſucceeded in curing intermittents; the bark is certainly very often adulterated, which may be one cauſe of its inefficacy: but for my own part, for above twenty-five years, I have always united other *tonics* with the *cortex peruvianus*.

The tonics I have moſtly depended on are the ſal martis, flores martiales, limatura martis, ſmall doſes of the vitriolum album, the flores zinci, and ſimilar preparations; all of which, except the prepared ſteel, ſhould be preſcribed in a diſſolved form, in order to divide and diffuſe their particles, and render them eaſier on the ſtomach.

The vitriolum album in ſmall doſes, without any bark, has cured great numbers in the ague given in the following mode.

No. 92. Take of chamomile flowers a quarter of an ounce, let them be boiled ten minutes in little more than a quart of water.

Strain off the liquor through flannel, at the ſame time preſſing the flowers.

Pour the liquor into a quart bottle, when cool.

Then weigh out 4, 6, or 8 grains of white vitriol, according to the age, ſex, or ſtrength of the patient, which muſt be diſſolved in a glaſs or marble mortar by rubbing it with the peſtle, and adding ſome of the liquor.

When the white vitriol is diſſolved, it muſt be well ſhaken with what is in the quart bottle.

Laſtly, add a quarter of an ounce of grated ginger, or powdered allſpice.

After having firſt purged the patient with ſena tea or Daffy's elixir, rhubarb, or any bitter purge, it is neceſſary to wait until the fit of the ague is ōff, which is the ſpace of time between one fit and the other.

One, two, or three table ſpoonfuls of the above mixture is to be taken according to the age or ſtrength of patients, or violence of the ague, every two, three, or four hours between the fits.

The ague by this means diminiſhes, every following fit is ſlighter, and the diſorder is frequently cured in a few days, without the bark.

During the time of taking the *vitriolic ague mixture*, the bowels ſhould be kept open by the following pill, eſpecially if the ſpleen, which is called vulgarly the *ague cake*, or the liver, be affected, circumſtances common to agues,

Take of prepared calomel (from Apothecaries' hall in London) 5 or 10 grains.

Rufus's pill one dram; let them be beaten together in a mortar until the powder and the maſs of the pill be well blended together.

Then divide the whole into twenty pills.

If Rufus's pill, or what is called the colocynth pill, with or without aloes or cathartic extract, be uſed, the difference is trivial; but Rufus's pill is beſt for *females*.

If the maſs of the pill ſhould be too hard, a drop of brandy put to it, and beating it in the mortar, will render it ſofter.

To thoſe patients who have been accuſtomed to drink ſpirits, a little brandy, gin, or Britiſh ſpirits ſhould be added to the vitriolic mixture.

The expence attending the cure of each patient is not, on an average, above four pence or ſix pence at moſt, and it is now publiſhed, that humanity may have an opportunity of aſſiſting poverty.

A dry diet is neceſſary, for moiſture is a principal cauſe of the ague; if *tea* is uſed, one ſmall diſh morning and evening will be ſufficient; meat may be eaten, and grated ginger may be always added to malt liquors. This mode of diet in autumn and winter would greatly prevent the *ague*.

If bark, however, be added to the mixture, which might render it more powerful, half an ounce powdered will be ſufficient for that purpoſe; which makes an additional four pence. At a moderate computation a hundred poor perſons may be cured, even if the bark were added,

added, at leſs than a ſhilling each, which in the whole would not amount to five pounds *.

This explicit mode of curing the *ague* is delivered for the benefit of thoſe charitable *ladies* or others, who reſide in the country, or remote from cities, or who are induced to relieve the diſtreſſes of their poor neighbours.

Intermittent inflammations of the eye are more common than is imagined, and are rendered worſe by bleeding, purging, bliſtering, applying cauſtics or iſſues, pultices, &c.: theſe ſhould be cured by bark, tonics, and *dry* diet †.

The intermittent toothach in relaxed nervous habits ſhould be cured in a ſimilar manner; in ſhort all intermittent complaints whatever, when ariſing from laxity of ſolids, depravations of the fluids, and nervous debility. There are, however, few nervous caſes, that require the *vitriolum album*; bark, confectio cardiaca, and volatile ſalts; or elixir of vitriol joined with bark and ſome aromatic, as

* Powdered bark may be had in London from ſeven to eight or nine ſhillings a pound; chamomile flowers are about three ſhillings per pound; white vitriol not above a penny an ounce; calomel prepared twelve pence per ounce.

Rufus's pills, &c. nine pence to a ſhilling per ounce.

† See my treatiſe on 216 Diſeaſes of the Eyes.

the

the ſpecies aromaticæ, &c. commonly ſucceed *.

The ſubject of intermittents ſhould not be quitted without animadverſions on a few prejudices that have prevailed.

1. It is ſaid, that the intermittent fever is often a cure for ſome other diſorder, and therefore ſhould not be haſtily cured.

2. That intermittent complaints ſhould be ſuffered to continue a limited time before the bark is adminiſtered.

3. That bark is the ſpecific and certain cure for the ague or intermittent fevers.

4. When *bark purges*, it ſhould be joined with opium.

5. That vomits ſhould always be given ſome little time before the paroxyſm or fit, or in ſhort, it is always the firſt remedy preſcribed in the ague, and even moſt other fevers.

* I had lately a very remarkable inſtance in a very nervous female patient of Mr. Hogarth's in Swallow-ſtreet, who every night was ſeized at ſix o'clock, after tea, with the moſt excruciating pains in the feet firſt, then they aſcended up the limbs, and laſtly to the os ſacrum and inguen, taking away the uſe of her limbs, and occaſioning convulſions. I immediately ordered a laxative, and very large doſes of bark, ſpecies aromat. and vitriolic elixir, every hour or two in the intermiſſion. Theſe means immediately diminiſhed the ſucceeding fit, and the patient was reſtored to the uſe of her limbs, the pains and convulſions ceaſed, and ſhe was cured in a few days.

I. *The ague* is *not the cure of any diſorder*; but a diſeaſe very inimical to the human frame, depraving the juices, relaxing the ſolids, depreſſing the ſpirits, and, laſtly, greatly injuring the viſcera and their functions, particularly the ſtomach, inteſtines, liver, and ſpleen, &c. which anatomical diſſections have fully demonſtrated. To run the riſk of obtaining theſe *injuries* to the human body, in hopes of being relieved from any *other complaint* is too ridiculous even for ignorance, one would imagine, to credit or adopt; yet theſe doctrines have been taught, have been credited.

II. *Intermittent fevers*, or *agues*, *ſhould not be ſuffered* to continue a *limited time* before they are cured. The contrary of this poſition was ſupported on the ſame flimſy grounds of the former article, and points out the ſame objections. The blood is depraved, and laxer in its *texture*; let the *ague relax* it more, ſay theſe phyſicians; the ſtomach is weak, relaxed, and incapable of digeſtion, and the inteſtines of chylification, render them leſs capable of performing theſe neceſſary functions; the face is pale, the red particles of blood are deſtroyed, the ſpirits are ſunk, the muſcular actions are all debilitated; make theſe calamities *worſe*; and when the patient is reduced to death's door, then adminiſter the ſheet anchor, that ſacred *dernier reſort*, the bark.

I aſſert

I aſſert from my own experience, and the experience of hundreds of other practitioners in this country, that the bark, after a ſtomachic bitter laxative, cannot be adminiſtered too ſoon, nor too often; cut down the diſeaſe in the bud, on its firſt appearance, never ſuffer it to take root, and all its conſequences are prevented.

III. Bark alone is pronounced a *ſpecific* in the ague; I aſſert the contrary is the caſe in many inſtances: hundreds have been cured, in the manner I have already communicated, without a particle of bark, nor am I without hopes of ſtill improving thoſe plans of cure, which have been ſo ſucceſsful. Perhaps centaury, wormwood, or other bitters would anſwer every purpoſe of chamomile flowers, which is merely a bitter ſtomachic of no great efficacy.

The *bark alone* is never ſo efficacious, as when aromatics and vitriolic preparations are added to it; the ague by theſe modes is cured immediately, often without a ſecond *fit*; and certainly a prompt, is preferable to a ſlow languid cure *.

IV. When

* The principal part of theſe animadverſions is calculated more for the Continent, or places in our own country remote from London; in this great city abundance of practice muſt have confirmed theſe obſervations. I have ſeen the poor in the hoſpitals of *Turin*, *Genoa*, *Florence*, *Rome*, *Naples*, *Venice*,

IV. When the bark *purges*, it is frequently not inefficacious, as has been ſuppoſed; on the contrary, it perhaps carries off from the inteſtines

nice, and different parts of France as well as Italy, bled in the ague repeatedly, and even in putrid remitting fevers. No arguments I could uſe with the phyſicians of the hoſpitals, could prevail, to induce them to change their bleeding, ſtarving plan, and diluting, though the patients died, in favor of giving ſmall doſes of antimonials in *paroxyſmo* vel *exacerbatione febris*, and in the remiſſion, or intermiſſion, *cortex peruvianus*, vitriolic acid, and to direct a dry diet.

Phyſicians ſhould liſten to propoſed improvements with candor and humanity, and after reflection by analogy and probable effects of remedies, if not dangerous, ſhould try their efficacy with fairneſs, and not with an arrogant ſuppoſition or wiſh, that what is not of their own acquiſition, may not have merit. I adviſe my travelling countrymen never to approach the Continent without *James's powder* and *bark*; theſe have ſaved many Engliſh lives, when the ſelf-conceit and obſtinacy of French or Italian phyſicians would have proved fatal. At Vienna and other parts of Germany, Flanders and Holland, practical medicine, with ſome few exceptions, is better.

Men acquire a profeſſor's chair, ſometimes, before they have written many preſcriptions, before they have had opportunities for great practice and experience; in which caſe all the knowledge they iſſue is dependent on the caprices, opinions, or, perhaps, fallacies of their predeceſſors. Men are not capable of teaching, who are not well taught and experienced themſelves; and no man can well comprehend medicine by either hearing lectures, or much reading; but by long prac-

tines what would diminiſh its *tonic* effects. Bark does not enter the lacteal ſyſtem, nor is abſorbed by inhalent veins; its *tonic* qualities act on the coats of the ſtomach and inteſtines only, which a number of experiments made by me prove. When, however, it continues purging for two or three days, prepared chalk, terra japonica, or extractum ligni campechenſis, and ſome aromatic, ſhould be added; which much better accords with the bracing power of the bark than *opiates*.

Opiates diminiſh the moving powers, and create coſtiveneſs, both which ſhould be avoided in all low nervous or intermittent fevers; for theſe complaints commonly ariſe from relaxation, a depraved relaxed texture of the blood, and a weakened force of the arterial ſyſtem, notwithſtanding the pulſations are accelerated.

Vomits in the intermittent fevers, and indeed moſt other fevers, are unneceſſary; they

tical experience, and obſervations made by himſelf, on the force of diſeaſes, and power of medicine. Tuition frequently taints the fancy with numerous prejudices, and a deleterious intoxication: but a multitude of experience in practices ſobers the mind again. Trifling medicines would never be preſcribed in important caſes, nor powerful remedies in trivial diſeaſes, where knowledge is obtained by experiments and obſervation.

force

force an immenſe quantity of blood to the head, and conſequently diſtend veſſels, which ſhould preſerve their diameters: this diſtenſion from vomits in the commencement of fevers, may be a principal cauſe of the *delirium* towards the criſis; but more of this in another place.

In the intermittent fever, or ague, the viſcera, ſuch as the liver and ſpleen, are often diſeaſed; all judicious phyſicians know, or ſhould know, that vomiting is contra-indicated in diſeaſed *viſcera*, and unleſs there be *ſaburra*, bile, or other matter in the ſtomach, which cannot be carried down through the inteſtinal canal, *vomits* ſhould certainly be excluded.

It is ſolemnly aſſerted, from experience on thouſands, that the ague can be cured always without *vomits*, and the obſtructions of the viſcera prevented, or removed ſafely by a ſmall doſe of calomel and any aloetic or bitter purgative repeated every other night, after the bowels have been firſt thoroughly cleanſed.

The *liver* or *ſpleen* being diſeaſed, or the bile ducts obſtructed, are the principal impediments in curing the intermittent fever, or ague; therefore removing thoſe impediments by aloetic pills with calomel, or ſoap with any aloetic, or by ſal diureticus, &c. are methods commonly crowned with ſucceſs. I have al-

ways attempted in agues, and indeed all intermittent complaints, the prevention or removal of viſceral or inteſtinal obſtruction, by giving *alterna quaque nocte*, while the bark or other tonics were adminiſtered, half a grain of calomel, and from three to ſix grains of the *pilula Ruſi.*

When the fit of the ague is expected, a few grains of James's powder, or from the fourth to the eighth part of a grain of *tartarum antimoniale*, ſo as neither to occaſion nauſea nor vomiting, are proper, and they ſhould be repeated every two, three, or four hours, to excite perſpiration, remove obſtruction, and ſhorten the duration of the cold and hot fits *.

A dram of the true *crude ſal ammoniac* diſſolved in any proper vehicle, and given an hour or two before the fit, has been recommended as a ſovereign cure for the ague; but as I have not tried it, and as I cannot perceive any tonic qualities in the remedy, I have thought it moſt humane to proceed in the modes which ſcarce ever fail of ſucceeding.

* Amongſt other miſtaken notions, is one which aſſerts, that antimonials do not excite perſpiration without creating nauſea or vomiting, repeated trials prove the contrary; unleſs amongſt the very robuſt and torpid.

Slight

Slight temporary Delirium.

Nervous patients are afflicted with ſlight wanderings of the mind, at times; they are momentary, without fever, and may ariſe from whatever irritates the brain, either corporeal or mental.

If diſtenſion of the œſophagus from air be the cauſe, by retarding the circulation in the returning veins, carminatives, aſſafœtida, and other antiſpaſmodics, are uſeful.

If the ſlight temporary delirium can be ſuppoſed to originate in any acrimony irritating the brain, the cure may be rationally attempted by correctors of the prevailing acrimony, or by mineral alteratives.

Extreme relaxation may be the cauſe; then tonics and a dry nutritious diet ſhould be preſcribed.

Mental perturbation, or violent paſſions, will kindle up a temporary delirium; when the furor is abated, calmneſs, ſerenity, and a determination not to be diſturbed by any thing, however provoking, ſhould be recommended.

Drowſineſs.

Somnolentia, or drowſineſs, indicates compreſſion on the brain, and may ariſe from full-

neſs of veſſels, from an overloaded ſtomach, or from meditation, which is apt to ſend a great quantity of blood to the brain.

During digeſtion, or chylification after dinner, numbers are attacked with drowſineſs.

This ſymptom, in hot climates and in Italy, is indulged by reſt after dinner without injury.

In colder climates, it is ſometimes a prelude to more ſerious diſeaſes, as apoplexy and palſy, and ſhould be removed by obviating the different cauſes.

Volatiles, a more abſtemious diet, evacuants, diaphoretics, pediluvia, exerciſes, and amuſements, are the general remedies againſt drowſineſs.

Stupor, or *Hebetudo*,

Is a dulneſs of memory and mind; ideas cannot be recalled or commanded without unuſual exertion. Patients ſeem ſometimes to reflect deeply, but often cannot expreſs by the tongue their conceptions.

Cauſes.—This is ſometimes attendant on old age, or continues after inveterate epilepſies, apoplexy, or palſy; or ſucceeds intenſe meditation, or any great and long-continued violent exertions, or paſſions of the mind.

Hem-

Hemlock, opium, or other narcotics, have produced this ſymptom *.

Prognoſtic.—When the ſtupor is recent or accidental from the uſe of opiates or narcotics, it is eaſier cured by an abſtinence from thoſe medicines, than in caſes ariſing from an impaired mind, apoplexy, or palſy; for theſe latter, in progreſs of time, end fatally, with or without convulſions, lethargy, &c.

The *cure* requires an inveſtigation of cauſes and their removal. Volatile ſalts, the ſal ſuccini, antimonial diaphoretics, cupping, frictions, bliſters, pediluvia, evacuants, as diuretics, cathartics, and diaphoretics; or alteratives of the cinnabarine kind, if from acrimony, are to be adminiſtered.

Watchfulneſs, or *Pervigilium*,

Is the defect of ſleep, or a ſolicitude for ſleep without acquiring it.

The bodily *cauſes* are, every depraved ſtate

* The lady whom I cured of a cancerous ulcer of the womb, and who was the ſubject of the letter againſt Dr. Hunter on Medical Vanity, had taken only ſmall doſes of hemlock by Drs. Fothergill and Hunter's order: this medicine produced ſuch loſs of memory, that while ſhe had a bit of light pudding on a fork in her hand, ſhe called for her dinner, and it was with difficulty ſhe could be made to ſwallow her food, when ſhe had it in her mouth; ſo impaired was her memory by taking hemlock.

of the blood that can irritate the brain; ſuppurations, ulcers, &c.; the mental, ſtrong affections of the mind, as love, grief, fear, &c.

The conſent of the ſtomach with the brain may likewiſe occaſion watchfulneſs by indigeſtible food, detained wind, &c.

The *cure* is to be attempted by removing the different cauſes.

If watchfulneſs originates from bodily pain, unleſs neceſſary for ſome important purpoſe, light opiates may be admitted. If from mental perturbation, opiates often render the ſymptom worſe, and produce ſlight deliriums, or convulſions.

When indigeſtion in the ſtomach is the cauſe, light bitter aloetics in mint water are proper, not to purge, but merely to act as ſtomachics.

In debility, corroborants are neceſſary, and a dry diet; if prevailing acrimony is the cauſe, it ſhould be removed chiefly by rendering the blood more balſamic by the uſe of metallic alteratives and proper diet.

Frightful Dreams, Incubus or *Night-mare.*

The nervous or indiſpoſed perſons are oppreſſed during ſleep with a heavy preſſing ſenſation on the cheſt, by which reſpiration is impeded,

impeded, or the circulation of blood intercepted to ſuch a degree as to threaten ſuffocation.

Frightful ideas are recollected on waking, which occupied the dreaming mind.

Frequent attempts are made to cry out, but often without effect, and the horrors and agitations felt by the patient are inexpreſſibly frightful.

Theſe ſenſations generally originate in a large quantity of wind, or indigeſtible matter in the ſtomach of ſupper eaters, which preſſing the ſtomach againſt the diaphragm impedes reſpiration, or renders it ſhort and convulſed. Inflated inteſtines may likewiſe produce ſimilar effects.

Worms in the ſtomach or inteſtines may, by irritation, prevent ſleep.

The forementioned inſtances are relieved by avoiding all flatulent food, or ſuppers, and by giving carminatives, bitter ſtomachics, and laxatives, a little ſpirits and water, inſtead of malt liquors, &c.

Worms are to be removed by anthelmintics.

There is another ſpecies of the incubus or night-mare, which has a more dangerous tendency, and this ariſes from an impeded circulation of blood in the lungs when lying down; or too great relaxation of the heart and its impelling powers.

Epilepſy, or apoplexy, or ſudden death, are ſometimes amongſt the conſequences of this ſpecies of diſturbed ſleep.

Polypi in the large veſſels, aneuriſms, water in the thorax, pericardium, or lungs, empyema, &c. are amongſt the moſt dangerous cauſes.

A ſlighter cauſe may be air diſtending the œſophagus. An overabundance of coagulable lymph in the blood, joined with debility in the arterial ſyſtem, may give riſe to polypoſe concretions.

This ſtate of blood is common to gouty, rheumatic, and nervous patients, and is no ſign, as was formerly imagined, of *true* inflammation, and experienced practitioners know that bleeding repeatedly has been attended with fatal conſequences; for it has produced dropſies or worſe diſeaſes.

If polypoſe concretions may be ſuppoſed, which is not eaſily known, in urgent caſes and difficult reſpiration, unleſs amongſt the gouty and debilitated, bleeding muſt be uſed; afterwards bliſters repeated, volatile alcalies, or the *ſal ſodæ*, *ol. tart. per deliquium*, according as circumſtances indicate, joined with the bitter infuſion, are proper.

Pediluvia of *ſpiritus ſalis* marin. ʒiij. ad cong. iv. aquæ tepidæ, are proper, particularly to the

the gouty and rheumatic *, to be uſed ſucceſſively every night for twelve or fourteen times.

Water in the cheſt, or pericardium, lungs, &c. is rarely removed; but attempts may be made by antimonial diaphoretics, evacuating cathartics not too freely adminiſtered; by chalybeates and other tonics, if they do not impede reſpiration, bliſters to the cheſt, and a very dry nutritious diet. Tar water has been uſeful in theſe caſes, and diuretics of the terebinthinate kind.

In the empyema, the purulent matter muſt be evacuated by the chirurgical operation for that diſeaſe; but as the diſorder commonly ariſes from ſuppurations of the lungs, &c. little ſucceſs is expected in ſuch calamitous diſeaſes. A long experience has convinced me, that few recover after the empyema, water in the cheſt, pericardium, &c.

The aneuriſm either of the aorta, or ſubclavian artery, are always incurable.

The moſt common cauſe of diſturbed ſleep amongſt the nervous is a quick perceptibility of mind, and too anxious a concern for what-

* See my treatiſe on the Gout, and its ſafe alleviation by this remedy. Since the publication of the firſt edition I have ſeen very excellent effects from theſe bathings; not as a radical cure of the gout, but as a great mitigator of all its ſymptoms.

ever engages the attention; therefore love, hope, fear, ſuſpenſe, vexation, grief, or even the contemplation of paſt pleaſures or ſufferings, will eaſily diſturb ſleep, and occaſion horrid or frightful dreams.

When the principal cauſe is reſident in the mind, medicine can afford little relief, except by blunting the ſenſations with fetid remedies; by mild reaſonings, and by a friendly participation of the anxiety that diſturbs the patient's tranquillity.

Agitations of the mind, Peeviſhneſs or *Petulance.*

The diſpoſition of human minds often change from bodily indiſpoſition: the beſt tempers become captious, peeviſh, and iraſcible under diſeaſe, and the moſt fierce and tyrannical are frequently depreſſed, mild, and timid from the ſame ſource.

A ſharp acrimonious blood, joined with exquiſite ſenſibility of mind, will greatly conduce to the production of feelings diſtreſsful to the poſſeſſor; ſlight accidents are magnified into the greateſt misfortunes; the ſoul perceives every thing through a cloud, and no balmy rays of comfort are admiſſible to ſuch afflicted beings.

A mind agitated and thrown into violent paſſions from little cauſes, indicates a depraved

ſharp

ſharp ſtate of the blood, and great ſenſibility in the nervous ſyſtem.

The degeneracy of blood in nervous diſeaſes might have been the principal cauſe.

Sharp blood produces inexpreſſible uneaſy ſenſations in the body.

The mind becomes peeviſh without knowing the cauſe.

An agitated mind is productive of inappetency, or indigeſtion, and a depraved chylification.

Depraved chyle produces depraved blood.

Degeneracies of the blood occaſion degeneracies in all the fluids, ſecretions, and excretions.

It is eaſy to conceive the mind and body becoming reciprocally and alternately the cauſe and the effect; the effect and the cauſe of miſerable ſenſations, burſting forth into violent paſſions.

Iraſcibility and petulance appear natural to ſome particular perſons; or rather, they are often acquired by ſelf-indulgence, or the early indulgence of parents and friends *.

* The ſubjects are purſued more accurately in my *Hiſtoria & Schola Medicinæ*, wherein different ſtates of the blood are demonſtrated to exiſt according to different paſſions of the mind; which throws a great light on human character and its diverſities.

Wherever

Wherever agitations of the mind, peeviſhneſs, or petulance exiſt, they always injure the conſtitution, and they increaſe in proportion as they are cheriſhed or indulged.

The ſtate of the body ſhould be conſidered, and whatever diſeaſe it labors under ſhould be removed.

In debility, after proper evacuations, by ſtomachic laxatives, tonics, and dry nouriſhing diet; in acrimony or ſharpneſs of humors, correctors, according to the ſpecies, are to be adminiſtered of æthiops, or cinnabar of antimony and the pulvis e tragacanth. compoſitus, &c.

Thoſe who indulge themſelves voluntarily in agitating their minds without provoking cauſes, ſhould be well informed, that they embrace the moſt effectual methods, not only to ſhorten, but even to render their exiſtence, during life, miſerable.

If patients are not determined to be calm, or to moderate their paſſions by ſtruggling againſt them, medicine will ſeldom prove efficacious, however judiciouſly preſcribed.

Nervous patients ſhould, therefore, under theſe circumſtances, never condemn medicine as defective in not being able to eradicate, or counteract the natural or acquired propenſities of the human mind, grown inconquerable by too much indulgence, or by long diſeaſe.

Changing

Changing the ſtate of blood, however, by mild alteratives, has very much contributed to the cure of what is known by the name of bad unhappy tempers; for the blood being rendered more balſamic and healthful by the removal of acrimony, the ſenſations of body and mind become more pleaſant, and ill humor, with all its aggravating malignity, is gradually diſſipated.

Miſerable feelings at the happineſs of others, or envy with all its poiſonous malignity, are certainly more owing to a bad ſtate of blood, and certain form of body, than has been generally imagined; and indeed the countenance of ſuch miſerables indicate, by the glance of their eyes, the unhappy ſenſations of the ſoul; while pallidneſs, ſallowneſs, and meagerneſs, ſhew the indiſpoſition, and bad nutrition of the body. *Frontis nulla fides* * may be uſeful to the undiſcerning, but not to the experienced and ſenſible, when applied to the delineation of human character. Penetrating phyſiognomiſts comprehend the natural diſpoſition of human beings, after long experience and obſervation amongſt mankind, by a momentary glance, and they credit, or ſuſpect appearances with tolerable certainty. Thoſe who are moſt inclined to doubt the poſſibility of detecting human cha-

* Juvenal, Sat. 2. ver. 8.

racter

racter in the countenance are, perhaps, the perſons who by artifice wiſh moſt to conceal the depravities of their hearts, and who act always in maſquerade. A celebrated French author ſays: *Et l'on n'eſt jamais ſi aiſément trompé, que quand on ſonge à tromper les autres.*

Phyſicians above all others have the greateſt opportunities of developing human character; they ſee mankind in health and ſickneſs; under diſguiſe and without diſguiſe, in courts and in ſick chambers; and I am certain, thoſe who make the juſteſt obſervations, will be moſt capable of preſcribing for the diverſities of human nature.

Education, ſocial life, and polite company, will reſtrain or correct a natural vitiated diſpoſition, but not entirely eradicate the ſeeds of perverſeneſs and ill humor, nor induce the crafty and deſigning to be unreſerved.

Thoſe who well comprehend human character know, that it is as difficult for the open, generous, and juſt, to be guilty of duplicity or deceit, as the artful, deſigning, and malignant to act with integrity, truth, and juſtice. Cicero ſays, very juſtly, *Frons eſt animi janua*; no man had greater opportunities of underſtanding mankind.

J. Baptiſta Porta has made excellent obſervations on theſe ſubjects.

Lavater

Lavater has diſtinguiſhed himſelf as a moſt exquiſite phyſiognomiſt; but phyſicians may carry the ſubject much farther; for they may diſcover many cauſes of human character in the ſtate of the blood, form of body, and mental propenſity, independent of original tranſmiſſion of conſtitution from parents; or what is attained by education, example, precepts, cuſtoms, and different climates: theſe are ſubjects little attended to; but the field is immenſe for deep ſpeculation and curative utility, and well merits the ſerious conſideration of every ſcientific phyſician.

The ancients conſidered, what they called *temperaments*, or various differences of conſtitutions; but they failed in demonſtrations on theſe ſubjects; therefore experimental philoſophy, chemiſtry, mathematics, mechanics, hydroſtatics, pneumatics, &c. have been, at times, prematurely forced into the medical art, in order to *fix* medicine to ſome more *permanent ſtandard* for practice. Various inquiries of this nature have occupied the attentions of the moderns, but the doctrines of temperaments have been nearly neglected. It is hoped, various temperaments and conſtitutions, which indubitably exiſt in nature, will be more accurately ſcrutinized; for the great lights of the circulation; the known differences of arterial and venal blood; the diſcoveries made in the lymphatic

lymphatic ſyſtem, the chemical analyſes and other modes of aſcertaining the component principles of blood and other fluids of different habits; the diſcoveries and experiments on the nerves; electricity, air, fire, water, earths, &c. &c., all tend to clear the medical mind of former prejudices. Though attempts to explain the deep cauſes of human character may be new and difficult, yet if they be purſued with vigor and energy, the whole art of medicine will be rendered more certain*; for it would be applied more aptly to the individual conſtitution of mutable nature *.

The effects of love, grief, deſpair, envy, hilarity, deep meditation on one ſubject, in ſhort of all the human paſſions and ſentiments, will hereafter be conſidered in a manner not hitherto attempted; which may tend more ſatisfactorily to elucidate nervous and maniacal affections †.

Groundleſs

* What obſervations and experiments I have made from conſidering form of body, ſtate of blood, hereditary diſpoſitions, dawnings of the infantile mind, education, diſcipline, precepts, examples, cuſtoms of countries, powers and effects of climate, diet, laws, religions, &c. &c. ſhall be unreſervedly communicated; and though not ſo perfect as I could wiſh, yet it may induce others to purſue the ſame ſtudies, which will prove an excellent addition to the republic of medicine.

* With regard to the paſſion of love, the hiſtory of Seleucus Nicanor, and Antiochus his ſon, is a great proof of the penetrating

Groundleſs Fears and diſmal Apprehenſions.

The groundleſs fears and diſmal apprehenſions of the nervous are truly ſhocking to their friends, and inexpreſſibly depreſſing and melancholy

penetrating diſcernment of the firſt great improver in anatomy, Eraſiſtratus.

Eraſiſtratus, the famous phyſician to Seleucus Nicanor, king of Syria, is an inſtance what an attentive and ſkilful practitioner can diſcover, by obſerving the features and changes in the color of the face—Antiochus, the ſon of Seleucus, fell in love with Stratonica, his mother-in-law, wife to Seleucus; but not daring to diſcover it, he fell dangerouſly ſick with a high fever. Eraſiſtratus, the phyſician, was called for, who obſerved, that the preſence of Stratonica made great alterations in the prince, whenever ſhe came into the chamber; on the contrary, when other people or ladies came to inquire, no changes were perceivable: he then gueſſed at the real cauſe of the prince's indiſpoſition, and endeavored to acquaint Seleucus of the caſe with great prudence and circumſpection. Eraſiſtratus told the king, that the caſe of the prince was incurable, as it was cauſed by a violent love for a woman whom he could not poſſeſs.

What do you ſay? Is there no remedy for my ſon! ſaid the king. Eraſiſtratus replied, *Sire, you will ſoon be convinced of it, when I tell you that the prince is in love with my own wife, and I am reſolved not to part with her on any account whatever.* Seleucus then took Eraſiſtratus in his arms, and ſaid, *How can you refuſe me what alone can ſave a ſon whom I ſo tenderly love!* To this the phyſician anſwered, *Great Sire, pleaſe to put yourſelf in my place, would you, royal Sire, give up Stratonica, if the prince loved her?*

melancholy to the ſufferers. The oppreſſed mind is wretched in its preſent condition, and anticipates a thouſand imaginary misfortunes. Some

Ah, by all the gods! exclaimed Seleucus, *if it pleaſed to them to reſtore my ſon to health, and this could be the means, I would with great pleaſure cede Stratonica, and give alſo to him a conſiderable part of my empire.*

Immediately Seleucus declared his ſon king of Aſia Superior, and gave him Stratonica as a wife. The good ſenſe and prudence of Eraſiſtratus muſt appear very evident. Eraſiſtratus and Herophilus, Tertullian ſays, had diſſected 600 human bodies, in order to get acquainted with human nature. They had ſufficient influence with the Ptolemeys to have permiſſion to diſſect dead bodies, and, indeed, Celſus ſays, *condemned criminals alive.*

Celſus de medicina, lib. i. in proem., expreſſes himſelf very elegantly, ſaying, "Neceſſarium eſſe incidere corpora "mortuorum, eorumque viſcera atque inteſtina ſcrutari: lon- "geque optime feciſſe Herophilum & Eraſiſtratum, qui noxen- "tes homines a regibus ex carcere acceptos, vivos inciderint, "conſiderarintque etiam ſpiritu remanente ea quæ natura antea "clauſiſſet, eorumque poſituram, colorem, figuram, magnitu- "dinem, ordinem, duritiem, mollitiem, lævorem, contactum, "progreſſus deinde ſingulorum & receſſus: & ſive quid inſe- "ritur alteri, ſive quid partem alterius in ſe recipit." — He adds farther a very ſenſible remark: "Neque crudele eſſe ho- "minum nocentium & horum quoque paucorum ſuppliciis, "remedia populis innocentibus ſeculorum omnium quæri."

The opening dead bodies to ſcrutinize the parts was contrary to the Greek and Roman laws. In the Iphigenia of Euripides is this paſſage: If any one ſtain his hand by murder, if any one touch a cadaver or woman immediately after parturition, the gods diſcharge him from their altars as impious and profane.

Many

Some think every night that they ſhall not live to ſee morning; others are continually anxious for their children, friends, or on whatſoever occupies their affections; a religious and

Many paſſages in the Bible prove the great averſion the Jews had for touching dead bodies; the ſame opinion prevailed in general with all the eaſtern nations, and in the hot countries, where dead bodies ſoon fall into putridity.

The good effect of the liberty of diſſections, immediately produced a conſiderable change in medicine; for above all things, anatomical demonſtrations purge the mind of hypotheſes, fallacies, and imaginary conceits. All the anatomical knowledge of the ancients was chiefly owing to the induſtry of Eraſiſtratus and Herophilus, under the auſpices of that great encourager of literature, Ptolemy Lagus, or Soter.

The ſciences cannot be well promoted, except by the generoſity of princes; but how few have encouraged the uſeful art of medicine? How many ages were they ſuffered to languiſh without any protector? Louis XIV. muſt ever be revered for his various inſtitutions at Paris, of which any induſtrious ſtudent may partake without fee or reward. How much more grandeur of ſentiment and philanthropy appear in ſuch a prince, than in thoſe who neglect ſuch noble opportunities of immortaliſing their fame? — One great objection to a medical education at many univerſities is the impoſſibility as well as difficulty of procuring dead bodies for anatomical exerciſes; and I affirm, that no man ever became a complete phyſician without diſſecting with his own hands many ſubjects: diſſection gives a knowledge of the parts, and leaves an impreſſion on the mind which cannot be effaced; theſe advantages lectures ſeldom anſwer, which is often the cauſe of a deficiency in anatomical knowledge.

pious deſpondency ſeize ſome; others have imagined themſelves dead, and have directed their funeral: in ſhort, the innumerable variety of falſe images theſe nervous patients ſuffer and expreſs, appear little ſhort of inſanity; and they happen frequently to thoſe of the beſt underſtandings, joined with great nervous ſenſibility.

Theſe wretched ideas originate in a diſtracted mind, from abſurd, irrational fears or deſires, or from too cloſe and long continued contemplation of abſtruſe, deep myſteries, above human comprehenſion; from fears inſpired by ignorance and fanaticiſm; or from bodily debility rendering the faculties of the mind timid, ſuſpicious, and miſerable.

When theſe mournful or diſmal apprehenſions have originated in the mind independent of bodily diſeaſe, they are more difficult to remove than if produced by bodily infirmity.

The cure of the mental wretchedneſs depends much on the ſoothing, reaſoning, and the conſolation of affectionate friends: in religious deſpair, by the calm advice of a confidential friend or divine, inſpiring the deſpairing mind with hopes, and diverting the melancholy, according as circumſtances require; but, above all, the removal of the patient from the company of ignorant bigots, promoters of falſe enthuſiaſm, or gloomy perſons.

When

When the body has been primarily affected, and the ſenſations of deſpondency ariſe from debility, the modes of cure already directed for various ſymptoms may be adopted.

Unjuſt ſuſpicions of intended miſchief are beſt removed by inculcating or acquiring confidence, removing the cauſes by change of air, diverſions, and chearful company.

Taciturnity and *meditation* ſhould be conquered by engaging the patient to converſe on favorite ſubjects; by removing from calm retreats to more buſtling and active ſcenes; by changing the objects of attention, and, if poſſible, by exciting the paſſions.

Deſpondency is beſt relieved by fortifying the mind with hopes, and chaſing away all diſmal companions, particularly harſh, ill-judging zealots in religion; by giving active ſtimulating purges, and by forcing the patient to uſe exerciſes even to fatigue. Such patients ſhould be narrowly watched, leſt they commit ſuicide.

Flying Pains.

Flying pains, in nervous patients, may ariſe from emphyſematous diſtentions of the *tela cellulosa*, rheumatiſm, gout, acrimony of various ſorts, vellicating the nervous filaments, and diſtending the minute vaſcular ſyſtem, or from obſtructed perſpiration.

The removal of theſe flying pains depends on firſt diſcovering their cauſes.

In gouty pains, flying in different parts of the habit, nothing is ſuperior to the pediluvium compoſed of the *acidum muriaticum* greatly diluted with warm water*, unleſs the patient ſhould have calcareous concretions in the hands, knees, elbows, or feet.

Internally, light antimonial diaphoretics, with camphor and confectio cardiaca, or volatiles, according to ſymptoms and conſtitutions, are ſucceſsfully preſcribed.

The *flying* rheumatic pains may be treated in a ſimilar manner.

Emphyſematous nervous *diſtentions* yield commonly to laxatives, light diaphoretics, vapor baths, the volatile ſaline draught, or ſpiritus Mindereri, with cordials, &c.

Acrimonious pains from ſcurvy, ſcrophula, lues venerea, &c., require the different metallic remedies, as anti-venereals, alteratives, &c.; which ſhould be very cautiouſly preſcribed for the nervous.

Fluſhings in the Face, and various parts.

Fluſhings are very common amongſt the nervous ſymptoms, and appear to ariſe from men-

* See *Treatiſe on the Gout alleviated.*

tal

tal agitation forcing a great quantity of blood, which is already acrimonious, to the head and face; or from an irregular action of the fixed air in the fluids, or in the cellular ſtructure of the human body, with obſtructions in the returning veſſels.

Fixed air, or other air, may act as ſtimuli, and be uſeful in the circulation of the blood and action of the fluids on the ſolids; but like other neceſſary particles, if over-abundant, may ſtimulate and increaſe arterial action, forcing red particles into the cavities of the minute ſerous arteries, or into the minuteſt cells of the human cellular ſtructure: hence fluſhings, heat, and redneſs.

If mental perturbation be the cauſe of fluſhings, acting on the arterial ſyſtem, a determined calmneſs, and avoiding every thing likely to diſturb tranquillity, are neceſſary.

If from the ſuperabundance of fixed or other air let looſe, and ravaging with force and irregularity through the minute meanders of the human frame, its generation ſhould as much as poſſible be prevented in the ſtomach, and its treatment be ſimilar to that of *flatulency*.

Light diaphoretics likewiſe are proper in ſuch caſes, or the vapor baths prepared with nervine herbs, to promote its evacuation through the pores of the ſkin. A continued mild alte-

rative courſe acts with more certain, though tedious effect, than all others, not only in changing the blood, but removing obſtruction itſelf.

Senſations of Cracking, or *Exploſions in various parts.*

From ſimilar ſources to the laſt-mentioned ſymptoms, the ſenſations of crackings or exploſions originate. If in the head, they prove very troubleſome; in ſuch caſes cupping in the upper part of the neck I have found uſeful. A puncture in the ſkin of the leg or arm, or poiſonous, infectious matter received in the ſtomach, have ſuddenly produced an emphyſema; the air has been attracted by the communication of the tela celluloſa, and collected in all the external and cellular ſtructure of the muſcles, adeps, cutis, &c.

I have thought, by the effects of cupping in cracking and exploſions in the head, that with the blood ſome of the diſtending air has been attracted or expelled, by which means the patient has been ſoon liberated from the uneaſy ſenſations produced.

Imaginary Debility and diſinclination to move.

An imaginary debility frequently invades the minds of the nervous: they ſuppoſe it is impoſſible to walk acroſs a chamber without falling. If they be oppoſed in this unreaſonable

fear

fear or diſinclination to move, ſome become obſtreperous and violent; others give tokens of grief: are profuſe in complaints, and are apt to ſuppoſe their moſt affectionate friends barbarous, when earneſtly ſolicited to ſhake off theſe tranſitory ill-founded conceits.

It is very certain that patients under the dominion of theſe ſymptoms only expreſs what their feelings urge: though by obſervers theſe falſe images are plainly perceived, yet in the patient's mind they ſeem realiſed, and merit our compaſſion and attention.

Reaſoning, or arguments of ſurrounding friends, to convince the patients of their erroneous mental images, frequently aggravate the diſeaſe: harſhneſs is oppoſed by violence and vociferation: ſoothing mildneſs ſtrengthens the conceits. I have always found it moſt eligible to obſerve a middle courſe in applying to the patient's mind; neither altogether acquieſcing nor denying the poſſibility of the nervous timidity. When they have dwelt ſome time on theſe miſerable feelings, ſome new object ſtarts, the ideal debility and diſinclination to move vaniſh, and the patient ſuddenly riſes, walks or rides, and demonſtrably proves the late calamitous apprehenſion viſionary.

It is abſolutely neceſſary for the phyſician to combat and conquer theſe ſymptoms by mild-

neſs

neſs and perſuaſion, or indeed according to circumſtances and diſpoſition of the patient: good ſenſe will ſuggeſt what conduct and behavior is moſt conducive to anſwer theſe purpoſes, and chace away thoſe ill-founded fears. If they be indulged, patients will remain in bed, or purſue an indolence likely to debilitate their already relaxed habits, or create diſeaſes more dangerous than the nervous.

Diverting the mind, and engaging it to ſome new intereſting objects, will often avail. The application of medicine muſt be dictated by what has been already repeated. Plethora is to be diminiſhed by venæſection and evacuants; debility requires tonics, and acrimony mild mineral alteratives, according to the prevailing ſpecies.

On the Pulſes of the Nervous.

The pulſes of nervous patients are various; ſome are ſlow and firm, others quick and low, yet the patients labor under ſimilar affections.

The concluſions from the pulſe, were they regulated by the doctrines in other diſeaſes, would be often fallacious.

To the nervous particularly belong the privilege and power of exciting or diminiſhing the pulſe by the operations of the mind.

Impetuoſity,

Impetuoſity, iraſcibility, or peeviſhneſs, will quicken; grief or melancholic ideas retard the contractions of the heart and arteries.

The pulſe, therefore, in the nervous is not to be ſo much depended on as in many other diſeaſes.

Where even acrimony ſometimes abounds, the pulſe is not weak, nor quickened: in other inſtances the circulation is much augmented, if not in ſtrength, yet in celerity. *Febres erraticæ*, and even a natural ſalivation, have ariſen from this laſt ſource, joined with anxiety of mind. Bleedings, abſtinence, and low diet, do not cure, but injure the patient, by leſſening the vital powers, inducing additional languor and depreſſion of ſpirits *.

The ſtrongeſt pulſes amongſt the nervous are moſt favorable; the quick and weak leſs: but the intermittent and very ſlow are moſt alarming, and indicate more than the others the poſſibility of preſent defect, and future ill conſequences.

* Bleeding and antiphlogiſtics, ſaline evacuants, abſtinence, or extreme low watery diet, have been preſcribed, from perceiving a quick pulſe and tranſitory heats, but improperly. Neither the heat nor quick pulſe ariſe from plenitude, nor an inflammatory diatheſis, but from acrimony, or a lax texture of the blood; therefore alteratives or tonics, and nutritious foods, are often moſt eligible. See theſe doctrines more fully diſcuſſed in the Eſſay on the *putrid, malignant Sore Throat*, &c.

Dyſpnœa,

Dyſpnœa, or *difficulty of breathing.*

The dyſpnœa is a difficulty of breathing.

In the nervous it moſt frequently originates from ſympathy.

The œſophagus being diſtended with wind, and compreſſing the larynx and pharynx, or the ſtomach or inteſtines inflated, and acting on the diaphragm, will occaſion a difficulty of breathing, and even a ſyncope, or fainting.

The treatment of the nervous dyſpnœa ſhould be ſimilar to the hyſteric paſſion; the ſymptoms are to be palliated or cured by carminatives, fetids, antiſpaſmodics, and aloetic remedies, lime water, calcined or common magneſia, volatile alkaline ſpirits, &c.; but the deeper cauſes ſhould be removed by the more important methods already recommended.

Nervous cough and *nervous aſthma.*

The nervous cough is either ſympathic, from various diſeaſed viſcera, and is producible on hearing any other perſon cough, from agitation of mind, or idiopathic, when the *membrana pituitaria* is affected.

The former generally ariſes more from affections of the mind, flatulence in the œſophagus, ſtomach, or inteſtines, morbid liver, or other viſcera irritating the diaphragm, than from any primary diſeaſe of the lungs. The latter,

or

or idiopathic, is an irritation of the *membrana pituitaria*, which not only extends over the whole inner ſurface of the noſe, but all through the internal ſtructure of the lungs.

The treatment of both caſes will be eaſily comprehended. Neither repeated bleedings, unleſs in plethora, abſtinence from animal food, nor the extreme low diet which ſome phyſicians have ſo rigorouſly adopted, will avail in the nervous cough, but relax the habit, and often render the nervous affection incurable *.

The lungs are only ſecondarily to be conſidered in the ſympathic nervous cough, as they are more generally irritated to increaſed convulſive action, by the morbid affection of ſome other viſcus.

As in the dyſpnœa, ſo in the nervous ſympathic cough, the œſophagus, ſtomach, inteſtines, are inflated, or there may be diſeaſes of the liver, meſenteric glands, and other viſcera; therefore the inveſtigation and removal of the cauſes of this dry cough muſt be governed by an attention to the primary diſeaſe.

In both the ſympathic and idiopathic nervous cough, aſſafœtida, joined with alkaline volatile

* I have ſeen this ſpecies of cough treated as a *phthiſis pulmonalis*, or pulmonary conſumption, which has ſo lowered and emaciated the patient, as to render recovery very difficult.

ſalts,

ſalts, or volatile tincture of valerian, mitigate the cough, particularly in the pallid and languid: in the more florid, large doſes of camphor diſſolved, and united to any aqueous menſtruum by means of blanched almonds, or in the following manner, are uſeful:

SOLUTIO CAMPHORATA.

No. 93. ℞. Camphor ʒſs. vel ℈ij. ſolve in
Spiritu vini rectificato ʒiij. deinde adde
Gum. arab. pulv. ʒiſs.
Sacchar. alb. āā ʒiſs. miſce ſimul denique adde gradatim aq. pur. ʒviiſs. f. ſolutio camphorata, cujus capiat coch. ij. vel iij. ad libitum in dyſpnœa nervoſa, cum vel ſine aliquo liquore convenienti.

To this mixture, if neceſſary, may be added *elixir paregoric. tinctura thebaica, volatile alkaline ſalt*, &c., or very ſmall doſes of *antimonium tartariſatum*, according to the nature of the caſe, the conſtitution of the patient, and will of the preſcriber *.

Opium pulveriſed, and joined in ſmall quantities with gum benzoin, or frankincenſe, ſtorax, &c., and received in the form of a light fume, has greatly allayed the irritation of the nervous

* This is a much better preparation of camphor than the julapium e camphora; becauſe in the former the doſe of the camphor may be aſcertained; in the latter, the fineſt particles, by the boiling water, fly off, rendering the remedy of doubtful utility, or, perhaps, in a great meaſure, inefficacious.

cough,

cough, particularly if the reſpiration be not difficult or weak: the ſame preparation has likewiſe proved very ſerviceable in mitigating coughs from various other cauſes; when joined with ſmall quantities of *cinnabar factitium*, in form of a fume, it will probably aſſiſt in removing thoſe *tubercula* in the lungs, which are the forerunners of pulmonary conſumption.

Oleaginous mixtures united by the volatile alkaline ſpirit, to which may be added tinctura thebaica, under proper reſtrictions, have produced ſalutary effects; but oils are objectionable, in general, for nervous patients, as they are apt to relax the tone of the ſtomach and pall the appetite.

In the *nervous aſthma*, opium ſhould be very cautiouſly preſcribed, or wholly omitted. The reſpiration and circulating powers are ſometimes very weak, and a doſe of opium, injudiciouſly preſcribed, has ſent patients to eternal reſt.

Lac ammoniacum, and the ſolutio camphorata, with the fourth or eighth part of a grain of the *antimonium tartariſatum*, every four or ſix hours, bliſters, volatiles, and fetids, with pediluvia, and even venæſection, in urgent caſes, have moſt availed in removing or palliating the nervous aſthma.

In more obſtinate and chronic caſes, pediluvia, bliſters, ſquills, lac ammoniacum, æther, and

and ſometimes tonics, are neceſſary. Æthiops mineral, cinnabarine preparations, mercurial pills of the argentum vivum, &c., with antimonials, are very beneficial as cauſe-removing remedies in theſe nervous coughs or aſthma.

No. 94. ℞. Cinnab. fact. ppt. ʒvj.
Conſ. cynoſbat. ʒiſs. Syr. balſam. q. ſ. f. Elect. cujus capiat Q. N. M. bis vel ter in die, ſuperbibendo coch. ij. vel iij. ſolutionis camphoratæ.

Pains under the mediaſtinum, in the pleura, or *diaphragm.*

Amongſt nervous patients I have frequently obſerved pungent pains immediately under the mediaſtinum, in the pleura, or diaphragm: the anatomical conſideration of the ſituation of the pain determines ſometimes, though not always, the part affected. If the pain be immediately under the ſternum, the diſeaſe is ſeated in the mediaſtinum, or in the veſſels of the heart; if on the ſides, in the thoracical muſcles or pleura; if pains ſhould extend from the fore and lower part of the thorax to the back, the diaphragm is affected.

Theſe pains have originated commonly from ſudden grief; that on the mediaſtinum has ſucceeded a kind of ſobbing, in which the patient thinks the heart is ready to burſt; and there is reaſon ſometimes to conclude, the heart has become

come enlarged from over dilatation, which, in ſome inſtances, ſooner or later, may be attended with dangerous or fatal conſequences.

Theſe ſymptoms are generally accompanied with a dry cough, and the heart ſuffers palpitation in the pain affecting the mediaſtinum, on aſcending up ſtairs, or walking up a hill *.

Thoſe nervous pains in the pleura, or even diaphragm, are commonly more troubleſome than ſerious: they often accompany gouty or rheumatic acrimony, and are to be treated accordingly, by bliſters, volatiles, &c.

The fixed pain, originating from extreme grief, or any very violent paſſion of the mind, immediately in the center of the ſternum, requires a copious bleeding to prevent thoſe conſequences which a large quantity of blood might create, when directed to the heart by the force of the over-afflicted or agitated mind. The ſooner this operation is performed, on any violent guſt of paſſion, or ſudden and vehement grief, the greater probability there will be that leſs injury will happen to the heart or its large veſſels.

Bliſters, antiſpaſmodics, and laxatives, are advantageous; but preferable to all is the con-

* The palpitation of the heart, and its various cauſes, are fully conſidered in the *Treatiſe on convulſive Diſeaſes.*

ſolation of affectionate friends, whoſe participation in ſorrow or misfortunes will tend to the alleviation and diminution of the oppreſſing affliction.

To the methods of cure, already recommended in nervous diſeaſes, may be added the adminiſtration of clyſters, repeated once, twice, or thrice in the day, which may be detergent, nervine, or alterative. The firſt, compoſed of weak ſolutions of borax, aloetics, ſope, in decoctions of detergent herbs, cleanſe the rectum and partly the colon, preſerving the regular periſtaltic motion of the inteſtines. The ſecond are antiſpaſmodic and carminative, compoſed of warm ſeeds in decoction or infuſion, weak lime water, or *magneſia alba calcinata vel non calcinata*; theſe correct and abſorb fixed air, and remove flatulency. Weak acid clyſters might correct alkaline air. The third, compoſed of very weak ſolutions of mineral alteratives, as *Plenk*'s ſolution with ſulphurious waters, *antimonium tartariſatum*, &c., &c., carry their effects farther into the conſtitution, by the abſorbing powers of the lacteal ſyſtem on the ſurface even of the large inteſtines. On theſe new modes of treatment much more may be advanced at ſome future opportunity.

A

TREATISE

ON

MADNESS, SUICIDE,

&c. &c.

Insanity.

THOUGH it was not originally intended to treat on infanity in this performance, yet, as ſome doctrines drawn from anatomical obſervations after death, point out modes of cure, hitherto unattempted, the ſucceeding thoughts are delivered, that thoſe who have opportunities may make trial of their efficacy.

Madneſs, or infanity, is an alienation of the mind, without fever.

It is diſtinguiſhed into two ſpecies; melancholy, or mania; furor, or raving madneſs.

The former is known by ſullenneſs, taciturnity, meditation, dreadful apprehenſions, and deſpair.

The latter is attended with a violent and inordinate deſire often to do miſchief; fury, vociferation, impetuoſity of temper, an indomable turbulence and vehemence; an angry and wild ſtaring look in the eyes, actions raſhly attempted, and as ſuddenly relinquiſhed; obſtinacy, perverſeneſs, immodeſty, are amongſt its characteriſtic ſigns.

Theſe are the two general ſpecies of inſanity; but they are often complicated; and in madneſs, as in the natural tempers of human beings, there is an infinite diverſity.

Various are the opinions on the cauſes of madneſs; but *pathemata animi* certainly are the principal, as love, pride, grief, &c. Hoffman thinks it to be a debility of the brain; others ſuppoſe it to ariſe from black blood, diſeaſed liver and ſpleen, acid humors in the ſtomach, ſuppreſſions of accuſtomed evacuations, &c. &c.

Venal bleedings, arteriotomia, vomiting, purging, immerſion in cold water, hot baths, diuretics,

diuretics, ſetons, bliſters, the ſoliciting accuſtomed evacuations, *diluters*, camphor, nitre, mineral waters, light diet, air and exerciſe, ſtripes, ſoothing words or flattery, and attention to the minds of patients, are the principal remedies preſcribed by all authors in madneſs.

From a contemplation of the plans of cure adopted for madneſs, it ſeems, that the diſorder has neither been ſcientifically conſidered, nor judiciouſly treated. The general uſe of evacuants by purging is rational, but *vomiting* and *diluting* are certainly very abſurd. The veſſels of the head by diſſection are found over diſtended, and vomiting ſends up a greater quantity of blood, accumulating evil on evil. Where the veſſels are already turgid with blood, the admiſſion of great quantities of *diluting* liquors muſt add fuel to fire, and increaſe the fulneſs; not to mention its incongruity with evacuants. If *evacuating* the veſſels be a proper curative intention, *filling* them again muſt be a contradictory practice, and reproductive of the diſeaſe.

The few opportunities practitioners in general have to examine, deeply, the nature of madneſs, except thoſe who turn it greatly to their emolument, may be the cauſe of theſe diſorders being little underſtood. I have attended

ſome few inſtances, and have opened the bodies of ſome mad perſons after death, and finding my diſſections correſpond nearly with others, from theſe ſources of intelligence will ſome new opinions be advanced on the ſubject; that thoſe who have the power of attending the inſane may, if they approve, apply the methods.

As to dependence on medicine, I have ſeen enough of the mad to know, that many cannot be prevailed on without violence, namely, what is called ſpouting, to ſwallow any; therefore, the manner of treatment here propoſed will be derived from anatomical information, and greatly conſiſt in a ſtrict attention to diet, as well as medicine.

Diſſections of mad Perſons.

The diſſections of mad perſons after death ſhew various indiſpoſitions of the brain and its membranes *.

The

* Appearances from diſſections after death.

MELANCHOLIA.

Symptomata morborum.	*Extiſpicia cadaverum.*
Melancholia cum capitis dolore quem ſequuntur convulſiones.	Pus in cerebro.
—— ſiti moleſtiſſima ſtipatur, ſubito moritur.	Ventriculi cordis infarcti pituita.
—— cum inſania.	Venæ capitis varicoſæ.

— tabe

The veins of the dura and pia mater, cerebrum and cerebellum, are greatly *diſtended* with *dark-colored blood.*

The

Symptomata morborum.	*Extiſpicia cadaverum.*
Melancholia tabe confecti.	Viſcera abdominis ſcirrhoſa
——— in febre cum dolore dorſi, cui ſuccedunt fluxus hæmorrhoidales & corporis tumeſcentia.	Pancreas & pulmones purulenti, cerebrum turgens colluvie ſeroſa.
——— aſthma & tabes dein.	Hepar ſcirrhoſum; pectus aqua ſcatet; pericardium cordi adnatum.
——— cum furore, dein amentia.	Cerebrum exſuccum & flavum.
——— melancholicus gladio ſe confodit, ſanatur; ſed dein ſuborto vomitu enecatur.	Cor marcidum, aqua citrina in pericardio.
——— ſemet ipſe ſuſpendit clavo feneſtræ.	Lien putridus.
——— poſt uſum fructuum horariorum moritur.	Pancreas calculoſum.
——— cum ſummo calore.	Sanguine nigro turgent venæ encephali, aqua ſtagnat in ventriculis cerebri.

MANIA.

Symptomata morborum.	*Sectiones cadaverum.*
Mania, a lochiis ſuppreſſis poſt ſeptennium oborta, hæmorrhagia uteri ſedatur, qua tamen nimis perdurante, moritur ægra.	Uterus paſſim ſcirrhoſus & paſſim cartilagineus.

Mania

The meninges have been found offified.

Congeſtions called *polypi* and pus, have been diſcovered in the brain; but this, perhaps, is the effect more than the cauſe.

The

Symptomata morborum.	*Sectiones cadaverum.*
Mania ſuccedit cephalalgiæ & animi perturbationibus, poſt ſe trahit ſyncopem lethalem.	Hepar exiguum, vaſa encephali ſanguine turgentia, meninges offeæ, plexus choroides hydatidoſus, & aqua in ventriculis cerebri.
——— poſt ſtudia intenſa.	Cerebrum ingens, compactum; vaſa ejus ſanguine turgida.

In aliis ſubjectis fuerunt inventæ meninges offificatæ, & aqua in ventriculis cerebri; plexus choroides ſcirrhoſus; cerebra perdura; cranii oſſa ſolito multo majora; vermes in naribus.

Pauca depromuntur ex obſervationibus anatomicis:

Vaſa cerebri ſanguine craſſiori, ſubatro turgida, colluvies ibidem ſeroſa, plexus choroides muco obductus, glandula pinealis vitioſa.

Cor polypis refertum — abdominis vitia varia. Ovarium ſteatomatoſopiloſum repertum—*Miſcell. Berol.* iii. p. 16.

Mania. The ſeat of this diſeaſe about the vena portarum *Simſon.*

Meninx dura ſicca. *Fantoni & Baglivi.*

Lapilli inventi in glandula pineali. A plica reſecta tumidum cerebrum, membranæ putridæ. *Haller.*

Polypus in cerebro. *Idem.*

Anatome maniacæ mulieris; 1. in the inteſtines were found a great many tæniæ and ſome lumbrici; 2. the meſenteric

The veins of the brain are varicous.

The ventricles of the brain are ſometimes full of ſerum or lymph.

Scirrhoſities and hydatides, or rather varices of the plexus choroides, are frequent.

The pineal gland vitiated and ſcirrhous.

The brain turgid with a ſerous colluvies.

Worms, or rather polypi in the noſe, and ſinuſes of the os frontis.

Polypoſe concretions in the ſinuſes of the dura mater.

Various diſeaſes of the viſcera, which, excepting the ovaria and uterus, appear more the effect than the cauſe of madneſs.

ſenteric glands obſtructed and indurated; 3. the aliments in the inteſtinal duct every where of a white color, the chyle not having been yet ſeparated; 4. the inteſtines very much diſtended with wind, in ſome places inflamed; 5. the brain inflamed alſo; 6. in the anterior ventricles extravaſated ſerum; 7. a large polypus in the ſinus falciformis, alſo in the left lateral, in the right a ſmall one; 8. the whole ſubſtance of the lungs full of pus, and ſcirrhous; 9. œdematous legs. *Harmer.*

From ſome diſorder of the brain, from hot and acrimonious blood, juices, vapors, but chiefly from yellow or black bile. *Galenus.*

Maniæ cauſæ. Ab amore, a belladonna, datura, a graviditate, hemicrania, a herpete repreſſo, hyſteralgia lactea, ſine materia, melancolia, ſuppreſſione, metaſtatice a pathemate, periodica, a plica reſecta, ſcabie repreſſa, ſemine retento, terrore & veneno. *Sauvages.*

In

In what few diſſections I have been able to obtain, were the ſubſequent appearances.

A turgency of the veins of the dura and pia mater; but of this latter in particular, thro' all its various directions in the cortical and medullary ſubſtance of the cerebrum and cerebellum.

A dilatation of the veſſels in the plexus choroides.

Serum in the ventricles of the brain.

By injecting the internal, external carotids, and arteria cervicalis, no dilatation of the coats, congeſtions of blood, nor indeed was any blood whatever found in the arteries; but the dilatation and turgency were either in the capillaries, or venal ſyſtem.

The ſame circumſtance has been obſerved in the habitual inflammations of the eyes.

Inferences drawn from the antecedent appearances in mad perſons.

Paſſions, or meditation, certainly force a greater quantity of blood to the brain than is uſual.

This increaſed quantity of blood, when moderate, or when accidental and temporary is prevented doing any great injury, by means of the ſinuſes of the dura mater.

When

When the paſſions are often repeated, or the mind conſtantly meditates with great energy, attention, force, or violence on any one object, the veins are conſtantly in a ſtate of diſtention, by which means their coats become weakened, and the dilatation, or enlargement of their diameters gradually increaſe, from the quantity of the blood forced by the arteries into the veins.

The inability of the veins deſtitute of valves to reconvey the blood to the jugulars, &c. with a rapidity equal to its celerity and augmentation, preſerves the diſtention.

In proportion as the veins dilate to receive the increaſed quantity of blood, their coats become weaker and weaker, of courſe leſs able to make reſiſtance to the augmented quantity of fluid, and leſs endued with power to force the blood on to the ſinuſes of the dura mater, or to the larger returning veins. This increaſed and conſtant dilatation of the veins may increaſe the ſize of the veins conſiderably in every part of the cerebrum and cerebellum, through all their foldings, and in ſhort in every part containing the pia mater, which is proved by injections to be almoſt univerſal in the brain, and all its appendages.

The ſinuſes of the dura mater themſelves may be over diſtended.

The

The increaſed velocity of blood in the arteries, and its tardy circulation through the veins may occaſion irritation in the pia mater, the ſame as the ophthalmia cauſes in the tunica conjunctiva of the eye.

This increaſed force, or quantity of blood paſſing through the arteries, may change the blood, and produce vitiated acrimonious fluids in the brain itſelf. Local contaminations of the fluids are not uncommon in other parts, by which the whole body may become tainted, although the morbid effects ſhall chiefly predominate in the particular part diſeaſed.

The conſtant generation of theſe acrid, vitiated, and irritating fluids, probably, produces thoſe effects called *amentia, furor, mania, inſania, melancholia*, &c. creating confuſion and abſurd ideas in the mind.

After parts have been long accuſtomed to act with increaſed energy, and the veſſels to ſuffer reiterated diſtention, they may continue in a ſtate of diſeaſe *, as is demonſtrated in the *habitual ophthalmia*, ulcers, and other diſeaſes ariſing from vitiated fluids acting on the ſolids,

* Whoever deſires to have more explained on the poſſibility of local diſeaſes, as ulcers, &c. contaminating the whole body, may conſult my treatiſe on ulcerated legs and their cure, without reſt, and on ſcorbutic complaints.

and

and irritated ſolids and veſſels increaſing their forces and acting on the fluids.

An over diſtended bladder loſes its elaſticity and contractility, and becomes paralytic; incapable of forcing out the urine, or overcoming the reſiſtance of the *ſphincter veſicæ*.

The differences obſerved in maniacs, as approaching more or leſs to furor, melancholy, or deſpondency, may be rationally explained from the natural diſpoſition of each individual mind; the habit of body, the healthful or vitiated powers of digeſtion, chylification, ſanguification, and nutrition; the ſecretions and excretions.

In debilitated habits, where ſolids are lax, and the blood ſerous, the face pallid, with natural ſlowneſs of conception or expreſſion, melancholy of different gradations takes its ſeat.

In ſtrong habits, or where the conceptions are quick, the paſſions violent, and the expreſſion impetuous, and where fluids and ſolids approach neareſt a healthful ſtate, furor or mania are moſt likely to prevail.

When conſtitutions partake of a mixture of health and ſickneſs, of violence and inſenſibility, of raſhneſs and timidity alternately, the madneſs may be complicated.

As all human beings think differently, and as the variety in nature is infinite with regard

to conſtitutions, paſſions, and propenſities, ſo is madneſs; every one being mad in his own particular mode.

Pain or irritations from acrimony or diſtenſion of veſſels in other parts, are conveyed to the brain, and conceived by the mind; but a changed or vitiated ſtate of the fluids, and a continued diſtention of the veins, in the brain itſelf, ſeem to deſtroy the mind's powers.

The images of the mind create confuſed ideas, impreſſions, or falſe perceptions.

In madneſs the brain perceives not its own indiſpoſition.

The phrenitis is temporary or accidental, and ſeems an univerſal inflammation of the membranes and the brain itſelf; attacks ſuddenly and with vehemence, and terminates in a few days; but madneſs is commonly cauſed by a gradual, ſlow, and continued determination of blood to the brain from *pathemata animi*, or meditation on one ſubject, until the fluids of the brain become, and continue, vitiated.

The immediate connection of the mind with the body, how they reciprocally act on each other, how the ſenſations are diſtinctly conveyed, or what are the means by which they are communicated through the nerves to the brain, are objects, however deſirable to know, beyond the limits of human comprehenſion. It is, how-

however, indiſputably proved, that the nerves are the organs which receive and convey all our ſenſations.

It is the nervous ſyſtem which acts, and is acted on by the mind in all voluntary muſcular action. Deſtroy the nerve going to any part, and the power of motion and ſenſe in the part wholly ceaſes, or is but very imperfectly performed by means of other anaſtomoſing nerves.

Irritations on the brain produce convulſions.

Compreſſions on the brain from over diſtended veſſels, fractures, or depreſſions of the ſcull, concuſſions from falls, or any violent ſhocks, and extravaſated blood on the brain, produce delirium, convulſions, ſtupor, comatoſe ſymptoms, loſs of ſenſe and voluntary motion, inſenſibility, and death.

In depreſſions and fractures of the ſcull all thoſe fatal ſymptoms are frequently cured by the operation of the trepan, and removal of compreſſion, extravaſated blood or matter from the brain.

Though human knowledge has not yet diſcovered, nor perhaps never may diſcover, what the *ſoul* is, how it operates on the body by means of the nerves, or how the nerves operate on the *ſoul*, and convey all our will, or ſenſations; yet an induſtrious application to

diſſections after death ſhews frequently the immediate cauſes of various ſymptoms, and even death itſelf *.

In

* Although diſſections in delirium from fevers are not immediately connected with madneſs, yet from the ſimilarity of ſymptoms, the fever excepted, I have been induced to add the following appearances found on opening the dead bodies. Theſe diſſections ſhew various affections of the brain and other parts, and the ſymptoms they produced during life.

DELIRIA.

Symptomata.	*Extiſpicia cadaverum.*
Delirium ſoporem accerſit lethalem.	Cerebrum durum, concretiones in ventriculo.
——— cum convulſionibus febrem vulneri frontis ſuccedaneam ſequitur.	Abſceſſus in dura matre.
——— cum epilepſia.	Meninges putridæ; aqua in ventriculis cerebri.
——— excipit capitis dolorem cum febre continua.	Ventriculus tertius cerebri lympha turget.
——— cum ſpirandi difficultate varioloſum cruciat.	Puſtulæ in bronchiis.
——— buboni ſe adjungit.	Cor ſanguine infarctum.
——— in febre ardenti & convulſionibus.	Pulmones & hepar putridi, cerebrum illæſum.
——— cephalalgiam comitatur.	Tumor cyſticus in cerebro.
——— furioſus excandeſcit in febre chronica.	Hepar durum & ingens: cerebrum colluvie purulenta inquinatum.
——— cum febre vehementi & dolore circa coſtas ſitas.	Diaphragma inflammatum.

Delirium

In powerful exertions of the mind to produce great bodily ſtrength, large inſpirations are

Symptomata.	*Extiſpicia cadaverum.*
Delirium in febre tertiana duplici & tumoribus brachii dextri.	Ventriculus inflammatus, veſica felis aëre turgida.
——— in febre maligna epidemica.	Aqua in abdomine & encephalo, hydatides in cerebro & hepate.
——— cum tremore prehendit capitis dolorem.	Pulmones ſcirrhoſi, valvulæ aortæ induratæ, aqua ſanguinea in cranio & ſpina dorſi.
——— puer delirans, floccos colligit, lingua exuſta, fæces nigræ.	Cyſtis lympha turgens in cerebro.
——— cum convulſionibus in febre petechiali.	Pulmones ſcirrhoſi, pleuræ adnati, omentum & inteſtina putrida, lien ingens.
——— cum alvi fluxu.	Inteſtina putrida.
——— excipit colicam.	Inteſtinum cœcum putridum.
——— poſt ſe convulſiones trahens, accedit melancolicum vomitionibus & capitis dolori obnoxium.	Omentum exeſum, inteſtinum colon inflammatum.
Delirium ſuccedaneum capitis dolori, cum convulſionibus ſævit.	Abſceſſus cerebri.
—— —— in febre ardente.	Gelatina circa vaſa cerebri.
—— —— alvi fluxui.	Abdominis inculpata viſcera, hydatides in meningibus & aqua in ventriculis cerebri.
—— —— item.	Inteſtina putrida.
—— —— lipothymiæ.	Aqua in capite & ſpina dorſi

are made, the increaſed air is retained as long as poſſible in the lungs, the face reddens, and by the command of the will the bodily powers and ſtrength, for a ſhort ſpace of time, exceed greatly the natural; ſo that people run ſwifter, ſupport and carry greater weights, fight with undaunted violence, and ſtrike with an incredible force, and effect ſurpriſing things, by ſummoning a vigorous reſolution and mental determination.

The ſtrength to be acquired by the com-

Symptomata.	*Extiſpicia cadaverum.*
Delirium ſuccedaneum iſchuriæ.	Ren dexter & ureter calculoſi.
—— —— animi perturbationibus.	Hepar inflammatum.
—— —— poſt capitis contuſionem & tetanos ſibi accerſit.	Aqua in ventriculis & juxta baſin cerebri: meningum purulentiæ.
—— —— poſt cereviſiæ hauſtum viget: remediis fugatur, ſed dein recrudeſcens convulſiones lethales accerſit.	Meninges oſſeæ.
—— —— poſt inſolationem oriens, convulſiones.	Cerebrum inflammatum.
—— —— poſt caſum ab alto cum dolore in vultu.	Sanguis ſtagnans in cranio, cerebri involucra inflammata.
—— —— propinato arſenico.	Ductus alimentaris exeſus.
—— —— cum ſomnolentia, & ictero, obſcuro hepatis dolore poſt contuſionem capitis.	Dura meninx & hepar putrida.

mand

mand of the will is aſtoniſhing, yet it cannot be accompliſhed but by a greater determination of blood to the head, and its retention there ſome ſhort ſpace of time; ſo as to give the increaſed nervous energy to all the acting muſcles.

Perſons of delicate weak habits, in madneſs or convulſions, acquire ſuch an additional force and *ſtrength*, as to require two or three ſtrong perſons to prevent their doing themſelves or attendants miſchief.

Hence it muſt appear rational, that the increaſed force in convulſions, delirium, madneſs, or any extreme violent actions, in a great meaſure, depend on a greater quantity of blood flowing to the brain, or particular nerves.

By the command of the will, by paſſions of the mind, by cloſe meditation, a greater quantity of blood can be ſent to the brain than ordinarily flows there, without ſuch intentional influence. Two effects can be produced by this increaſed quantity of blood in the brain, according to the pleaſure of the will, either *ſtronger* and *ſublimer ideas* in the mind, or an *increaſe of bodily ſtrength* in all the muſcles deſtined to voluntary motion.

According to inclination, human beings, by exertions directed differently, may increaſe the bodily or mental powers to a ſurpriſing degree.

Poetical ſublimity, ſuperior reaſoning faculties, clear conception, penetration, judgment, a refined imagination and expreſſion, are all the effects of mental, as the exerciſes of the *paleſtra* are of bodily exertion.

An over-exertion of both body and mind continued will injure the robuſteſt conſtitutions; laſſitude is the conſequence of either; but conjointly exerciſed, great debility and palſies have originated.

A ſtrong attraction to any particular art, ſcience, or pleaſure, an ambitious and conſtant deſire to excell the groſs of mankind in whatever is the particular object of attainment, are ſometimes attended with ſymptoms little ſhort of madneſs, but is denominated ardor, zeal, or religious devotion, enthuſiaſm.

An over-affection for horſes, dogs, muſic, painting, the chace, flowers, the gratification of amorous paſſions, or as the French expreſs it, *il eſt fou de telle* ou *telle autre choſe, il aime à la folie les jeux ou les chevaux, &c.*; or the violent and unremitting purſuit to acquire greater knowledge than others in any art or ſcience, have all produced madneſs.

Whatever may be the pleaſure or object in view, there is in the mind a proneneſs or propenſity, either through choice, neceſſity, or hope, according to the various taſtes of the parties,

parties, for its acquirement, which may aptly be called *mental attraction.*

This *mental attraction*, not always the effect of deliberative reaſon, but often of chance, example, caprice, or whim, produces all the diverſity of taſtes, deſires, and purſuits diſcernible amongſt ſociety.

While the words and actions of mankind in the different attachments, or *mental attractions*, correſpond with the objects of purſuit without wild ravings, loſs of ſenſe, or miſchief to ſociety, they ſhould not be cenſured as madneſs; for every being has a natural and juſt right to be *ſuo modo* happy.

Theſe *mental attractions*, when directed to the improvements of arts or ſciences, or to render mankind wiſer and happier, although they may give a ſingular caſt of character to the poſſeſſor, yet merit the utmoſt reſpect. A philoſophical apathy, or that indolent, torpid ſtate of mind ſome ancients ſought for in vain, could it have been attainable, would have produced an injurious inactivity. The paſſions, or active principles in the human breaſt, have invented all that is laudable and excellent; if they have injured in ſome inſtances, in others, ſociety have been equally benefited.

The inordinate attention of the mind to objects above human comprehenſion, or attain-

ment, may appear, in ſome meaſure, ridiculous, though it frequently produces ſome new diſcovery; but diſappointed love, grief, or any affections of the mind ariſing from human calamities, imaginary or real, merit the utmoſt humanity and compaſſion.

There are *corporeal attractions* that give each individual, in a certain degree, his own particular conſtitution and apparent character.

Corporeal attractions are the aſſimilations and adheſions of conſtituent particles from nutrition, and their converſion into certain ſtates of the blood and body peculiar to each individual, the effect of which is likewiſe called *idioſyncraſia.*

The fat and corpulent attract and retain, from their daily food, abundance of oily particles.

The thin or ſlender attract leſs oil, but more earth and gluten.

The pale attract ſerous particles of blood in nutrition.

The florid, what compoſes red particles.

The ſallow-colored a conſiderable portion of coagulable lymph, &c.

Theſe corporeal attractions give the different appearances amongſt human beings, as to fatneſs, leanneſs, pallidneſs and floridneſs, &c.

The

The *mental attractions* and character are much dependent on form of body and ſtate of blood.

A groſs habit of body produces indolence; ſlenderneſs, activity and alertneſs; pallidneſs, debility and ſlowneſs; floridity, warmth of conſtitution and quickneſs of temper *. The rudiments, or *prima ſtamina* of this natural variety, are formed perhaps in the embryo *ab origine*, while in the uterus, or in the veſicles containing the *animalculum* in the ovarium.

All the differences in one and the ſame diſeaſe, amongſt different patients, ariſe from this variety of *corporeal* and *mental attractions*. Appearances and ſymptoms in diſeaſes may be nearly the ſame, but the ſenſations are different: a ſcratch on the finger of a delicate nervous perſon appears as great a calamity, as a large wound to the robuſt and more torpid. Sympathy in woe, therefore, or human feelings for the diſtreſſes of others, ſhould not be proportioned merely to the magnitude of the evil, but to the acuteneſs of the miſerable ſenſations perceived in the afflicted breaſt †.

The

* Theſe ſubjects are purſued and conſidered more minutely, with their cauſes and effects, in my treatiſe on diet, &c.

† General modes of practice preſcribe a variety of remedies in various diſeaſes; but the ſelection of what is moſt beneficial, at what times, and under what circumſtances, muſt always

The evident exiſtence of *mental* and *corporeal attractions* comes within the knowledge of every reflecting obſerver, and is ſubject to ocular demonſtration. The component parts of different human bodies may be analized, and it may be eaſily diſcovered, whether oil, gluten, earth, &c. moſt predominate, with their relative proportions.

From the difference of the natural or acquired *mental attractions*, or cogitations, and the different proportions of the component particles and figures of human bodies; all the varieties and ſingularities of mankind, whether in health, ſickneſs, or even madneſs, originate.

Theſe diverſities in corporeal and mental attractions give the character, perſonal difference or identity, and diſtinguiſh one human being from another *.

always be left to the ſkill of the preſcriber. All mankind differ; in a certain degree, all require ſome different treatment.

Theſe obſervations on *corporeal* and *mental attractions*, and diverſities of opinions on one and the ſame ſubject, apply more cloſely to the differences of conſtitutions in nature, than many written precepts on diſeaſes, which can only give general knowledge, leaving much to diſcretion. Nature is full of irregularity; what then can be more abſurd, than to expect ſucceſs in phyſic by following one beaten track or confined *routine* in practice?

* In the animal, vegetable, or mineral kingdoms affinities or attractions can be proved by chemiſtry and various experiments of *analyſis* and *ſyntheſis*.

Particles

The corporeal and mental attractions not only differ in each individual, by which one man is diſtinguiſhed from another; but diet, air, ſoil, climate, and purſuits, produce different human attractions.

The light air and diet and cuſtoms of France produce gracility, and agility of body; cheerfulneſs and levity of mind; while the ſwampy bogs and moiſt atmoſphere of Holland and Zealand, Flanders, Lower Germany, give magnitude and ſlowneſs of body, ſerioufneſs and ſolidity of mind. Theſe people, though they live not widely diſtant, are as diſſimilar as the ſnail and graſshopper. A tranſudation of volatile particles fly through the former, while the latter attract and retain humidity and ſluggiſh phlegm, fat, or coagulable lymph; the cauſes of theſe differences are eaſily ſuggeſted and diſcovered by a philoſophic and inquiſitive mind.

It muſt appear evident, that the reception, attraction, and retention of certain particles from diet, air, &c. and the volatilization, or

Particles attract ſimilar particles, and repel diſſimilar. All the figures of human bodies, whether tall, ſhort, fat, lean, &c. depend perhaps on original formation in the uterus, and the power of attraction afterward with ſimilar particles, while the fœtus or human being is in a ſtate of growth. Different vegetables attract different particles as well as their component parts; minerals have likewiſe attractive and repulſive powers, &c. See my *Schola Medicinæ*.

repulſion of others, give to the human body all its various and peculiar forms, powers, energy, &c.

The *mental attractions*, which are often dependent on the corporeal, in a certain degree, form attachments to favorite purſuits from example, paſſions, or ſentiments in the mind, and direct the corporeal to certain purpoſes; this may be called *mental attractions* to any art, ſcience, pleaſure, or paſſion. While reaſon guides the helm of human affairs, and the attention correſponds with the object propoſed to be acquired, or the means purſued are rational, man may be pronounced in his perfect ſenſes; but when the objects deſired, exceed all bounds of poſſible acquiſition, and yet are purſued with ungovernable aſſiduity and unreaſonable expectation, ſuch a ſtate of the mind is, in a certain degree, folly bordering on inſanity.

Various are the ſpecies of folly, that have terminated in madneſs.

Mental attractions to pride, arrogance, inſolence, duplicity, falſehood, envy, and malevolence, are all inſtances of folly; they are the temporary ſupport and the ſublimeſt refinements of little diſingenuous minds; but on meeting diſreſpect, detection, or diſappointment, have produced madneſs in the poſſeſſors.

Mental

Mental attractions to ſtrict juſtice, integrity, truth, and ſincerity, are the ſtrongeſt marks of ſuperlative wiſdom, and are the appendages of truly great minds: they generally give a philoſophical calmneſs in proſperity or adverſity, and an happineſs to the poſſeſſor unknown to the artful, treacherous, or deceitful.

It is to be regretted, that in the human affairs of the polite refined ages, artifices are the only weapons to counteract artifice; falſehood and duplicity, falſehood; pride and inſolence, haughtineſs, or ſelf-aſſumed dignity; hypocriſy, low cunning and hypocriſy. The books that have reduced theſe immoral practices to a regular ſyſtem, inſtead of applauſe for their politeneſs of ſtyle or manners, ſhould have been concealed for ever from the face of the earth; for they teach the vicious knavery, and render the upright ſuſpected.

In proportion as the arts, ſciences, and luxury increaſe, ſo do vices and madneſs. In countries where the feweſt wants and deſires are experienced, there are the ſmalleſt number of mad perſons; in thoſe kingdoms where the greateſt luxuries, refinements, wealth, and unreſtrained liberty abound, are the moſt numerous inſtances of madneſs. England, according to its ſize and number of inhabitants, produces and contains more inſane than any other country

country in Europe, and ſuicide is more common *.

In other nations mankind are obedient under either military or religious deſpotiſm, and are educated from infants in implicit ſubmiſſion and non-reſiſtance; in Britain every one thinks and acts as he pleaſes; this produces all that variety and originality in the Engliſh character, and cauſes arts, ſciences, and inventions to flouriſh.

The agitations of paſſions, this liberty of thinking and acting with leſs reſtraint than in other nations, force a great quantity of blood to the head, and produce greater varieties of madneſs in this country, than is obſerved in others. Religious and civil toleration are productive of political and religious madneſs; but where no ſuch toleration exiſts, no ſuch inſanity appears.

The remote cauſes of madneſs are various:

Anger, pride, and inſolence mortified, malice and envy ungratified, merit unprotected, or cruſhed by the unworthy; love, fear, hope, diſappointment, anxiety, grief, deſpondency,

* I have examined this matter in France, Italy, Germany, and Holland, but find no compariſon in the numbers who commit ſuicide in thoſe countries and England. Infidelity in a wife rarely makes a Frenchman cut his throat, but has often produced ſuicide amongſt the Engliſh, &c. To live in France *a la Pariſienne* is common.

avarice,

avarice, and a diverſity of human vices, folly, and calamitous feelings, have all been productive of *idiopathic* inſanity.

There are accidental remote cauſes, as ſuppreſſed evacuations, metaſtaſis, &c.; this may be called *ſymptomatic* inſanity, and is oftener cured than the former.

It appears from diſſection, that an augmented portion of blood vitiated in the brain, or its membranes; coagulation of the humidity in the cortical or medullary ſubſtance of the brain, concretions, &c. are the principal immediate cauſes producing the effects of delirium or madneſs.

How an increaſed quantity of blood vitiated in the brain, or a coagulation of the fine ſerous fluid tranſuding the ſtructure of the cerebrum and cerebellum, produce ſuch continued different effects in the mind as falſe apprehenſion, reaſoning and judgment, are queſtions replete with difficulty; but their inveſtigation ſhall be attempted. The ſpeculations and reaſonings, however, on this dark ſubject are not delivered as indiſputable truths, but merely as matter of opinion, or probable conjectures.

1. The brain has not been proved to ſecrete any fluid known by the common names of *nervous juice, nervous fluid, liquidum nervoſum*, &c.

II. No fluid called *nervous juice* or *fluid* has been diſcovered to paſs and repaſs through the nerves.

III. Nor is it rational to ſuppoſe any liquid can paſs and repaſs with ſuch rapidity as thought itſelf, either through tubes, ſuppoſing they were exiſting, or by tranſudation.

IV. The *arteries* paſs through all the nerves in every part, internal and external, by means of the *tela celluloſa*, or *pia mater*; this I have frequently proved by minute anatomical injections.

V. Where arteries paſs in other parts of the body, veins are generally found; from hence it is reaſonable to infer, that minuteſt veins, as well as arteries, paſs through all the nerves and nervous filaments, though the veins cannot be demonſtrated, owing to the coagulation of their contained fluids immediately after death, as in the lymphatic ſyſtem, except amongſt thoſe who die of dropſies.

VI. The laſt action of the arteries in *articulo mortis* is to force their fluids into the veins; the former are empty, the latter filled after death.

VII. The experiments of phyſiologiſts to diſcover the *nervous* fluid, or liquidum nervoſum, are erroneous; ligatures paſſed round nerves have only impeded the courſe of the blood in the

the arterial ſyſtem, hence tumefaction above the ligatures, and inſenſibility of parts below.

VIII. It appears clearly, that many phyſiologiſts have not been deeply verſed in anatomical injections, or they never could have ſuppoſed tumefactions above the ligatures of nerves, or the loſs of ſenſe and motion, any proof of a *nervous* fluid exiſting; becauſe thoſe effects ariſe from other manifeſt cauſes.

IX. Impeding the courſe of blood in the artery will effectually produce a coldneſs and inſenſibility of a part; an *aneuriſm* of the ſubclavian artery, which is only a partial impediment of blood to the arm, produces coldneſs and waſting to the arm and hand, with loſs of motion.

X. Heat, in the human body, is proved to be the effect of arterial action, and its ſtrongeſt reſidence is in arterial blood: where arterial action ceaſes, heat is aboliſhed, and death enſues. Human life depends on heat, and heat on human life; death is the total deprivation of arterial action, abſence of heat, and arterial blood in the arteries *.

XI. Arterial action ceaſes in a nerve on which

* I have formerly injected mortified parts, and found I could puſh my injections all through the arterial, but not into the venal ſyſtem; from hence I conclude, that the ſtagnation of blood in mortifications is rarely or never in the arteries, but in the veins.

a ligature is made; hence, independent of any *nervous fluid*, the nerve below will become cold and inſenſible, and all its ramifications going to different parts loſe their influence on any attempt to voluntary or involuntary motion.

XII. It may hereafter be proved, that *animal heat* and *arterial action* are the effects of certain particles extracted in reſpiration from *atmoſpheric* air, and conveyed through every vital, animal, and natural function of the human body.

XIII. Ligatures round the nerves producing a tumefaction on the part of the nerve toward the brain, and the loſs of ſenſe and motion in the part to which the nerve proceeds, is no proof of the preſence of any *nervous fluid*, becauſe thoſe effects are produced by the deſtitution of arterial blood, and the pulſatory actions of the arteries; and certainly it is not neceſſary, nor ſenſible, to uſher in unknown cauſes as producinge ffects, when evident facts, juſter cauſes and concluſions, are preſent.

XIV. In ſhort, not one experiment, hitherto made, proves that the brain ſecretes a *nervous fluid*, or that any *nervous fluid* paſſes and repaſſes through the nerves in voluntary or involuntary ſenſations or actions; nor is there any ſuch fluid as the *nervous fluid*, of the conſiſtence and manner of action univerſally taught and generally received.

XV. All

XV. All anatomiſts or phyſiologiſts, therefore, who have written in their works the term *nervous fluid*, its regular or irregular diſtribution, force, energy, &c. have advanced what has never been proved to exiſt. All phyſicians who talk of the nervous liquid in the human body under the appellation of *liquidum nervoſum*, or *animal ſpiris*, ſpeak at random on an imaginary exiſtence, and without any concluſive experiments or demonſtrations to ſupport the ſuppoſed ſubſtance called *nervous fluid*. Something acts, but what it is, has not been diſcovered; and it is more candid to acknowledge a deficiency of human ſcience, than to propagate error.

XVI. In this treatiſe, then, the appellations of *nervous fluid*, *liquidum nervoſum*, or *ſpiritus animales*, have been excluded as non-entities, and the *nervous powers*, *nervous influence*, or *nervous principle*, have been ſubſtituted.

The non-exiſtence of the *nervous fluid*, as generally received, has been ſtrenuouſly urged, becauſe it is of great conſequence in medical practice; it may likewiſe be uſeful to the fabricators of curious hypotheſes on matter, ſpirit, and metaphyſical ſubjects.

XVII. What ſubtile matter it is, or whether it is an exceeding volatile penetrating air, ſimilar to that which is ſuppoſed to ruſh through the Fallopian tube, and impregnate the ovum

in coition, giving life to the inert animalcula, are ſubjects that are more accurately conſidered in the *Schola Medicinæ*.

XVIII. The ſubtile matter which pervades, and paſſes equal to the mind is the electrical fire; but I doubt much, whether the electrical fluid would be impeded in its progreſs through the nerves by a *non-electric* ligature; indeed, all the concluſions I have been able to collect from electrical experiments, prove the contrary.

XIX. Nor is the nervous influence ſecreted in the brain acting as a gland; but it is, perhaps, particles of light, or fire attracted with the atmoſpheric air in reſpiration by the lungs, and conveyed to the brain in the blood, the brain being only its receptacle; probably thro' an attractive power, ſimilar to other parts of the body *.

The vital principle of heat, or human fire, reſides chiefly in the arteries, or in the blood they contain. Mr. Hunter ſuppoſes blood alive, not without ſome reaſon.

* There is an attractive power *ab origine*, perhaps, in the cells of the adipoſe tunic to accumulate adeps; in the liver, to receive particles to make bile; in the ſalivary gland, to attract particles from the blood proper for ſaliva; in the kidneys, for urine; in the eye, for that pellucid aqueous humor, &c.; in ſhort, all healthful, regular functions are performed by each attracting the propereſt particles for its peculiar purpoſes, &c. and repelling or excluding the improper.

XX. It

XX. It is ſufficient, perhaps, for the practice of medicine to know, that all voluntary involuntary ſenſations and actions are conveyed by the nervous powers, and nerves are large, from the brain itſelf, proportionably to the utility and magnitude of the ſenſe.

XXI. The ſenſes, as hearing, ſeeing, ſmelling, taſting, feeling, are all received and communicated by the nerves; and their abolition is a deprivation of ſenſe.

XXII. Deprive a human being of the nervous power, and a ſenſe of life no longer is perceived by the perſon: tie a large nerve proceeding to any part, and all communication with the ſoul is either greatly diminiſhed, or totally deſtroyed.

XXIII. Irritations on the nervous powers produce convulſions or irregular actions, a quicker pulſe in parts, and often confuſed ideas in the mind; but compreſſions or ligatures, according to their powers or force, torpidity or total inſenſibility. The ſoul cannot act on a part of the body beyond the nerve's ligature.

XXIV. From the acrid or putrid changes produced in the blood during the laſt ſtage of fever, or from a greater quantity of blood determined to, or irritating, the brain, either a furious delirium or ſtupor and inſenſibility is produced; the regular powers of the

ſoul being reſiſted by accumulated or changed blood in the brain.

All diſeaſes whatever are changes of the blood acting on the ſolids and nervous powers, and theſe latter again on the fluids.

XXV. There are, therefore, four conditions neceſſary to the cauſes of any diſeaſe preſent.

1. Some change of the blood or other fluids of the human body.

2. Irritation of the ſolids from the changed fluids acting as ſtimuli in the body, either partial or univerſal.

3. Increaſed or diminiſhed action in the whole or part of the arterial ſyſtem; the contractions of the heart or arteries of parts are quicker or ſlower.

4. Perceptibility of an univerſal or partial diſeaſe in the mind, conveyed by the nerves of the whole body, or irritated nerves of morbid parts communicating with the brain.

XXV. The ſoul, therefore, cannot be ſeparated from the body, in either conſidering, or even having poſitive intelligence of diſeaſe; without impreſſions on the mind no diſeaſe would be felt or deſcribed by the patient, and much leſs comprehended by the phyſician.

XXVI. Though *Stahl* and his followers were extremely abſurd in attributing diſeaſes and

their

their cure too extenſively to the ſoul's feelings and powers; yet the mechanical and other phyſicians, who have denied the mind any power in the affections of the body, have equally erred, which is amply demonſtrated in the *pathologia generalis* of the *Schola Medicinæ*.

I formerly made a great number of experiments to determine the connection of the ſoul with the body; as when the faculties of the ſoul firſt appeared; how it enlarged in knowledge; what were its properties without the advantages of obtaining ideas by different ſenſes; what were the conſequences of the loſs of hearing, ſeeing, ſmelling, &c. Theſe curious purſuits, though not always rewarded with a complete knowledge of the object purſued, yet opened ſome diſcovery unexplored, or at leaſt imperfectly underſtood.

XXVII. The mind or ſoul cannot be defined by any other means, than by attentive and cloſe obſervations on its oſtenſible effects, operations, and powers in the human body.

XXVIII. While the *ovulum* containing the rudiments of the future animal remains in the female ovarium, before the impregnation by the male, what is to form the future man is inert, without any perceptible action whatever of heart or arteries, &c. according to minuteſt microſcopical inquiry.

XXIX. When the female *ovulum* is impregnated by the male, the pulſation or *punctum ſaliens* is ſoon after evident; the embryo, in its pellicle or ovum, deſcending through the Fallopian tube, and taking its reſidence in the uterus, increaſes in an evolution of all its conſtituent parts, and gradually obtaining its perfect form, grows, from being ſmaller than a pin's head, to a moſt ſurpriſing bulk in the courſe of nine months.

XXX. During the time that the fœtus continues in the uterus, there is no reaſon to ſuppoſe it enjoys any qualities of the ſoul, which diſplay themſelves afterwards: it poſſeſſes, perhaps, *ſtimulum inſitum*, or an internal irritability, for the performance of the peculiar circulation of the blood, and ſome ſecretions and excretions; but in itſelf knows nothing of the one or the other; in ſhort, it has no thinking qualities, no ideas of ſenſe or reflection.

XXXI. When the fœtus is excluded from the uterus, ſome operations of the ſoul appear immediately after the firſt reſpiration, after receiving *atmoſpheric air*; for it cries, and ſoon ſhews a deſire for food, and will elect ſugar in preference to aloes. The circulation of the blood is changed and performed in a different manner; for inſtead of paſſing through

the

the ductus arterioſus, venoſus, and foramen ovale, the auricles and ventricles receive the blood; the pulmonary arteries and veins acquire their power of circulating the blood thro' the lungs, &c. in a mode that continues thro' life.

XXXII. The ſoul ſeems to have no power until the atmoſpheric air has ruſhed into the lungs; for without this the infant periſhes ſoon after delivery. The air ſeems to contain the *pabulum vitæ*; but after being received by the lungs, what is emitted by expiration is unfit for the purpoſes of life, a ſupply of freſh air being conſtantly neceſſary.

For the firſt month after being in the world, the infant ſcarcely ſhews any viſible ſigns of the ſoul's powers, except in crying for food, and then it ſleeps, if not in pain.

XXXIII. Afterward it gradually receives impreſſions of objects by viſion, ſounds by hearing, and in proceſs of time imitates the language it is to learn by the ſoul's powers on the organs of ſpeech, until it is able to articulate guttural, naſal, oral, or other ſounds, and diſtinguiſhes one thing from another.

XXXIV. Then the mind is impreſſed in civilized nations with ſome religious worſhip, which it is taught to believe to be the only true religion, and that all others are erroneous: theſe

infantile

infantile impreſſions very often continue with zeal or ſuperſtition through life.

xxxv. The ſoul afterwards expands, and having collected a ſtore of ideas by the ſenſes, has the power of reflecting, remembering, comparing, and reaſoning, by which it begins to form a judgment on men and things. The extent of human knowledge in different men is extremely different; for ſome paſs through life without conſidering, examining, or performing any thing, except the offices of nature; while others buſy themſelves in inveſtigating the cauſes of all the effects they perceive, and produce, by an elevation of ſentiment and indefatigable induſtry, the moſt important diſcoveries in different ſciences, according to the genius, bent, or inclination of the parties.

xxxvi. The properties of the ſoul then begin with reſpiration, and on reſpiration ceaſing the ſoul loſes all its faculties; does it not appear, that it receives conſtantly ſomething from the atmoſpheric air we breathe? The ſoul ſeems as fugitive as air. It receives all its primary knowledge by its operation to, from, and by the evidence of the ſenſes: it retains what it is taught, can afterwards reflect, remember, reaſon, judge, always in proportion to the number and diverſity of ideas it has received

ceived or collected. Where there be few ideas, the reflection, reaſoning, and judgement are proportionably confined; where they be various and numerous, the ſoul views men and things very extenſively. The inferiority or ſuperiority of human underſtanding generally depend on the paucity or multiplicity of ideas and juſt reaſoning poſſeſſed by the mind.

XXXVII. The powers of the ſoul on the body have been already obſerved; it can act on the heart, and impel a greater quantity of blood to the head, for either mental or bodily exertion.

XXXVIII. The ſoul's powers in checking or diminiſhing the heart's action on any ſudden intelligence of misfortune; or quickening its action by joy, muſt be evident to all perſons capable of quick feelings or ſenſibility. Muſic has ſimilar powers. Handel's funeral anthem has for a ſhort ſpace of time ſtopped or ſuſpended the circulation in my heart; lively muſic has quickened it; and others, who exquiſitely feel muſic, have perceived ſimilar effects, though incapable of accounting for the cauſes of ſuch ſenſations.

XXXIX. The ſoul can direct a greater quantity of blood to the parts of generation, and create a great turgency in the veſſels and cellular ſtructure, and retain the fluids there a conſiderable ſpace of time.

XL. Violent

XL. Violent anger has forced ſo great a quantity of blood to the head, that the veſſels have been ruptured, the blood extravaſated, and ſudden death has been the conſequence.

XLI. The ſoul itſelf is ſome inviſible agent, or power acting in various modes on that human matter called the brain, and the ſoul gradually acquires ſtrength and knowledge by the powers of the ſenſes, but not without human growth, and human induſtry.

XLII. The brain being the ſoul's principal receptacle, conveys, in health, the ſoul's intentions, by means of the nerves, to anſwer all the functions of life with order, preciſion, and regularity according to the laws of the animal œconomy.

XLIII. Inſtead of a nervous fluid paſſing and repaſſing all our ſenſations, either voluntary or involuntary, it ſeems more probable that it is the ſoul's influence that pervades, by its ſubtilty, all organized and other parts; it is the grand conductor as well as governor of all its various feelings and actions.

XLIV. All cauſes muſt be equal to their effects, and while the ſoul's powers are not impeded in the brain or nerves, the inviſible agent performs with more or leſs energy all the neceſſary mental functions of life; but the organization of the brain being diſeaſed, the ſoul

is interrupted in its various powers with delirium, ſtupor, madneſs, falſe images, &c. &c.

XLV. The ſoul's powers, however great in a healthful organization of the brain, cannot conquer the impediments nor diſeaſes of that organ; neither can it perceive its derangement from morbid affections in the brain: mad perſons, like the obſtinate and ſuperficial, frequently conceive all the world to be in error except themſelves.

XLVI. The brain then, that principal organ on which the ſoul acts primarily, being injured or diſeaſed, reſiſts or prevents the ſoul's regular impulſes, and ſo conquers it, as to convert a ſound underſtanding into folly and madneſs, or produce a falſe aſſociation of ideas.

XLVII. The due order and regularity of the ſoul's influence being impeded, perverted, or prevented in different parts of the cortical or medullary ſubſtances of the cerebrum and cerebellum, an irregular influence is the conſequence, and the ſoul's action on different parts annulled; the free influence being obſtructed, falſe images are conceived, falſe reaſonings and concluſions reſult from falſe ideas and apprehenſions; wild projects, furious ravings, ill-founded fears, ſtrange unuſual conceits, violent attempts to do miſchief accompanied with incoherent expreſſions, are the conſequences of the brain's

brain's reſiſtance to the regular influence of the ſoul.

XLVIII. In the nervous parts remote from the brain irritability is excited by vitiated, changed, and acrid blood acting as ſtimuli, and arterial action is increaſed: inſenſibility is produced by ligatures or compreſſions of the medulla oblongata or nerves, which are the immediate appendages, and poſſeſſing nearly the ſame ſtructure as the brain. If ſuch effects are producible by evident cauſes in parts diſtant from the brain, but immediately under its influence, it is eaſy to comprehend ſimilar cauſes producing ſimilar effects in leſions of the brain itſelf, and perverting all regular influence or perception in the powers of the mind.

XLIX. Though what this invifible influence called the ſoul is, may remain eternally beyond ocular demonſtration, or the utmoſt limits of the moſt cultivated human comprehenſion, yet it muſt be ſomething ſufficiently powerful to act on human matter during life; to increaſe in ſtrength and energy in proportion as it aptly receives and treaſures up true ideas, and exerciſes its faculties in conceiving, reaſoning, and judging, &c.

L. It is clear, that its principal reſidence is in the brain and nerves, and theſe latter pervade every part of the body.

In

In a ſound brain the ſoul performs its functions with regularity according to individual character. The brain being in a morbid ſtate, the animal functions are particularly injured, and falſe ideas, with all their concomitants, are evident, &c.

LI. The over exertions of the ſoul force an abundance of blood to the brain, either in attempting poetical ſublimity, or purſuing deep and continued metaphyſical reaſonings and meditation.

This increaſed quantity of blood, or its acquiring a vitiated morbid change, may cauſe the brain's reſiſtance to the directions of the ſoul, and may excite or obtund mental impreſſions; in the former, fury, and in the latter, melancholy may be the effects.

LII. Poetical fury, or violent tragic action, are ſenſations excited in the ſoul bordering on madneſs, and indeed have produced that diſorder.

Enthuſiaſm is another ſpecies, which has frequently terminated in madneſs.

Love is a paſſion lighted up in the ſoul by a mental attraction for ſome particular object, and has frequently terminated in inſanity.

Anger, pride, envy, and all paſſions or miſerable ſentiments, what are they, but over exertions of the ſoul's faculties operating with

augmented, or diminiſhed, energy on the brain?

LIII. Deſpondency or melancholy ſeem to be more the effects of relaxation and a diminution of mental exertion, in which the brain is more chronically affected, and leſs likely to be cured than in the more inflammatory or animated ſpecies.

Theſe reaſonings or facts duly conſidered, may not only point out ſuperior methods of treating hypochondriacal or nervous diſeaſes, but alſo inſanity.

The conſideration of the patient's mind is, therefore, of the utmoſt importance in many diſeaſes, but more particularly in the mental, to form the prognoſtics; the timid and dejected require an inſpiration of courage and hope, or medicine often fails. In the yellow fever of the Weſt Indies I have ſeen numerous inſtances of perſons ſeized with that fever, mournfully aſſert their aſſurance of dying, and they too often confirmed their intuitive prognoſtic. This was nothing but fear from others dying daily, and if that apprehenſion could be removed, patients have recovered.

In nervous diſeaſes and madneſs the intellectual faculties ſhould be principally conſidered, and the ſtate of the body previous to, and accompanying, inſanity.

From

From reflecting on the powers of the arteries in the brain and nervous ſyſtem, and the influence of the brain and nervous ſyſtem on the heart and arteries, and the powers of the mind on both, without the union of which human life cannot but very imperfectly exiſt, the ſubſequent cauſes of madneſs have been deduced.

1. Either by the will, or ſome accident, a greater quantity of blood has mounted to the brain, or has been retained there, than was agreeable to the laws of the animal œconomy.

2. The ſame cauſes have continued the ſame effects, whether from continued meditation, or any violent paſſions of the mind, or accidental ſuppreſſion of uſual evacuations, &c.

3. The minute capillary veſſels and the veins ſuffer a continual diſtention, either by the increaſed force of the arteries directed, or repeatedly determined by the will, or from the relaxation of the vaſcular coats and increaſe of the venal diameters *.

* In evacuating urine, feces, or flatus, a large inſpiration is made by the lungs, and the air is retained there during the expulſion as long as poſſible, eſpecially in coſtiveneſs. During theſe ſtrong inſpirations performed by command of the will, the veſſels of the brain have been ſo over diſtended as to burſt, and the effuſed blood has cauſed inſtant death or a fatal apoplexy. Thus perſons have ſometimes been found dead in their water cloſets.

4. This increaſed force in the arteries, and partial detention or retardation of blood in the venal ſyſtem, cauſe a change in the ſtate of the blood within the minuteſt folds and particles of the cerebrum and cerebellum.

5. This change of blood and its additional weight irritate and change, to a certain degree, all the ſerous particles of blood in the tela celluloſa, or ſubſtance of the brain, and produce calloſities by a coagulation of the fluids in the medullary or cortical ſubſtance. In the ophthalmia habitualis, or conſenſualis, the ſerous particles of the blood, from increaſed action in the arteries, and diſtention of the minute veins, become hot, acrid, and irritating: ſimilar effects may be produced in the membranous and cellular expanſions through the whole brain and its depending nerves. Local inflammation is very common, local acrimony likewiſe: does not rheumatic acrimony fix its ſeat in the tela celluloſa of muſcles, the venereal in the perioſteum and bones, the gout in joints, the ſcrophulous in lymphatic glands, &c.?

6. As clear perception, ſound reaſoning, and ſolid judgment are obſerved in a healthful ſtate of the brain and its fluids; ſo can their alteration or perverſion be eaſily conceived by the effects of acrimony, irritation, and over diſtention, from febrile heat and friction of their component parts.

7. Ana-

7. Anatomical inquiry leads to think, that the delirium in fevers is chiefly owing to morbid changes of the fluids in the brain; putrid *miaſmata* produce more dangerous and acute deliriums than perhaps any other: putrid *miaſmata* are received by the lungs and ſtomach, abſorbed by the pores of the ſkin, or by a cut or ſcratch on the finger, and have contaminated in a very ſhort time the whole body, changing the blood to a putrefactive ſtate, and ending fatally.

8. Phrenitis is an increaſed action of the ſolids, with inflammation of membranes and an over abundance of blood in the brain, producing a moſt dangerous acute fever, raving, delirium, or ſort of madneſs, terminating like violent acute fevers, in a few days.

9. Madneſs is another ſpecies of delirium, chronic, not acute; is commonly ſlow in its progreſs, without fever; neither producing the violent ſymptoms and fatal effects of putridity, canine madneſs, nor acute phrenitis.

10. Whatever, then, determines a greater quantity of blood, whether it be mental affections, the will, or any accidental ſuppreſſion of accuſtomed evacuations, or different ſpecies of acrimony, as febrile, nervous, gouty, venereal, &c., may produce temporary delirium, with or without fever, which in an extenſive practice may be frequently obſerved.

11. If the blood has once diſtended the veſſels of any part, a debility or relaxation may remain, and on any future occaſion of fulneſs, paſſions, &c. they may be re-diſtended; but particularly the brain; if the ſame meditations or paſſions are often repeated, and long continued, which firſt gave riſe to the diſtention. Where an hæmorrhage has once happened, as in the noſe, lungs, uterus, or anus, there is apprehenſion of its returning by plenitude, accidental coughs, colds, &c.; pleuriſies happen to the pleuritic, gout and rheumatiſm to the gouty and rheumatic, &c.

12. Madneſs, then, is nothing but the effects of diſtended veſſels, a checked vicious circulation, and changed fluids oppoſing or perverting the ſoul's regular action or power in the medullary ſubſtance of the cerebrum and cerebellum; in which perception, reaſoning, judgment, imagination, and memory reſide; as well as the nervous powers over the body for performing voluntary and involuntary motion, &c.

13. What the ſoul or mind ſpecifically is, has not as yet been ſatisfactorily accounted for, and perhaps never may be diſcovered; but it is certain, that morbid changes of the blood, or its over diſtended accumulations, concretions, indurations, extravaſations, &c. in the brain, produce the effects obſervable in madneſs, from the prevention or perverſion of the ſoul's

powers.

powers. This is perhaps ſufficient for human beings to know, to aſcertain either the difficulty of curing inſanity, or to direct the choice of remedies moſt proper for the malady.

Prognoſtics of Inſanity or *Madneſs.*

From a review of the cauſes of madneſs by diſſections after death, and the foregoing obſervations, it will not be difficult to judge in what inſtances madneſs is, probably, curable or incurable.

1. When madneſs is recent, has ariſen from fever, accidental ſuppreſſions, accuſtomed evacuations, from metaſtaſis, or any bodily affection alone; there are proſpects of curing the complaint by removing the reſpective cauſes.

2. If the inſanity originate from mental perturbation, violent paſſions, or any affections of the ſoul, conſtitutional or continued long, the cure will be difficult, and frequently impoſſible.

3. When the veſſels of the brain only ſuffer by diſtention, reducing them to their original diameters may prove a cure.

4. Acrimony irritating the brain, may be curable by diſcovering the ſpecies: whether ſcrophulous, venereal, gouty, or rheumatic, &c., and by applying, judiciouſly, the remedies adapted to each particular ſpecies, regi-

men, &c. &c. Theſe four cauſes of inſanity are, perhaps, more common than the ſubſequent.

5. Preternatural accumulations in the brain from a coagulation of the fine ſerous particles, which tranſude through the minute ſtructure of the different regions in the cerebrum and cerebellum, foldings, circumvolutions, windings, fiſſures, connections, various cavities, &c., ſcarce admit of cure; becauſe the effuſed thickened fluid requires liquefaction by reſolvents, and abſorption; which, though poſſible in the external parts of the human body, when ariſing from contuſions, &c., yet in the brain the ſucceſs of any medicaments muſt be extremely doubtful, having no aſſiſting muſcular powers to agitate and promote the impacted blood from the leſs elaſtic and debilitated veſſels.

6. Bony exoſtoſes, or concretions, or preternatural ſubſtances, as polypi, &c. are irremediable, could it be aſcertained that they exiſt in the brain, which, however, is impoſſible; but theſe are rare caſes.

7. A preternatural dryneſs and diminution in the brain, or a paralytic affection of the coats of veſſels, &c., are in general incurable, which may be eaſily conceived from the prognoſtics in palſies of other parts of leſs dignity than the brain.

8. Indu-

8. Indurations of various parts of the brain are, when confirmed, incurable, or at leaſt, extremely difficult to remove.

9. Maniacs of a florid complection have been known more frequently to recover, than the pale melancholic; the reaſon of which may be, that the former only ſuffer from diſtention of veſſels, the latter oftener from concretions in the brain, &c.

10. Hereditary madneſs, or the diſorder being cauſed by an ill-ſhaped head, as the *cilo* or ſteeple-crowned, are generally irremediable.

11. The difficulties medicine has to counteract in attempting the cure of maniacs, muſt be manifeſt from the appearances of the brain, &c., after death; its utmoſt efforts may prove fruitleſs in many inſtances, the cure, from analogical reaſoning, being ſometimes altogether impoſſible; in others uncertain, and in ſome only probable.

Theſe prognoſtics are drawn from conſidering the importance and ſoft ſtructure of the parts diſeaſed, the difficult acceſs of medicines or their powers to parts contained in ſuch a bony receptacle as the ſkull; the difficulty of drawing off blood from the various parts of the brain, which may be affected; and laſtly, from experiencing an oppoſition in changing the natural tempers of human beings in health;

much leſs then can diſorders of the ſoul be removed, when deprived of calm reaſon, reflection, and true judgment.

On the Cure of Madneſs.

The firſt thing to be conſidered in the cure of madneſs is, the cauſe which gave riſe to the diſeaſe, and its rational mode of removal; ſecondly, the conſtitution of the patient, whether florid, plethoric, and healthy otherwiſe; or pallid, debilitated, and cachectical. The former require profuſe evacuations and abſtinence; the latter deobſtruents, and perhaps in many caſes tonics. Thirdly, the force of the diſeaſe, and temper of the patient: the raſh, impetuous, and miſchievous muſt be reſtrained by the ſtrait waiſtcoat or chains, and exciting fear by the menacing aſpect, or the acquired and determined authority of the keeper or attendant: the low and melancholic require rouſing, ſoothing, and amuſement. The practical domeſtic management, however, of the inſane is well known to ſeveral gentlemen, who receive and humanely attend thoſe melancholy diſeaſes.

The *cure* of madneſs, when ariſing from ſuppreſſed evacuations, requires the ſolicitation of whatever is obſtructed, as the hæmorrhoids; menſes in women; perſpiration, or alvine feces, &c. Although

Although it is much doubted, whether madneſs ever aroſe merely from ſuppreſſed hæmorrhoids, without the junction of ſome other efficient cauſe, yet, if ſuch a circumſtance ſhould happen, opening the hæmorrhoidal veins with a lancet, or bleeding with leeches, would be proper.

Irritating aloetic purgatives, or centaury, &c. would likewiſe promote the flow of the hæmorrhoids.

If, however, the ſuppreſſed hæmorrhoids or piles occaſioned inſanity, from a turgency of the blood veſſels in the brain, bleeding in the jugulars, or even in the arm or leg plentifully, obſerving for a conſiderable time a very dry diet to prevent repletion, would moſt probably ſucceed.

Pediluvia are likewiſe neceſſary.

Suppreſſed menſes are reproduced by remedies adapted to the conſtitution.

If the ſuppreſſion originate in debility, with a very pallid countenance, aloetics and the gum pill, night and morning; and chalybeates, not of the heating kind, are uſeful, particularly the flores martiales with bitters, &c.; other ſteel preparations in ſome conſtitutions affect the head, and are improper.

If the ſuppreſſion ſhould ariſe from an inflammatory diatheſis, with floridity of face and plenitude

plenitude, bleeding, alkaline ſalts, ſal diureticus, &c. may be preſcribed, and occaſionally a ſmart evacuating purgative.

Pediluvia of ſalt and water, repeated two or three times a day, an hour each time, in either inſtance of ſuppreſſion, are adviſeable.

Suppreſſed menſes, from obſtructed uterine veſſels, or coagulations, or congeſtions in the lymphatic ſyſtem, cannot with certainty be removed, but by mercurials, either preſcribed, as evacuants or alteratives. See *Chloroſis* and *Suppreſſions* of the *Menſes*.

The obſtruction of the lochia after parturition has produced inſanity, and this happens to ſome women during every childbed period. The removal of the effects of obſtructed lochia depends on circumſtances, and ſhould be treated differently in different ſubject *.

Theſe caſes of madneſs commonly cede to a ſkilful application of medicine, of the deobſtruent, uterine, or evacuant claſs.

The milky mania, or that delirium which has been ſucceeded by melancholy or madneſs from ſuppreſſed ſecretion of milk, ſhould be treated by venæſection, evacuants, and bliſters, if no contra-indications forbid their uſe; purging particularly is uſeful, and antimonial dia-

* See treatiſe on The Cauſes of Death in Childbed inveſtigated, &c.

phoretics,

phoretics, as ſmall doſes of *tart. emet.* with nitre, and camphor to 10 or 15 grains every four or ſix hours. When I formerly practiſed midwifery, I have known theſe methods remove inſanity.

Thoſe women who are attacked with a maniacal affection after the birth of every child, commonly acquire their reaſon, by ſkilful management, in a few weeks or months.

Naſal hæmorrhage being cuſtomary, on being ſuppreſſed, has cauſed a maniacal affection; bleedings in theſe caſes are neceſſary in the *jugular*, *occipital*, *angular*, *frontal*, or *naſal internal vein*, if poſſible; for theſe four laſt veins communicate with the *ſinuſes* and *veins of the brain itſelf*; therefore, more promptly evacuate the blood from the part affected, and ſhould be particularly attended to in *ſanguineous apoplexy*, *epilepſy*, and *maniacal* affections *.

Irritating the internal part of the noſe by a feather or ſtraw will likewiſe produce the naſal hæmorrhage, which is ſuperior to ſternutatories or ſnuff, as the violent action of ſneezing, in a plenitude of the veſſels of the brain, has ruptured a blood veſſel, and proved fatal.

* See the origin and progreſs of the arteries, ſinuſes and veins of the dura and pia mater, cerebrum and cerebellum, accurately deſcribed in the *Schola Medicinæ*, with copper plates.

A *naſal*

A *naſal hæmorrhage* often cures that moſt violent of all deliriums the *phrenitis*; and all experienced phyſicians muſt have obſerved, that a very ſmall portion of blood iſſuing from the noſe in the deliriums accompanying inflammatory or other fevers, has immediately brought the patient to perfect ſenſe and reaſon.

In maniacal affections it appears very rational to purſue a ſimilar mode: it is, however, difficult or impoſſible, perhaps, to evacuate a ſufficient quantity of blood occaſionally from the naſal, frontal, angular, or occipital veins; but anatomy certainly demonſtrates the communication of theſe veins with the brain itſelf, and when it is ſuppoſed a turgency of cerebral veſſels is the cauſe of madneſs, nothing can appear more rational than to *deplete the veſſels of the part*, and reſtore the ſinuſes and veins to their original ſize by a very great *abſtinence* from *liquid* foods.

If the ſuppreſſion of accuſtomed perſpiration or coſtiveneſs have occaſioned madneſs, diaphoretics of antimony and camphor, or purging, are indicated. See *Coſtiveneſs* and *Dry Skin*.

If perſpiration ſhould be wiſhed in the head, the fumes of vinegar and water in a large baſon, and covering the head, will produce a plentiful evacuation of perſpirable matter.

Pediluvia

Pediluvia of ſalt and water, or tepid vapor, or water baths, will anſwer the ſame purpoſes.

The *cure* of madneſs from a perturbed mind, or paſſions long indulged, is to be attempted by the apparent gratification of the deſire, or ſometimes oppoſition, as far as mental cure extends.

Anger, whoſe intemperance is augmented by oppoſition, is eaſieſt calmed by ſilent neglect.

Pride, which commonly aſſumes great ſuperciliouſneſs and arrogance, and pretends to mental or bodily qualities it ſeldom poſſeſſes, is beſt ſoothed by affected obſequiouſneſs and adulation.

Mad pride renders the poſſeſſors in their own imagination, perſons of very great conſequence. The proudly mad conceive themſelves emperors, kings, or great perſonages, generals, rich merchants, &c., and they are generally tyrannical, pompous, obſerve a reſerved, diſtant behavior, and expect great homage; which if they receive not, are ferocious, vindictive, revengeful, or ſullenly miſchievous.

Pride in thoſe who are not inſane, is generally the concomitant of folly, and is commonly uſed as a maſked battery to cover the defects of the mind, or acquire importance amongſt

amongſt the undiſcerning vulgar: it is pitied by true wiſdom, and ridiculed by wit.

Envy, which ever maliciouſly indulges itſelf in the misfortunes, miſtakes, mental, or bodily defects of others, is happieſt in hearing ſcandal and detraction, eſpecially againſt thoſe whoſe ſuperior excellence is marked and acknowledged by mankind.

As its higheſt enjoyment is the miſery of others, ſo its moſt pungent ſenſations of horror ariſes on viewing any elevation of ſentiment or happineſs.

Avarice or *covetouſneſs*, which never enjoys what it poſſeſſes, but thirſts after wealth with an inordinate deſire and ſedulous attention, is rendered moſt eaſy by the contemplation and expectation of future Peruvian mines.

Diſappointed expectation is no unfrequent cauſe of madneſs; or hopes fruſtrated, that have been long dwelling on future acquiſitions*. What is more diſagreeable to the human mind than long ſuſpenſe, or alternate hope, fear, and apprehenſion? Deſperate attempts at ſuicide are often the conſequences of diſappointment: there is no remedy but ſetting bounds to human deſires, many of which are chimerical and un-

* It was remarked, that on account of the famous *South Sea bubble* many, who were ruined, became mad.

reaſonable; but this is only practicable before the approach of inſanity or deſperation, which, when preſent, never liſten to reaſoning advice.

Love, that fiery flame, when lighted up in the human breaſt, conſumes its votary, if not gratified with the object of *mental attraction*. It is a paſſion the leaſt of all, perhaps, governable by reaſon, and when productive of inſanity, which, in proportion to its violence, it is moſt approximate, is commonly incurable.

Jealouſy is a ſenſation of ſuſpicion, where the greateſt confidence is expected. In both love and marriage it has produced ſuicide: its remedy is indifference to the object adored, or a philoſophical reſignation to infidelity. In France, and other warm countries, infidelity in a miſtreſs or wife is treated with levity or laughter; in England, with ſober ſadneſs, deteſtation, or ſelf-murder.

Misfortunes in life, if nearly producing madneſs or deſperation, are only curable by a timely alleviation of the preſent or expected diſtreſs. If from domeſtic unhappineſs, from children or relations, vexation has produced madneſs. An apathy of ſoul feels nothing except for ſelf; but great philanthropy earneſtly engages in the conduct and welfare of all mankind, and has

thouſands

thouſands of emotions and fears unknown to the inſenſible or torpid.

A *nice ſenſe of honor* has produced raſh ſuicide, or inſanity from the moſt exquiſite feelings; where ſuch ſentiments exiſt, nothing can be more inhuman than to torture them; they are the companions of the moſt elevated and noble minds. There have been inſtances of officers in the army committing ſuicide on only receiving a ſharp reprimand for ſome trifling omiſſion, from a ſuperior officer. The experiencing neglect or harſh treatment from relations or friends, where affections have been warm, have produced ſhocking inſtances of miſery and inſanity.

Unjuſt perſecutions are amongſt the cauſes of madneſs. In this country of liberty, men of ſuperior rank or fortune, even if accompanied with haughtineſs, pride, or a malignant diſpoſition, have very little power to gratify malevolence; the greateſt as well as the loweſt being equally amenable to the law. In other countries, ſuperiors either in rank or profeſſion have great power over inferiors. The modern education and philoſophy have, however, ſoftened the ferocity of all ranks; but yet, there are too many inſtances, where, if mankind have an opportunity of doing miſchief

one

one to another, they ſeldom want the inclination *.

The

* An anecdote of the medical kind, though it gives no luſtre to the profeſſional character of the party, yet ought here to be mentioned, as a moſt inhuman trait of a man, who has figured in an elevated medical ſituation.

While I was at Vienna, the following ſtory was recent:

Baron Van Swieten, phyſician to the late empreſs, conſidered by many not the moſt ſucceſsful practitioner, and who all the world knows, was a rigid *Boerhaavian*, had attended a lady of ſome rank in the dropſy, and the Baron followed the *Boerhaavian* doctrines implicitly, but without the leaſt ſucceſs, and declared the caſe *incurable*; aſſerting, that any phyſician, who *undertook the cure* deſerved the appellation of *aſs*. Dr. *Hirneis*, a popular phyſician in that city, much eſteemed for his humanity, ſkill, and gentleneſs of manners, was called, and ſoon cured the patient by methods *not mentioned in Boerhaave*. The lady wiſhed to recompenſe the worthy doctor, but he declined accepting any pecuniary reward, and only requeſted the patient to go to Baron Van Swieten, and prove by ocular demonſtration, that the *aſs had cured what the ox could not*, alluding to the overgrown pride of the *court* phyſician. The Baron, inflamed at the cure being performed by methods he was unacquainted with, meditated, and accompliſhed the deſtruction of the doctor for curing the patient, contrary to his opinion and prognoſtic. The Baron had ſufficient power with the Empreſs to have Dr. *Hirneis* baniſhed from that city to Paſſau, by which the unfortunate man loſt all his practice, and he, with a numerous family were reduced to poverty. On the death of the empreſs the preſent emperor was applied to, in order to recal the baniſhed doctor, who had been in exile twenty years. The emperor, perhaps, not being diſpoſed to ſhew diſreſpect to his imperial mother's me-

mory

The perſons moſt capable of gratifying rancor at the expence of honor or juſtice are the haughty, proud, mean, and envious. The ob-

mory, or to her favorite phyſician, denied the requeſt; but after the death of *Baron Van Swieten* the exiled doctor was ſuffered to return to Vienna. In his twenty years abſence his principal friends had died; he ſoon found his practice was unlikely to be reſtored, and he expired a ſhort time after at Vienna from extreme grief, or, ſome ſay, by a ſhorter means. Thus an able practitioner fell a victim to medical ſucceſs, through the mortified pride and tyranny of a powerful, but mean, *court phyſician*.

In a learned profeſſion like ours, the very baſis of which ſhould be founded in gentleneſs, humanity, and the perfection of acquired excellence and ſcience; no ſuch narrowneſs of ſoul ſhould exiſt, as to be envious at the ſucceſs of another. Wherever the dawnings of induſtry and ſuperiority of medical knowledge appear, they ſhould be cheriſhed, protected, and brought forward, to benefit ſociety. In this happy country of liberty, phyſicians are upon a more equal rank; real abilities, and ſucceſsful practice, will always procure friends and protectors, which no profeſſional envy can cruſh; nor can court edicts be obtained to baniſh uſeful phyſicians from ſerving mankind in the manner moſt agreeable to their ſkill and inclinations. The royal college of phyſicians in London alone have the power of interdicting improper perſons from practiſing within ſeven miles of this metropolis; but it is hoped the cenſors of that learned body never have, nor will exerciſe ſuch power, from perſonal pique, or envious motives; but on the liberal principles of the *ſalus populi*, in the ſuppreſſion of quacks and impoſtors; for which purpoſe charters were granted, and extraordinary powers delegated.

jects

jects of perſecution are thoſe, commonly, who excel in mental; or who acquire great reputation from real merit, liberality, and probity.

The remedies againſt malevolence are patient forbearance, perſeverance in rectitude, foreſight of future miſchief, and a manly oppoſition to its wily ſnares, and low-cunning inventions. Integrity, diſcernment, and reſolution are terrors to the proud, miſchievous, or deſigning, and formidable ſhields againſt artifice, diſſimulation, or unjuſt perſecution.

Where an exquiſite ſenſibility pervades the human frame, without a maſculine habit of body and mind; long-continued vexation has been productive of inſane grief, melancholy, and ſuicide.

The *conſciouſneſs of immorality* has cauſed deſpondency, deſperation, and, laſtly, inſanity or ſuicide.

Injuſtice, cruelty, or murder have tortured the perpetrators and actors with the moſt pungent mental torments. The paths of ſtrict juſtice are ſtraight and happy; thoſe of injuſtice, low cunning, and deception, full of dangers, diſgrace, or mazed perplexities. True wiſdom always purſues the former; left-handed wiſdom, with various degrees of artifice, the latter. The recollection of barbarity or injuſtice, though it may have anſwered a temporary

intereſted purpoſe, has ſtung the parties afterwards with remorſe, horror, deſpair, melancholy; they have been haunted with a thouſand hideous imaginary ſpectres. Medicine ſeldom avails here, when the guilty mind, preying on its own depravity, has become inſane.

Change of ſituation, reparation of injuries, the converſation of friends, and attempts to direct the mind from its melancholy preſſure, are the chief aids under ſuch miſerable circumſtances.

The heart ſuddenly dilated by over joy, has produced madneſs; therefore good intelligence ſhould be delivered with prudence and circumſpection.

Diſtentions of veſſels, which include various madneſs, are of two ſpecies.

I. *Veſſels* are over dilated, by an increaſed force of the heart and arteries, with too ſlow a movement of blood in the veins: the effect of mental perturbation, acting powerfully on the heart in robuſt ſubjects, whoſe muſcular powers are ſtrong, and cohering particles firm, joined with plethora, and viſcidity of the blood.

II. *Veſſels* can be over diſtended, and continue ſo, from relaxation of their coats. The heart may be ſufficiently powerful, with *ſtimuli* of degenerated acrid blood, to force rapidly the irritating blood into the aorta, and this veſſel into the arteries. The fibres of arterial

terial coats, or the cohering particles forming muſcular fibres of arteries, may be leſs firm, joined with irritability of the nervous powers, and, therefore, eaſier excited to action.

The muſcular powers of the heart are often very lax and debilitated; the fibres compoſing this organ may be more irritable in proportion to the nervous irritability of other parts; or, the heart being over excited by a ſharp, debilitated, lax texture of the blood, its contractions and dilatations become rapid, though feebler. Theſe cauſes conjointly produce the quick, low pulſe in hectic and other low fevers, occaſion little heats or fluſhings, univerſal or partial, by a rapider, though in general a weaker arterial action. The acrid blood having a ſtimulating quality ſimilar to *artificial ſtimuli*, may act moſt powerfully in parts, which have already ſuffered diſtention, and accuſtomed to an inordinate excitement to action. Parts that have been once convulſed, on ſlight occaſions, are reconvulſed. Veſſels once excited to a quicker action, which may be called a convulſed motion of their muſcular coats or muſcles, from equivalent cauſes are eaſily irritated to repeat increaſed action. This is illuſtrated by any ſlight colds producing in various perſons their accuſtomed, though different effects; as to the pleuritic, a pain in the ſide;

to the gouty or rheumatic, the gout and rheumatiſm; to others, inflammations of the eyes, pains of the head, teeth, cough, inteſtinal complaints, &c. &c.

The veſſels of the brain, then, having already ſuffered diſtention with phlogiſticated or dephlogiſticated air, blood, or acrid fluids; the membranes and veſſels may be re-irritated by viſcid, or too lax a blood, acrimonies, &c.

It has been already obſerved, that the arterial coats of the arteries in the brain, are much thinner and weaker, than in any other part of the body.

The firſt ſpecies may be called *tonical diſtention*, the ſecond *atonical diſtention*. A great variety of diſeaſes may be more accurately conſidered under theſe two diſtinctions.

The former comprehends all the degrees of the true *inflammatory diatheſis*, in which the blood is viſcider and of a firmer texture than uſual, with ſtronger muſcular action; the latter, *atonia*, debility, relaxation of the nervous ſyſtem, &c.; in which the coherence of the blood and its texture are in various degrees laxer than uſual, and the muſcular powers weaker, though more irritable.

The *tonical diſtention* is moſt common to the florid, robuſt, and vigorous; the *atonical diſtention*

tention to the pallid, debilitated, and relaxed: one ariſes from the muſcular powers acting ſtrongly on the blood; the other, from the force, quantity, and preſſure of acrimonious fluids, againſt the ſides of over irritable veſſels, deprived of ſufficient ſtrength to make the proper reſiſtance.

The examples of both may be illuſtrated, by conſidering the diſtention of the veſſels, in the conjunctiva during the ophthalmia.

In both the continual, or intermittent inflammation of the eyes, the veſſels are preternaturally diſtended with red blood; yet the former requires bleedings, evacuations, and antiphlogiſtics; the latter, *bark* and *tonics*: the firſt is a *tonical diſtention*, the ſecond an *atonical diſtention*; in both caſes the veſſels are dilated, but evidently from oppoſite cauſes.

Another illuſtration may be drawn from the differences between the true inflammatory tumors of ſanguine temperaments, and the tumors in the *anaſarca*. In the firſt, the cellulous cavities of the *tela celluloſa* are filled with red inflammatory blood, forced into the cells by the mouths of arteries accompanied with redneſs, pain, heat; in the ſecond, the cellulous cavities are filled with *cold ſerum*, with almoſt a tranſparent pallidity of the parts, not accompa-

nied either by heat, redneſs, or pain. Nothing can be more contrary than theſe two cauſes giving riſe to tumors; yet nothing would be more dangerous than to bleed plentifully in the dropſy, and preſcribe antiphlogiſtics; or to invigorate the over-acting ſyſtem by tonics, bark, ſteel, &c. in the inflammatory *diatheſis*.

What cures the former, would do miſchief in the latter. From viſible and evident cauſes, effects, and the remedies which remove them, may inferences be drawn highly conducive to the cure of the diſeaſed membranes, vaſcular ſtructure of the brain, and all other membranous, or vaſcular parts.

It is evident, that *tonical* or *atonical* inflammation of the eyes produce ſimilar appearances and acute pains; yet practitioners, from a want of this knowledge, have frequently failed in treating the ophthalmia. Let theſe doctrines be applied to the florid and robuſt, or the pallid and weakened habits, and medical ſucceſs will be more certain *.

In raving or other ſpecies of *madneſs*, attended with *tonical diſtention*, the cure ſhould conſiſt, in repeated venæſection of the frontal, occipital, naſal, temporal, angular veins, or indeed the external jugulars, or in the arm, if

* See treatiſe on Diſeaſes of the Eyes, &c.

punctures about the face ſhould be objectionable.

The quantity of blood in the whole body requires reduction, to a conſiderable degree.

Draſtic, evacuating cathartics of jalap, nitre, and cremor tartar, or any other effectual purge repeatedly preſcribed, greatly aſſiſt in leſſening the quantity of fluids.

Extreme dry diet: inanition of veſſels, or of the cellulous cavities of the *tela celluloſa*, cannot long continue, unleſs great circumſpection be obſerved in the quantity of liquids, which the *inſane* uſe.

Two ounces of tea, coffee, or milk will be ſufficient for breakfaſt, with three ounces of bread, and a ſmall portion of butter.

At *dinner*, light food will be advantageous, with not above four ounces of liquid, whether table beer or water, and the ſame weight of bread.

Vegetables ſhould be ſparingly eaten, as they are apt to create flatulencies. It has been already mentioned, that flatus in the œſophagus, ſtomach, or inteſtines, may obſtruct the return of blood, or irritate the brain, &c.

As ſubſtitutes for drink, tamarinds, roaſted apples, or any fruits in ſeaſon, are proper; if they ſhould not create too much flatulency.

If

If the inſane perſon has been indulged with tea in the afternoon, not above two ounces of that liquor ſhould be drank.

For *ſupper*, if any be eaten, a roaſted apple and a little bread, with four ounces of the accuſtomed drink, will be ſufficient, which may be water, or cold tea.

Theſe remedies and regimen have performed ſeveral extraordinary cures in the true inflammation, diſtended veſſels of the eyes, and other inflammations: from analogy, great advantages may be expected in maniacal affections; wherein the veſſels of the brain ſuffer from *tonical diſtention*.

The *medicines* moſt proper to act uniformly with ſuch a regimen, are antiphlogiſtics; nitre, camphor, neutral or alcaline ſalts, as the ſal ſodæ, ſal tartari, ſal polychreſtus, &c., antimonial diaphoretics, and laxatives.

In a few recent maniacal affections, with *tonical diſtention*, I have ſucceſsfully preſcribed the following, or ſomething ſimilar.

No. 93. ℞. Camphor. gr. x. ad ℈j.
Amygd. decort. No. vj.
Sacch. alb. gr. xv. tere ſimul, deinde adde gradatim Aq. pur. ℥ij.
Sal. nitr. ℥ſs. F. hauſtus, quartâ vel ſextâ quâque horâ ſumendus.

To

To keep the inteſtines conſtantly in a lax ſtate;

No. 94. ℞. Elect. lenitiv. ℥iij.
Pulv. crem. tart. ℥ſs.
—— jalap. āā ʒij.
Syr. ſimp. q. s.
F. elect. cujus capiat Q. N. M. bis vel ter de die.

The *decoctum nitroſum* may accompany the antecedent regimen and medicines, *pro potu ordinario*, but not to much exceed the quantities preſcribed.

Theſe, or ſimilar plans, continued many months, would moſt probably cure madneſs, when principally ariſing from *tonical diſtention*.

The evacuating plentifully the fluids of the body, muſt certainly alſo empty the veſſels of the brain.

The emptineſs of veſſels being continued for many months, or perhaps a year or two, by the *dry antiphlogiſtic* regimen, may permit the coats of the veſſels to recover their former ſize; from the canals being continually emptier, and contracting and accommodating themſelves to the force and quantity of the irritating fluids.

Nitre and *camphor* acting chiefly as ſedatives, whoſe excellent qualities I have experienced near thirty years in the *phrenitis*, and *delirium*

in

in inflammatory fevers, &c. are very proper to diminiſh arterial action, or by acting as antiſpaſmodics, on the nervous ſyſtem diſtracted by *tonical diſtention*.

Laxatives conſtantly taken, ſtrike at the very root of repletion, by not ſuffering the lacteal ſyſtem to abſorb much of what enters the ſtomach or inteſtines.

Profuſe ſweating is, likewiſe, amongſt the evacuants of ſuperabundant fluids.

If a diaphoreſis ſhould be thought neceſſary, one or two drams of the *ſolutio antimonialis* may be added to the draughts, ſo as never to excite vomiting.

SOLUTIO ANTIMONIALIS.

No. 95. ℞. Tart. emet. gr. j. ſolve terendo in Aq. pur. ℥j.

In certain caſes, wherein drink cannot be diſpenſed with, water acidulated with vinegar, with or without nitre, will be beneficial; as it is cooling, and *diminiſhes lacteal abſorption*.

Large doſes of vinegar without any other remedy have cured the mania *. Vinegar acts

* Bergius M. M. vegetabil. p. 164. De aceti vini egregiis virtutibus medicis bene diſſeruit Joſ. Benvenuti in Nov. Act. Ac. N. C. vol. ii. p. 132, ſeq.

De felici effectu aceti in mania larga doſi propinati, obſervationes pulchras edidit, Locher in Obſ. Pract. p. 68.

as a diaphoretic and refrigerant in many fevers; it diminiſhes nutrition by contracting the lacteal abſorbent veſſels, and perhaps would be very efficacious with water, as a drink for the inſane, whoſe ſtate of ſtomach or inteſtines do not contra-indicate the uſe of vegetable acid.

The *cure*, then, of inſanity ariſing from, or accompanied with *tonical diſtention* of veſſels, depends on *depletion*, the preventing *repletion* with the uſe of antiphlogiſtic regimen, and remedies.

The *cure* of inſanity with *atonical diſtention*, pallor of countenance, or ſallowneſs, debility in the moving muſcular powers, or a depraved ſtate of the blood, and, of courſe, all other human fluids, will be comprehended from its oppoſition to the former ſpecies.

The natural ſtate of the patient's conſtitution ſhould be conſidered, before the inſanity commenced; to diſcover, whether the appearances of pallor, ſallowneſs, or depraved blood pre-exiſted: if they did, with ſo much the more difficulty can the conſtitutional depravations be changed, either by diet or medicine.

The mania or melancholy appear both in the *tonical* and *atonical diſtention*, and ſometimes are complicated, as far as I have been able to collect from thoſe converſant in maniacal affections.

tions. The modes of cure muſt be complex, if diſorders originate in compound cauſes.

In the *atonical diſtention* of veſſels, after proper evacuants of the cathartic kind, tonics of bark, elixir of vitriol, cold bathing, and exerciſe, ſhould be preſcribed.

The diet may be equally of the *dry kind*, as in the *tonical diſtention*, but more nutritious, in order not only to change the lax texture of the fluids, but likewiſe to give more firmneſs to the ſolids. The blood being diminiſhed, and the ſolids firmer; the diſtended veſſels will gradually contract, and, in time, reſiſt the milder impulſe of healthier fluids.

The ſeaſons of the year and climate ſhould be adverted to; for when the air is cold and humid, leſs drink is to be permitted, than in dry and ſultry weather.

The excretions are likewiſe not to be neglected; for when they be copious, more drink is to be allowed, than when perſpiration, urine, or feces be long retained, or evacuated in ſmall quantities: but theſe circumſtances are to be aſcertained by the portion of the foods daily received.

It appears rational, in either ſpecies of madneſs, that in proportion to the force of the inſanity, and length of time it has continued, a longer ſpace of time is proportionably required

quired for its removal. Veſſels once diſtended, in ſome conſtitutions, may require months, or years perſeverance in the moſt rational plans, to obtain a cure, and defend the patient from a relapſe *.

Acrimony, joined with diſtention of veſſels, may be of various ſpecies, and may greatly augment, or continue the effects on the brain in madneſs.

The acrimony moſt prevailing, whether inflammatory, in which a greater quantity of coagulable lymph, or in any debility, in which a leſs portion of coagulable lymph, but a greater of ſerum, abound, ſhould be conſidered.

* An officer, a moſt worthy man, who was in his Majeſty's ſervice with me in the French and Spaniſh war of 1761 to 1763, was apt to drink a cheerful glaſs, which always rendered him raving mad and extremely troubleſome to his brother officers: the delirium laſted two or three days; but I always cured him by acetum and water, bleeding, &c. He committed a raſh action in one of theſe fits, which, when ſober, made him determine never to drink any thing but water: this ſudden change of diet ſoon produced anaſarcous ſwellings, but by chalybeates and a dry diet he was cured. It is now a period of 25 years or more ſince he commenced his water-drinking plan, which he has conſtantly continued without any return of madneſs, but apprehends, that ſpirituous liquors would ſoon produce a relapſe. This great change of diet, though ſalutary to this individual patient, might be injurious, or fatal to many others.

The

The former requires evacuants, antiphlogiſtics, reſolvers of the coagulable lymph, ſuch as diluted alkaline ſalts, whether foſſile or vegetable, as the *ſal ſodæ*, or *ſal tartari*, and ſimilar remedies; the latter tonics.

The *ſcrophulous*, *venereal*, *gouty*, or *rheumatic* acrimony is to be removed by antivenereal and metallic alteratives; amongſt which, hydrargyrus and antimony joined, claim the preference as moſt ſafe and effectual. They may be repeatedly given, if well prepared, in ſmall doſes, after my manner, without diſturbing the moſt delicate conſtitution. Preſcriptions of this nature will be found in the prior part of the treatiſe, as correctors of chronical acrimony, and cauſe-removing remedies.

The *pineal gland* has been found morbid, withered, indurated, and dry, in ideots; but as the abſorbent lymphatic ſyſtem is not diſcoverable in the brain, it is doubted, whether this affection could produce madneſs.

The gouty, rheumatic, ſcorbutic, or any other prevailing acrimony, ſhould be treated according to circumſtances. In all which caſes, the blood muſt undergo a thorough change, or no ſucceſs need be expected.

Accumulations of ſerum, or coagulations in the brain, being amongſt the cauſes of inſanity, their

their removal, if poſſible, ſhould be effected: theſe congeſtions ſeldom happen, until the diſorder has ravaged many years.

In conjunction with the methods, already recommended, in *tonical* or *atonical diſtention*, profuſe ſweating, without much drinking, will be uſeful.

The vapor baths; or antimonial ſolution, ſo as not to vomit, or vinegar whey, or vinegar and water, or any other certain diaphoretic, continued many days, ſeem moſt likely to diſlodge and evacuate the accumulated, or offending matter.

If theſe ſhould prove unſucceſsful, then a long-continued mineral alterative courſe gives the beſt, though doubtful, proſpects of relief.

Bliſters to the head, neck, and back may be preſcribed, cupping, iſſues, or ſetons.

The *coagulated ſerum* in the interſtices of the brain appear, moſt likely, to be removed by a long perſeverance in the more powerful metallic alteratives, nitre, and camphor *. This I mention from analogous reaſoning. Glandular tumors, many accumulations and obſtructions have been diſcuſſed in other parts by

* See *treatiſe* on the new modes of adminiſtering *alteratives*, their modes of operating, powers, and various preparations in chronic diſeaſes, king's evil, ſcirrhus, cancers, ulcers, and all depravities of the blood.

theſe means, and it is rational to conclude, that the brain itſelf and membranes ſuffering from ſuch cauſes, may be relieved by ſimilar remedies, given in the new manner*.

Exoſtoſes preſſing on the brain, or in the longitudinal ſinus, &c. are incurable; ſuppoſing they were diſcoverable, unleſs their exact ſituations were known, and the trepan could be with ſafety performed, which hazardous operation is not applicable, to the ſinuſes.

Preternatural dryneſs, or palſy of the veſſels of the brain, which moſt commonly happen in the laſt ſtages of inſanity, might be treated with diaphoretics, ſtimulants, or metallic alteratives long repeated; though little or no ſucceſs can be expected. In difficult caſes, however, it is more humane to try ſome probable remedy, rather than totally deſert the patient; eſpecially where no miſchief can accrue from the attempt.

Indurations of the brain indicate a ſimilar prognoſtic, and attempts to cure with the former.

The four laſt cauſes, namely, accumulations or coagulum of ſerum, bony concretions, pre-

* Several new modes of preparing, and adminiſtering mineral alteratives, I have invented; which will be communicated in a ſmall treatiſe on thoſe ſubjects, in addition to thoſe already publiſhed.

ternatural

ternatural dryneſs, or induration of the brain, are not diſcoverable during life. Diſſections after death have ſhewn their exiſtence; therefore, to prevent them in life by the antecedent remedies, is, perhaps, the moſt that medicine, however ſkilfully applied, can attempt.

Florid complexions with mania, and ſtrong muſcular powers; or where the brain acts with great energy and violence, require powerful evacuants and relaxants.

The *pale*, *melancholic*, and *debilitated*, tonics, cold bathing, &c.*.

The *acrimonious*, alteratives of the mineral claſs, &c.

Opium, a noble remedy in many diſeaſes, has been recommended in maniacal affections; to the uſe of which are the following objections:

1. It cannot cure madneſs, nay it is known often to increaſe the paroxyſms of furor.

2. Suppoſing it would allay irritation by diminiſhing the nervous influence and arterial action, yet theſe effects would be diametrically oppo-

* I lately cured a young lady of a melancholic ſpecies of madneſs, by two grains of the *pulvis alterans* in a pill, three times a day, and large doſes of nitre and camphor. The *pulvis alterans* is waſhed calomel, which has been 12 times ſublimed, or ſix times ſublimed, if the former be not procurable, and ſulph. aurat. ant. p. æ. *rubbed together* for 10 or 12 hours.

ſite to every rational attempt to remove the cauſes of the diſeaſe; for if madneſs be principally cauſed by fluids over-diſtending veſſels, and a tardier circulation through the veins; or from accumulations or ſtagnations in the brain. *Opium*, by its ſedative properties, would be more likely to *fix* the diſorder in thoſe parts, than *remove* it.

3. In perturbations of mind, amongſt the nervous and eaſily irritable, *opium* produces wanderings of the fancy, delirium, and diſtracted pains of the head, ſimilar to ſtrong intoxicating liquors. If its ſedative powers act on the nervous ſyſtem, this checks the circulating arterial pulſations, by leſſening the irritability of the heart, and muſcular fibres of arteries, rendering their action ſlower; hence a greater quantity of blood may be collected and retained in the brain; which counteracting, as in madneſs, the nervous animal principle, is productive of phrenzy, delirium, &c. in proportion as the party who takes *opium* is nervous, and irritable in mind and body.

4. It occaſions coſtiveneſs, which in madneſs ſhould always be prevented; there are likewiſe many other objections, not neceſſary to be recited on the preſent occaſion.

5. *Opium*, therefore, as it cannot rationally be preſcribed, but as a mere palliative *pro tem-*

pore;

pore; whoſe effects are never permanent, but by a repetition and increaſe of its doſe; incurable caſes excepted, it is excluded in the treatment of madneſs, as contrary to the cure recommended.

This is not intended merely to palliate at the expence of future miſchief; but to eradicate, if poſſible, the very cauſes of that melancholy diſorder.

If allayers of irritation be thought neceſſary, camphor and valerian are moſt proper for the *tonical diſtention*; and the fetid gums, as aſſafœtida, myrrh, ſagapenum, olibanum, &c. in *atonical diſtention*; which muſt be left to the ſkill and judgment of the preſcriber.

Thus have been explained, and communicated many new doctrines concerning madneſs, its cauſes, and cure. The *data* or *facts* on which theſe principles have been conſtructed, are anatomical inquiries, the moſt certain of all, and inductive reaſonings from the morbid appearances of parts, conſtituting many new lights on inſanity. Several methods of cure, hitherto unattempted, are drawn from the foregoing reaſonings, and above thirty years conſtant and extenſive experience and reflection, on the powers of medicine in every branch of the art.

If the curative modes recommended ſhould, as they muſt, in ſeveral inſtances fail; yet the

cauſes of this failure, from contemplating what is here advanced, will be better underſtood, than heretofore. The next uſeful knowledge to curing diſeaſes, is, to comprehend, and give the reaſons, why cures ſhould not be expected. This is the diſtinguiſhing mark of real medical learning, contraſted to raſh boaſting, and deluſive empiriciſm.

One of the moſt ancient and moſt curious anecdotes concerning madneſs is amongſt the works of Hippocrates, who was called by the Abderites to come to Abdera to cure Democritus of inſanity. The embaſſy and epiſtles on this famous occaſion demonſtrate the origin of the doctrine of madneſs, as ariſing from *black bile* or *melancholy*, which opinion prevailed for above 2000 years.

The moſt conſiderable circumſtance concerning Democritus is, the diſſection of animals, to diſcover the cauſe of madneſs. His countrymen, obſerving him to purſue theſe kind of ſtudies, which were very extraordinary in thoſe ages; retiring and living in ſepulchres; engaged in the deepeſt contemplation; they concluded, he was in a ſtate of melancholy madneſs. This is no uncommon compliment to all men of extraordinary genius, or who poſſeſs an elevation of ſentiment above the generality of cotemporaries.—Democritus continually laughing, on all occaſions, whether ſerious or mirthful,

ful, confirmed their ſuſpicions. For this reaſon, they ſent Ameleſagoras, one of their chief citizens, to *Hippocrates*, that moſt eminent phyſician at Cos, with the ſubſequent epiſtle.

" *The Senate and People of Abdera to Hippocrates. Health.*

" Our city, Hippocrates, is in very great danger, together with that perſon, who, we hoped, would ever have been its greateſt ornament. But now, (O ye gods!) it is much feared, that we ſhall only be capable of envying others, ſince he, who through extraordinary ſtudy and learning, elevated the city, is fallen ſick: ſo that it is much apprehended, if Democritus become mad, our city Abdera will be deſolate: for, wholly forgetting himſelf, watching day and night, laughing at all things, ſmall and great, and eſteeming them as nothing; he occupies, after this manner, his whole life. One marries a wife; another trades; another pleads; another executes the office of magiſtrate; goes on an embaſſy; is choſen officer by the people; is rejected; falls ſick; is wounded; dies: he laughs at all theſe: on beholding ſome to appear diſcontented; others pleaſed. He likewiſe inquires, what is done in the infernal regions, writes his contemplations, and affirms the air to be full of images; that

he underſtands the language of birds, and often, riſing in the night, ſings to himſelf; and ſays, that he ſometimes travels into the infinity of things; and aſſerts that there be innumerable Democritus's like him. Thus, together by the exerciſe of his mind, he deſtroys his body. Theſe are the things we fear, Hippocrates! theſe are thoſe which deeply afflict us. Come quickly, therefore, and preſerve us by your advice. Deſpiſe us not; for we are not inconſiderable; and if you reſtore him, you ſhall not fail, either of money, or fame. Though you may prefer learning before wealth, yet accept of the latter, which ſhall be preſented to you in great abundance.

To reſtore Democritus to health, if our city were all *gold*, we would give it. We think our laws, Hippocrates, are ſick. Come then, thou beſt of men, and cure a moſt excellent perſon. Thou wilt not come as a phyſician, but as the founder of all Ionia, to encompaſs us with a ſacred wall. Thou wilt not cure a man, but a city, a languiſhing ſenate; and prevent its diſſolution: thus becoming our law-giver, judge, magiſtrate, and preſerver. To this purpoſe we expect thee, Hippocrates; all theſe, if you come, you will be to us. It is not a ſingle obſcure city, but all Greece, which implores thee to preſerve this body of wiſdom. Imagine that learning herſelf comes on this em-

baſſy

baſſy to thee, begging that thou wilt free her from this danger. Wiſdom is certainly allied to every one; but eſpecially to us who live ſo near her. Know for certain, that future ages will acknowledge themſelves obliged to thee, if thou deſert not Democritus, for he is capable of communicating the truth to all mankind. Thou art allied to Æſculapius by thy family, and by thy profeſſion. He is deſcended from the brother of Hercules, from whom came Abderus, whoſe name, as you have heard, our city bears; wherefore, even to him, will the cure of Democritus be acceptable. Since therefore, Hippocrates, you ſee a whole people, and a moſt excellent perſon, falling into madneſs, haſten, we beſeech you, to us. It is ſtrange, that the exuberance of good ſhould become a diſeaſe. Democritus, by how much he excelled others in acuteneſs of wiſdom, is now in ſo much the more danger of being mad, whilſt the common, unlearned people of Abdera enjoy their ſenſes as formerly; and even they, who before were eſteemed very fooliſh, are now moſt capable to diſcern the indiſpoſition of the wiſeſt perſon. Come, therefore, and bring along with you *Æſculapius*, and *Epione*, the daughter of Hercules, and her children, who went in the expedition againſt Troy: bring with you the receipts and remedies againſt ſickneſs. The earth plentifully affords

affords fruits, roots, herbs, and flowers to cure madneſs, and never more happily than now, for the recovery of Democritus. Farewell.

Hippocrates returned this anſwer:

Hippocrates to the Senate of Abdera. Health.

Your countryman Ameleſagoras arrived at Cos that day on which was celebrated the Aſſumption of the rod, which, as you know, is an annual aſſembly and ſolemn feaſt amongſt us, held at a cypreſs tree, which is carried by thoſe particularly conſecrated to the god. But finding by the words and countenance of Ameleſagoras, that your buſineſs required much haſte, I read your letter, and much wondered to find your city no leſs troubled for one man, than if the whole city were but one man. Happy indeed are the people, who know that wiſe men are their defence; not walls and bulwarks, but the ſound judgment of wiſe perſons. I conceive the arts are the diſpenſations of the gods, men the works of nature; and be not angry, ye men of Abdera, if I conceive, that it is not you, but nature itſelf, which calls me to preſerve her work, which is in ſuch imminent danger of falling.

Wherefore, obeying that which is the invitation of nature and of the gods, rather than yours, I ſhall make haſte to cure the ſickneſs of

Demo-

Democritus, if it be a ſickneſs; and not, as I hope, an error in you. It would be yet a greater teſtimony of your good will, if you were troubled only on ſuſpicion. Neither *nature* nor the *gods* have promiſed me any thing for my coming; and therefore, men of Abdera, do not you force any thing upon me; but ſuffer the works of a *liberal art* to be *free*. They who take *rewards*, compel ſciences to *ſervitude*, and make them ſlaves, depriving them of their freedom. Beſides, it is poſſible, that ſuch may diſſemble in a great diſeaſe, and deny in a little; and when they have promiſed, *not come*, and *come*, when they are *not* ſent for. Miſerable indeed is human life; for that the inſatiate deſire of *wealth* continually invades it, as a winter wind! I wiſh that all phyſicians would join together to cure it of this diſeaſe, which is worſe than madneſs; notwithſtanding it is thought happy, but is indeed a peſtilential ſickneſs. All diſtempers of the mind are, as I conceive, high madneſs; for they excite, in the reaſon, ſtrange opinions and fancies; which reaſon muſt be purified, and cured by virtue. As for me, if I at all made it my deſign to be rich, I would not, ye men of Abdera, come to you for ten talents; but would rather have gone to the great king of Perſia, where there are vaſt cities full of all kind of wealth: there I would have practiſed phyſic;

but

but I refuſed to cure a nation which are enemies to Greece; and to the beſt of my power have myſelf oppoſed the barbarians. I thought it a diſhonor to accept the wealth of a king, foe to our country, by which means I might become a deſtroyer of Greece. To get wealth, by all means, is not to be rich; the principles of virtue are ſacred and juſt. Do you not think it an equal offence to cure our enemies, as to take money for the cure of our friends? But this is not my cuſtom. I raiſe no wealth out of *ſickneſs*; nor did I wiſh, when I heard Democritus was mad, that it might prove ſo in reality: if he ſhould be well, he is a friend; if he happen to be cured of his ſickneſs, more a friend. I underſtand that Democritus is a perſon of firm and ſettled parts, the ornament of your city*.

It is ſaid that Hippocrates, in order to perform this voyage, ſent to his friend Dionyſius to take care of his family in his abſence; to Damagetus, that he would provide a ſhip;

* Artaxerxes offered an hundred talents to Hippocrates to come into Aſia, and cure a peſtilence, which deſolated the provinces and army. The ſum, in ſilver talents, is ſuppoſed to be 35,000l. in gold about 400,000l. This ſhews the great riches of the Aſiatics, and the patriotic virtue of that noble Greek to reſiſt the temptation; though the iſland was threatened with a dangerous war. Men have been leſs ſcrupulous in our refined times: whenever they have an opportunity of acquiring immenſe wealth, *per fas vel nefas*.

to Cratevas, that he would furniſh him with medicaments.

How Hippocrates was received the next day at Abdera, he gives the following deſcription to his friend Damagetus.

To Damagetus. Health.

It was as I conjectured, Damagetus; Democritus is not mad; but is extraordinary wiſe; and hath taught us wiſdom; and with us, all men. I have ſent back, with many thanks, the Æſculapian ſhip, on the prow whereof, to the picture of the ſun, may be added health; for we made a quick voyage, and arrived the ſame day, that I had ſent word, I could be at Abdera. I found all the people flocking together at the gate, in expectation, as it appeared, of our coming; not only men, but women, the old and the young, and by Jove, the very children; ſo much were they affected at the madneſs of Democritus, who at that time was ſeriouſly employed in *philoſophy*. When they perceived me, they ſeemed, a little, to be comforted, and to have ſome hope. Philopœmen offered to conduct me to my lodging, as all of them likewiſe deſired; but I told them, Men of Abdera, I will do nothing before I have ſeen Democritus; which, they no ſooner heard, than they applauded, rejoiced, and brought

brought me immediately along the forum; ſome following, others running before, crying out, Great king, Jupiter, help; heal! I adviſed them to be comforted; for that it being the ſeaſon of the Eteſian winds, I was confident, there was not any ſickneſs that would continue long: and, in ſaying this, on I proceeded. The houſe was not far, nor indeed the city; we went to it, being near the city walls, whither they conducted me quietly. Behind the tower there was a high hill, very full of tall poplars; from whence we beheld the habitation of Democritus. Democritus himſelf ſat under a ſhady, but low plane tree; in a thick grove all alone, ſqualid, upon a ſeat of ſtone, wan and lean, with a long beard. At his right hand, a little brook ran down the hill; upon which was a temple conſecrated, as it ſhould ſeem, to the muſes, encompaſſed with vines, which grew there ſpontaneouſly. He ſat very compoſed, having a book on his knees, and round about him lay other books; with the bodies of many animals diſſected. Sometimes he wrote haſtily; ſometimes pauſed, ſeeming to conſider things within himſelf. Soon after he aroſe and walked, and intently examined the diſſected creatures; then laid them down again, and returned to his ſeat. The Abderites, ſtanding about me, and hardly refraining from tears, ſaid, You ſee, Hippocrates, the life

life of Democritus, how mad he is; he knows neither what he would have, nor what he does. One of them, who would have given me a farther deſcription of his madneſs, on a ſudden fell a ſobbing, and howled like a woman at the death of her ſon, and then began to lament like a traveller robbed of his goods; which Democritus hearing, ſometimes ſmiled, ſometimes laughed, not writing any longer, but ſhaking his head. Men of Abdera (ſaid I) remain here, while I approach nearer; that, by hearing him ſpeak, and *obſerving his conſtitution*, I may judge clearly of the diſtemper: in ſo ſaying, I went gently down; the place was very ſteep, ſo that I could hardly keep myſelf from falling. When I came near, it happened, that he was writing ſomething, in a rapture, earneſtly; whereupon I halted, waiting till he ſhould give over. It was not long before this occurred; and, perceiving me advance towards him, ſaid, Hail, ſtranger! I anſwered, Hail alſo, Democritus, the wiſeſt of men! He, as I imagine, a little concerned, that he had not ſaluted me by name, replied, What may I call you? for my ignorance of your name is the reaſon that I ſtyled you ſtranger. My name, ſaid I, is Hippocrates, the phyſician. You are, ſaid he, the glory of the Æſculapians, the fame of whoſe worth, and knowledge in phyſic, is arrived as far as me.

What

What buſineſs has brought you hither? but firſt ſit down. This ſeat, you ſee, is pleaſant, green, and ſoft; better than high thrones, which are ſubject to the envy of fortune.— When I was ſeated; is it a public or private buſineſs, ſaith he, which brought you here? tell me freely, and we ſhall, to our utmoſt power, aſſiſt you. I anſwered, It is on your account, that I came hither, to be acquainted with you, a wiſe perſon, the occaſion being afforded me by an embaſſy from your country. He replied, Then let my houſe entertain you. Having thus made trial of him ſeveral ways, and not perceiving any thing like inſanity; You know, ſaid I, Philopœmen, one of this town? Exceeding well, anſwered he, you mean the ſon of Damon: he lives near the Hermæan fountain. The ſame, replied I; he has been an old acquaintance, and kindly received me for his gueſt. But you, Democritus, I intreat to afford me a better entertainment; and, firſt tell me, what it is, that you are writing. He, after a little pauſe, anſwered, concerning *madneſs*. Good Jupiter, ſaid I, you write ſeaſonably againſt the city! What city, Hippocrates? anſwered he. I replied, that I only ſpoke at random. But what do you write of madneſs? What elſe ſaid he, but explaining what it is, how it comes to be generated in man, and how it may be cured. Theſe animals, which

you

you behold, I have diſſected for that purpoſe; not as hating the works of the gods, but to make inquiry into the nature and ſeat of *choler*. You know, where *bile* abounds too much, it moſt commonly cauſes madneſs in men: it is in every perſon; but in ſome leſs, in others more: its exceſs cauſeth diſeaſes, being a matter partly good, partly bad. By Jove, ſaid I, Democritus, you ſpeak truly and wiſely, and I judge you happy, who can enjoy a ſerenity I cannot partake of. But why cannot you? ſaith he. I anſwered, Becauſe either travels, children, or eſtate, ſickneſſes, deaths, ſervants, marriages, or the like, interrupt my repoſe. Hereupon he fell into his uſual paſſion, and laughed for ſome time exceedingly, ſuſpending diſcourſe. Why, ſaid I, Democritus, do you laugh? Whether is it, that I have ſpoken well or ill? Upon this, he laughed more than before, which the Abderites, who ſtood a diſtance off, perceiving, ſome ſhook their heads, others beat their foreheads, others tore their hair; for, as they afterwards ſaid, they obſerved him to laugh at that time more than ever he had before. Democritus, thou beſt of wiſe men, replied I, I deſire to know the reaſon of this paſſion? What have I ſaid that ſeems ridiculous? for if it prove ſuch, I may reform it; but if otherwiſe, you may deſiſt from this unreaſonable laughter. By Hercules,

ſaid he, if you can convince me, Hippocrates, you will effect a cure greater than any you have yet performed. Wherefore, ſaid I, ſhould you not be convinced? Know you not, that you act abſurdly in laughing at the death of a man, ſickneſs, madneſs, murder, or any thing worſe than theſe; and on the other ſide, on marriages, aſſemblies, the birth of infants, ſolemn rites, magiſtracies, honors, and, generally, at every thing that is nominated good? Thoſe things which deſerve to be pitied excite laughter; and, thoſe, for which we ſhould rejoice, you laugh alſo; therefore you appear not to place any difference between good and evil. Then he, You ſpeak well, Hippocrates; but you are not yet acquainted with the reaſon of my laughter, which, when you know, I am confident you will prefer to the cauſe for which you travelled here, and convey it as a medicine to your own country, thereby improving both yourſelf and others. In requital, perhaps you will think yourſelf obliged to teach me phyſic; when you ſhall underſtand, what trouble all men take for things that deſerve not labor; things of no value, and conſume their lives unprofitably in actions that deſerve nothing but ridicule. What, ſaid I, is all the world ſick, and knows it not? If ſo, they can ſend no where to ſolicit help: for what is beyond the world? He replied, There are infinite worlds,

O Hip-

O Hippocrates; have not ſo mean an idea of the riches of nature! Teach me this, ſaid I, Democritus, ſome other time; for I am afraid, if you begin to talk of this infinity, that you will fall again into a fit of laughter. But now inform me the reaſon, that you laugh at the accidents of life. Then looking ſtedfaſtly upon me, You think, ſaith he, there are two circumſtances occaſioning my laughter; good and ill; whereas indeed I laugh but on one principle. Man, full of folly, deſtitute of upright actions, playing the infant in all his deſigns, undergoing great toils for little benefit, travelling to the end of the earth, and ſounding bottomleſs depths to get ſilver and gold; never ceaſing to accumulate, and with an increaſe of ſtore, increaſing endleſs troubles; leſt, if he ſhould want, he might be thought miſerable. He digs into the bowels of the earth by the hands of ſlaves; whereof ſome are buried by the earth falling on them; others dwell under ground, as though it were their native ſoil, ſearching for gold and ſilver, ſifting one ſand from another; cutting and tearing their mother earth, which they both admire and trample. How ridiculous is this, to love that part of the *earth* which lies *hid*, and condemn that which *lies open* to them! Some buy dogs, others horſes; ſome delight in having large

poſſeſſions, which they may call their own, and would command multitudes, when they are not able to command themſelves. They marry wives, and in a ſhort time are divorced; they love, and then hate; they take delight in children, and when they are grown up, diſinherit them; they war, and deſpiſe peace: they conſpire againſt kings, murder men, dig the earth to find ſilver, with the ſilver they have found, they buy land; what the land which they have bought yields, of corn or fruits, they ſell, and receive ſilver again. To what changes and miſfortunes are they ſubject! When they poſſeſs not riches, they deſire them, when they are acquired, they are hid, or ſcattered. I laugh at their ill-deſigned projects, I laugh at their miſfortunes. They violate the laws of truth, through contention and enmity with one another; brethren, parents, and countrymen fight and kill each other, for thoſe poſſeſſions, of which, after death, none can be poſſeſſors. They purſue an unjuſt courſe of life; they deſpiſe the poverty of their friends and country; mean and inanimate things they account for riches: they will part with a whole eſtate to purchaſe ſtatues, becauſe the ſtatue ſeems to ſpeak; but thoſe who ſpeak, indeed, they hate. They affect things difficult to be acquired; they who dwell in the continent, covet the productions of the ſea; they who inhabit iſlands, thoſe

of

of the continent; perverting all things to their own depraved deſires. In war they praiſe valor, while they are daily ſubdued by luxury, avarice, and all paſſions; and in the courſe of his life every man is a Therſites. Why did you, Hippocrates, reprove my laughter? No man laughs at his own inſanity, but at the madneſs of another. They who think themſelves to be ſober, laugh at thoſe who appear to them to be drunk: ſome laugh at lovers, whilſt they themſelves are ſick of a worſe diſtemper; ſome at thoſe who travel by ſea, others at thoſe who follow huſbandry; for men do not agree with one another, neither in arts, nor actions. All this, ſaid I, Democritus, is true; neither is there any argument that may better prove the unhappy ſtate of man; but theſe actions are cauſed through neceſſity, by reaſon of the government of families, the building of ſhips, and other civil offices, wherein a man muſt neceſſarily be employed; for nature did not produce him, to be idle. Again, height of ambition cauſes ſeveral men to deviate from the paths of juſtice; they aim at all things, as if there were nothing immoral; not being able to foreſee the darkneſs that attends their futile attempts. For, Democritus, what man is there, that, when he marries, thinks of divorce, or death? Who is there, who, while he educates children, thinks of loſing them? The like on

huſbandry, navigation, dominion, and all other offices of life. No man foreſees, that his expectations may prove abortive; but every one flatters himſelf with hopes of good ſucceſs, and does not anticipate the worſt. Why therefore is this ridiculous? Democritus replied, You are yet far from underſtanding me, Hippocrates, neither perceive, through want of knowledge, the bounds of ſerenity and perturbation; for if they ordered theſe things prudently, they might eaſily diſcharge their duty, and evade my laughter; whereas now, they are blind to the offices of life, and with minds void of reaſon, are carried away by inordinate appetites. It were enough to make them wiſe, if they would but conſider the mutability of things, how they wheel about continually, and are ſuddenly changed; whereas they, looking upon theſe as firm and ſettled, fall into many inconveniences and troubles, and correcting things injurious, they tumble headlong into many miſeries. But if a man would rightly conſider, and weigh in his mind all things that he attempts, underſtanding himſelf, and his own abilities, he would not let his deſires run to infinite, but follow nature; out of whoſe ſtore all are nouriſhed and ſupplied. As a corpulent body is in the greateſt danger of ſickneſs, ſo a high eſtate is in greateſt danger of falling. Great minds are known in extremities. Some there are, who,

taking

taking no warning by that which happeneth to others, periſh by their own ill actions; minding things manifeſt, no more than though they were not manifeſt; whereas they have many precedents to guide their life, of things effected and not effected, by which we ought to foreſee the future. This is the occaſion of my laughing. Fooliſh men puniſhed by their own wickedneſs, covetouſneſs, luſt, enmity, treachery, conſpiracy, envy: it is a hard thing to give a name to many of theſe evils, they being innumerable, and practiſed ſo privately. Their behaviour as to virtue is ſtill worſe; they affect lies, they follow pleaſure, diſobeying the laws: my laughter condemns their inconſiderateneſs, who neither ſee nor hear; whereas the ſenſe of man only, of all others, is able to foreſee future events. They hate all things, and then again apply themſelves to them; they condemn navigation, and yet ſail on the ſea; deſpiſe huſbandry, then fall a plowing; put away their wives, then marry others; they bury their children, beget more, and bring them up; they wiſh to live long, and when old age comes, are grieved; never remaining conſtant in any ſtate whatever. Kings and princes commend a private life; private perſons a public. He that rules a ſtate, praiſes the tradeſman's life, as free from danger; the tradeſman applauds the courtier, as full of ho-

nor and power; for they purſue not the direct, true, and ſmooth way of virtue, in which none of them will endure to walk, but crooked and rough paths. Some tumble down, others run themſelves out of breath, to overtake ſuperiors in fortune or reputation. Some are guided by incontinence to the beds of their neighbours; others are ſick of a conſumption, through inſatiate avarice. Some, by ambition are carried up into the air, and through their own wickedneſs thrown down headlong. They pull down, and then they build; they do good, and oblige others, then repenting, break the laws of friendſhip, commit wrong, fall at enmity, and fight with their neareſt relations; of all which, avarice is the cauſe. Wherein do they differ from children that play, whoſe minds being void of judgment are pleaſed with every thing they meet with? In their deſires they differ not much from brute beaſts; only the beaſts are contented with that which is enough. What lion is there that hides gold under ground? What bull fights for more than he needs? What leopard is inſatiably greedy? The wolf, when he has devoured as much as ſerves for his neceſſary nouriſhment, gives over; but whole days and nights put together are not ſufficient for men to feaſt and riot. All brute beaſts have their yearly ſet times for coition, and then leave; but man is continually tranſ-

ported

ported with luſt. How can I, Hippocrates, but laugh at him that laments the loſs of his goods? and eſpecially, if, without regard to dangers, he travels over precipices and on the ſea, how can I forbear to laugh exceedingly? Shall I not laugh at him whoſe ſhip founders, by lading it with rich merchandize, and then blames the ſea for ſinking it? If I ſeem injudiciouſly to laugh at theſe, there is, at leaſt, ſomething that deſerves to be lamented. Theſe ſtand not in need of the phyſic nor medicines of your predeceſſor, Æſculapius, who, preſerving men, was ſtruck dead by thunder *. Do you not ſee, that I am alſo partly guilty of inſanity, who, to inquire into the cauſes of madneſs, diſſect theſe ſeveral living animals, whereas, indeed, I ought to ſearch for it in man himſelf? Do you not ſee that the whole world is full of inhumanity, ſtuffed, as it were, with infinite hatred againſt man himſelf? Man is from his very birth a diſeaſe: when firſt born he is uſeleſs, and ſues for relief from others: when he grows up, fooliſh, wanting inſtruction: at full growth wicked; in his decaying age miſerable, toiling, throughout all his time, imprudently. Such he is from the womb. Some being of furious,

* Æſculapius, the fabulous hiſtories inform us, was deſtroyed by thunder.

angry

angry diſpoſitions, are continually engaged in quarrels; others in adulteries and rapes; ſome in drunkenneſs; others in coveting the goods of their neighbours; others in conſuming their own: ſo that if the walls of all houſes were tranſparent, we ſhould behold ſome eating; others vomiting; others wrongfully beaten; others mixing poiſons; others conſpiring; others caſting accounts; others rejoicing; others weeping; others plotting againſt their friends; others raving mad with ambition. Some actions there are more remote within the ſoul. Some young; ſome old; ſuing; denying; poor; rich; ſtarved; luxurious; ſordid; impriſoned; murdered; buried; deſpiſing what they poſſeſs, and aiming at what they have not; impudent; niggardly; inſatiate; vain glorious. Some ſetting their minds on horſes; others on men; others on dogs; others on ſtone and wood. Some affect embaſſy; others the command of armies; others ſacred rites. Some wear crowns; others armor. Some fight at ſea; others at land; others till the ground. Some plead in the forum; others act on the theatre: every one is differently employed. Some embrace pleaſure and intemperance; others reſt and idleneſs. How then, can I but laugh at their conduct? It is to be feared that your art of phyſic will not pleaſe them;

them; for intemperance produces frowardneſs, they eſteem wiſdom, madneſs; and I doubt much, that many things in your art are openly reproached, either through envy or ingratitude: for the ſick, when they are cured, aſcribe the cauſe either to the gods, or chance. Many are of ſuch a diſpoſition as to hate thoſe who have obliged them, and can hardly refrain from being angry if they have occaſion for aſſiſtance. Numbers alſo, being themſelves *ignorant*, prefer *ignorance* before *ſcience*. *Fools* give their ſuffrages; neither will the *ſick* commend; nor they who are of the *ſame art* give their approbation through *envy*. It cannot be, but you muſt have ſuffered injury of this kind; for I know very well, that you have often been treated unworthily, and reproached by *malice* and *envy*. There is no knowledge, nor atteſtation of truth. In ſaying this, he ſmiled, and ſeemed to put on a divine look, caſting off that which he had before. Then, I ſaid, excellent Democritus, I ſhall carry back with me to Cos the great gifts of your hoſpitality, full of your wiſe inſtructions. I ſhall return to proclaim your praiſes; for that you have made inquiry into human nature, and underſtood it. I ſhall go away cured in mind, it being requiſite, that I take care for the cure of the bodies of others. To-morrow, and afterwards,

wards, we ſhall meet here again: which ſaid, I aroſe, and he readily accompanied me. A man came to him, from whence I know not, to whom he delivered his books. When I came to the Abderites, who all this while ſtaid for me, Men of Abdera, ſaid I, I return you many thanks for the meſſage you ſent; for I have ſeen Democritus, the wiſeſt of men, who only is able to reduce men to ſound underſtanding. This, Damagetus, is all I have, with pleaſure, to relate to you concerning Democritus. Farewell!

Theſe epiſtles give an admirable deſcription of that moſt excellent of men, Hippocrates, whoſe noble ſoul exerted its utmoſt efforts to relieve the afflicted, and prove ſerviceable to ſociety: — an example well worthy of imitation — an example which, if followed, muſt raiſe medical reputation above all the detraction and calumnies of malicious enemies. Great, however, as Hippocrates was, his ſuperior excellence excited envy among phyſicians of inferior abilities: theſe frequently compoſe the majority in moſt liberal profeſſions. Great minds only can purſue noble objects, and attempt actions above the vulgar comprehenſion, but little minds induſtriouſly employ their whole genius in ſervilely adapting themſelves to the common prejudices of the multitude.

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The ſuperior excellence of the firſt are only known to the diſcerning few: the others, from ſimilarity of ſouls, and leiſure for ſtratagem, impoſe on the major part of mankind.

Theſe epiſtles, likewiſe, contain a deſcription of the luxury of the inhabitants of Abdera, and mankind in general in thoſe ages. The Greeks, about the ſame period, were in a moſt voluptuous, lethargic, and corrupt ſtate, which ſoon terminated in the total ſubverſion of their liberties: for Philip, the Macedonian prince, in proportion as they were indolent and credulous, became vigilant and enterpriſing, availing himſelf of the depravity and corruption of the times. He bribed the principal inhabitants and ſenators of the different ſtates, and, by ſlow, imperceptible degrees, planned their overthrow. This was afterwards accompliſhed by his ſon and ſucceſſor, Alexander. The moſt excellent and powerful orator, Demoſthenes, could ſcarcely rouſe a ſpirit of oppoſition in the Athenians; nor could they be excited to any noble or patriotic action to retard the growing power of Philip. A fatal ſupineneſs, and ſlothful ſecurity had ſeized their ſouls, and benumbed every enterpriſing faculty; thus they fell a ſacrifice to the ambitious conqueror, and illuſtrious protector of Ariſtotle and ſcience.

On SUICIDE.

Suicide is a voluntary and ſelf deprivation of life, or the commiſſion of ſelf-murder *.

In a religious, moral, or political view, any human being deſtroying himſelf is criminal.

I. In a *religious view*, it is contrary to the divine precepts of Chriſtianity, and therefore criminal.

II. In a *political view*, it robs mankind of thoſe ſervices, whether corporeal or mental, that ſociety at large has a right to expect and demand of each individual forming a part of the whole. Suicide is a crime, then, where the duties of every individual are politically conſidered.

III. In a *moral view*, it is an heinous crime, as far as it relates to the duties a man owes to his relations or friends through life: it is a diſſolution of all thoſe ties by which men are bound either by intereſt or affections. No human being can exiſt without the aſſiſtance of ſome of his own ſpecies; nor does any perſon live whoſe corporeal or mental ſervices, either

* Suicide, in Greek, is called αυτοχειρια, which is very expreſſive of the action, for it comprehends ſelf-killing by one's own hands.

for

for labor or advice, may not become uſeful. Men receive, and they are bound, by family affections or gratitude, to give protection, and diſtribute favors or aſſiſtance. He who deprives ſociety of his ſervices, either in a political or moral view, therefore, muſt violate thoſe obligations he owes his country, family, or friends, and becomes immoral and criminal by the act of ſuicide.

According to the principles of the Chriſtian religion, political or private policy, and the legal inſtitutions of moſt European nations, ſuicide is conſidered criminal.

Elegant writers have appeared in defence of ſuicide, and have produced many ſpecious reaſons in its favor, without ſolid argument.—Rouſſeau ſays, "To ſeek good, and avoid evil "in that which does not injure another, is a "right of nature. When life is an evil to us, "and a good to no other perſon, we may then "get rid of it. If there be in the world a "maxim evident and certain, I think it is this; "and if it is overturned, there is no human "action which cannot be made out to be a "crime!"

1. If a man robs ſociety of his preſent, or the proſpects of his future ſervices, he injures that ſociety: it is immoral to commit injuries.

11. Though life may be an evil to a diſap-

pointed, miſerable man, yet no man can judge how ſerviceable his preſent or continued life may be to other perſons; therefore he has *no right to get rid of it.*

No human being can exiſt, who may not, in ſome meaſure, be uſeful; therefore M. *Rouſſeau*'s ſuppoſition, that any one can live without being beneficial, or probably ſo, to ſome other perſon, is viſionary, and cannot poſſibly happen.

III. Man cannot live without the neceſſaries of life, food, raiment, and lodging. In a commercial view, other perſons muſt be benefited by the conſumption of every individual, conſequently no perſon can live without being ſerviceable to ſome perſon in ſociety: he muſt, in ſome meaſure, ſupply his own and the wants of others. Theſe reciprocal ſervices or benefits to ſociety are loſt by ſuicide.

IV. There is ſcarce any perſon without relations, as father, mother, ſiſters, brothers, couſins, or friends, to whom mutual benefits are given and received through life; of all which death is the total deprivation. Is life *no good to others* in this view?

Do not ſurviving relations or friends ſuffer great miſery of mind from loſing, by death, whomſoever they eſteem? How much more is the mind diſtreſſed if ſuicide robs us of affectionate

tionate friends? Is it not ungrateful, nay barbarous, to wound the feelings of our warmeſt friends by an action which is not only conſidered horrid, but criminal, by divine and civil laws.

The ſincerity of the vindicators of ſuicide is beſt determined by their own practice; for there is no proof of any one of theſe celebrated philoſophers committing the horrid action: they have endeavored to praiſe a crime which they never had reſolution to execute.

Were ſuicide much to prevail, it might occaſion depopulation; therefore heavy fines and puniſhments, either to prevent or deter mankind from ſuicide, have been generally adopted in all civiliſed countries. Whether confiſcation of property or eſtate, by which heirs deſcendent are deprived of the fortune of their anceſtors, is not too ſevere, ſhould be conſidered by the judicious legiſlator. In one view, it appears highly unjuſt that an innocent deſcendent ſhould be puniſhed for the crime of an inſane anceſtor: in another view, it may ſeem neceſſary to deter mankind from ſuch actions, and induce families to prevent their commiſſion by an active vigilance.

The *remote cauſes* of ſuicide are ſimilar to thoſe of inſanity — perturbations of mind, or corporeal acrimony.

The more *immediate cauſes* are, paying too great a reſpect for the opinion of the world, or not being ſufficiently courageous or collected in mind to bear misfortunes *æquo animo*.

An impatient, ambitious, or boiſterous temper, that will not ſubmit to common reaſon, or comply with circumſtances of time and ſituation in life; warm, unreaſonable expectations damped by cruel diſappointment; imaginary diſreſpect received, timidity, and deſpair, have all terminated in ſuicide. In none of theſe inſtances can the party be conſidered as compoſed in mind. In every violent paſſion there is a certain degree of madneſs.

The mind dwelling on one ſubject, in which is perceived calamity, preternaturally excites the paſſions. When the miſery of the mind appears greater than the preſent or future advantages of life, a ſufficient reſolution is ſummoned up to deſtroy that life which is become inſupportable.

It has been conſidered courageous for a miſerable man to determine not to live; but if the ſubject be examined by juſt reaſoning, ſelf murder may appear cowardice. In proportion to human misfortunes, human exertions and courage are required. Whoever deſerts his friend in danger, is ſtigmatiſed with the opprobrium

probrium of cowardice; but how much more pufillanimous to defert himfelf or family?

The example of Cato is applauded by fome writers as a proof of great magnanimity. The action was the reverfe: it was the effect of pride and timidity. If ever Rome required his experience and patriotic counfels, it was at that very period. To defert the duty Rome had a right to demand, by a voluntary death, was the meaneft conduct in his character. It ftamped an indelible ftain on his reputation, which only a fuppofition that his intellectuals were impaired could rationally excufe. It was not the virtuous Cato, who had ftemmed the torrent of intentional tyranny, who had fpiritedly crufhed the Catiline confpiracy, who had given the moft noble examples of virtuous refolution and rectitude in moral conduct; but the enfeebled Cato, finking under an accumulation of evils, whofe foul was depreffed with fufpenfe and diftracting paffions, waiting an opportunity for revenge, or preparing to finifh his life, on difappointment. If fuch examples were admitted magnanimous, in every ferious quarrel, or war, where none can command fuccefs, it might be laudable to commit fuicide, the confequences of which are obvious.

On fuch occafions countries would lofe their braveft generals; private families their nobleft and moft experienced fupporters.

" If I cannot acquire what I wiſh," ſays Cato, " I will kill myſelf, I will not live to " grace Cæſar's triumph, though I know Cæſar " to be the moſt generous and clement of con- " querors. I cannot ſubmit to receive Cæſar's " favors; my pride is wounded; my fears de- " ſtroy all tranquillity; my body is ſinking un- " der adverſity. I will not dedicate my ſer- " vices to my diſtreſſed country, under the " auſpices of ſucceſsful Cæſar: I will plunge a " ſword into my boſom, and commit an in- " juſtice to myſelf, which, through a long life, " I never committed to others. From the " uniformity of my former patriotic character, " writers, without deep reaſoning, will paint this " concluding action in glowing colors: they " will give additional luſtre to an immortal " reputation." Such, moſt likely, were the ſecret ſprings of action in Cato's mind; ſuch were the contending paſſions which excited the delirium: it was not the placid, judicious Cato of former years; but the depreſſed Cato, *impos mentis*, committing a raſh action contrary to all his former great reaſoning and virtuous perſevering conduct. It was, in fact, Cato's act of inſanity: it was not dying to ſerve the country, but to effectually rob Cæſar and the country of his eminent ſervices: it therefore appears more the effect of private pique and deſpondency than a demonſtration of public

virtue

virtue or courage. Had all others concerned in that civil war followed this extraordinary example, the country would have been robbed of many of its brighteſt and ſurviving ornaments. Cato could not ſay with Horace,

"*Dulce & decorum eſt pro patria mori;*"

for it was not for the country, but the gratification of a ſelfiſh caprice, a perſonal reſentment and hatred to Cæſar and his power. Had Cæſar attacked the city while Cato enjoyed a vigor of mind, body, and popularity; when the citizens were better diſciplined, and leſs corrupt, he would have deſpiſed ſuch inglorious conduct: he would rather have hoped for ſome future opportunity to diſpel the dark clouds overwhelming the diſtracted country.

Phyſicians have frequent opportunities of obſerving the diminution of human courage and wiſdom from long-continued misfortunes, or bodily infirmities. The moſt lively, ſpirited, and enterpriſing, have become depreſſed from reiterated diſappointment: cowardice and deſpair have ſucceeded to the moſt unqueſtionable bravery and ambition. The man is then changed; his blood is changed; and with theſe his former ſentiments. The timidity is no longer Cato's; but the miſerable, debilitated body of Cato, without that vigorous ſoul that ſo eminently

eminently diſtinguiſhed, on other important occaſions, this excellent and divine patriot.

The example of *Lucretia* merits admiration and compaſſion; of *Cleopatra*, as a female, pity: but *Marcus Curtius*, who voluntarily killed himſelf to liberate his country from famine and peſtilence, juſtly merits the praiſes of all ſucceeding ages; as a real patriot, he deſerves immortality.

It is certainly clear, that when a man meditates how he ſhall deſtroy life, or dwells unreaſonably on any misfortune, he is no longer *compos mentis*; the commiſſion, therefore, of ſuicide muſt neceſſarily be always conſidered an act of *inſanity*.

This is contradicted by ſome, from obſerving, that previous to ſuicide, many arrange their temporal affairs, write ſenſible letters to their friends, talk, and appear as rational perſons, except on the ſubject, whether concealed or known, which occupies and attracts the attention, abſorbing all the other mental powers.

On the common occurrences of life, if the intender of ſuicide talks and acts rationally, yet if in any one point he is irrational, and urged by that ſingle inſtance of irrationality to be the perpetrator and executioner of ſuicide, it muſt be admitted, that though he was ſenſible and compoſed in moſt inſtances, yet in one thing

thing his mind was urgently diſcompoſed. This diſcompoſure, when it can induce a man to hurt himſelf, or deſtroy life, cannot be conſidered the act of a rational being, but of evident madneſs.

All mankind purſue, to the beſt of their judgment, what is thought real or imaginary good, and naturally, from experience, example, or reflection, avoid whatever is conſidered evil.

Pain is an evil; death the deprivation of every hope or comfort in this life. No man in his ſenſes will burn, drown, or ſtab himſelf; for theſe all produce what are called evils: neither can any of theſe actions be executed without the probability of pain in the convulſive action, or ſtruggles of death. As no rational being will voluntarily give himſelf pain, or deprive himſelf of life, which certainly, while human beings preſerve their ſenſes, muſt be acknowledged evils; it follows, that every one who commits ſuicide is indubitably *non compos mentis*, not able to reaſon juſtly; but is under the influence of falſe images of the mind, and therefore ſuicide ſhould ever be conſidered an act of inſanity.

Whether the cauſes which lead to ſuicide ariſe from acrimony of the blood producing falſe images; changes of the ſeaſons, as in the dreary

dreary month of November; imaginary or real misfortunes occupying the mind; the treatment ſhould be ſimilar to that of inſanity.

The mind ſhould be diverted by muſic, converſation, &c.; the body exerciſed. Evacuants, antiphlogiſtics, bleeding, &c., to the plethoric and florid, tonics to the debilitated, antiſpaſmodics to the irritable nervous, and mineral alteratives to the obſtructed, ſhould be, according to circumſtances, preſcribed. Whereever there may be the leaſt reaſon to ſuſpect intended ſuicide, it is beſt to ſecure the life of the patient by a rigid watchfulneſs over all his actions. All inſtruments, weapons, or means of executing ſuch impious and irrational intentions, ſhould be removed.

The body ſhould be ſweated with exerciſe or antimonial diaphoretics, and the patient kept conſtantly in bed. The commiſſion of the miſchief may be thus prevented. If theſe directions be thought inſufficient, it is better to commit the intender of ſuicide to the perſons who receive the inſane into their houſes; for the cunning contrivances of perſons in ſuch a diſtracted ſtate of mind are aſtoniſhing: they often elude the greateſt vigilance, and will affect to be perfectly ſenſible, but a few moments before they commit theſe raſh inſane actions.

This

This ſhort doctrine concerning ſuicide ſhall conclude with an anecdote of the celebrated M. *de Voltaire.*—An Engliſh gentleman of fortune had been ſitting many hours with this great wit and cenſurer of human character. They diſcourſed chiefly on the depravity of human nature; on tyranny and oppreſſion of princes; poverty, wretchedneſs, and misfortunes; the pain of diſeaſe, particularly the gout, gravel, and ſtone. They worked up each other to ſuch a pitch of imaginary evils, that they propoſed next morning to commit ſuicide together. The Engliſhman aroſe, and expected M. *de Voltaire* to perform his promiſe, to whom the genius replied, "*Ah! Monſieur, pardonnez-moi, j'ai "bien dormi, mon lavement a bien operé, et le "ſoleil eſt tout-à-fait clair aujourd'hui.*"

ON

CONVULSIONS AND SPASMS.

Convulſions or *ſpaſmi clonici* are alternate involuntary contractions and relaxations of the muſcles: *ſpaſmi tonici*, rigid contractions without relaxation *.

Convulſions are univerſal, or partial, and have obtained different names according to the parts affected, or ſymptoms, as *riſus Sardonicus*, the Sardonic laughter, when the muſcles of the face are affected; St. Vitus's dance, when the arm is thrown into involuntary motions with lameneſs and rotations, or other ſingular motions of the leg.

The hyſteric epilepſy, or other epilepſies ariſing from different cauſes, are convulſive diſeaſes of the univerſal kind; the muſcles of the globe of the eye throwing the eye into involuntary diſtortions and obliquity of ſituation; or the muſcles of the eyelid, lower jaw, or

* Theſe diſtinctions are derived from the Greek, and are very expreſſive. χλονεω, *commoveo*, to move to and from; τεινω, to pull or draw, &c. In *clonic convulſions*, contractions and relaxations are alternate, as in the epilepſy: but in the *tonic*, as they are called, the member remains contracted and rigid, as in the *triſmus*, *tetanus*, &c.

any

any other particular part acting contrary, and in defiance to the direction of the will, are inſtances of partial convulſion.

The muſcles principally affected in all the ſpecies of convulſions are thoſe immediately under the direction of the will; as the muſcles of the eye, eyelids, face, maxilla, neck, ſuperior and inferior extremities. The muſcles of reſpiration, acting both voluntarily and involuntarily, are not unfrequently convulſed, as the diaphragm, heart, &c.

The mind can command voluntary muſcles, when the parts are in an healthful ſound ſtate, to augment, or diminiſh various neceſſary actions; but in convulſive diſorders the motions are irregular, not under the control of the will; but often move with ſurpriſing violence, force, agitation, and diſtortion.

1. The mind, in any powerful exertions, always firſt acts upon the heart, which being perceptible of the mental intentions, has power to ſend a greater quantity of blood to the head than ordinarily.

11. The increaſed intentional force of mental or bodily exertion acquires a greater flow of blood to the head, and its ſhort retention there.

The ſoul ſeems to have a power to direct this vital fluid through the minute nervous filaments of any muſcles deſtined to voluntary motions,

motions, in conjunction with the nervous principle.

III. Deſtroy the arterial influx: heat and action below the part thus impeded are nearly deſtroyed, or conſiderably diminiſhed, if even anaſtomoſing arteries paſs to the very part.

IV. Deſtroy the principal nerve, irritability and perceptibility ceaſe, or are very obſcure, although anaſtomoſing nervous filaments ſhould extend themſelves to the part.

V. It therefore appears evident, that no motion can be performed regularly and with due force by the muſcles for the purpoſes of life, without the junction of the arterial influx of blood, and power of the nervous principle. This will hereafter be proved by experiments, which, ſcarcely, when well underſtood, admit of diſputation.

VI. The increaſed quantity of blood and nervous principle determined by the will, give greater force and energy to the muſcles; their powers can be ſtrengthened or weakened by the powers of the mind; but not without a greater or leſs influx of arterial blood, and nervous influence conjointly.

VII. This nervous and arterial influx which paſſes from the brain and its arteries through every, and even the minuteſt filaments of nerves, acting on the muſcular fibres, in which a *vis inſita* is reſident, excites the muſcles to action

in proportion as the nervous principle and arterial influx are greater or leſs*.

VIII. The muſcular powers are acquired *gradatim*; they obtain additional ſtrength by uſe, and loſe their energy by diſuſe; in infancy they are ſcarce obſervable, and do not ſupport the body in an erect poſture: in manhood they acquire more vigor, according to the exerciſes they have been moſt accuſtomed to; whether of dancing, fencing, leaping, jumping, running, boxing, tumbling, &c.

All theſe are actions, which the human mind has power to direct the muſcles to perform, not ſuddenly, nor without repeated attempts, labor, and exerciſe, for years, before any excellence or perfection is obtained in thoſe bodily motions, attitudes, &c. &c.

IX. A determined reſolution not to uſe the arms or legs, and a continued ceſſation from muſcular action, render the muſcular fibres rigid and inactive; the will cannot, after the muſcles have been fixed, induce them to perform any motion; the limb becomes diminiſhed

* Though different ſtimuli applied to the heart, or muſcular fibres of other parts make the muſcles contract after death, no ſuch mechanical ſtimuli anſwer the purpoſes of life, its regular powers and actions. The heart of a ſhark will dilate and contract many hours after death; this I have repeatedly ſeen in hot climates, after the body of the ſhark has been eaten by the ſeamen.

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in ſize, or withered, rigid, and uſeleſs. This is illuſtrated by ſome religious in India, who fix the arm in a certain poſition, and are never after able to move it.

To produce voluntary muſcular motion five circumſtances are neceſſary:

1. The mind acting on the heart, which ſends a greater or leſs quantity of blood to the head.

2. The mind directs the arterial influx and nervous principle to the muſcles intended to be moved.

3. The muſcles intended to be moved receiving a greater or leſs influx of blood by the arteries, connected and running through all the *nervous medulla* by means of the *pia mater* and *tela celluloſa*, joined with the nervous principle, excite an irritation in the muſcle.

4. The muſcle irritated having a *vis inſita*, contracts more or leſs powerfully, according to the quantity or force of the arterial and nervous influence commanded by the mind.

5. The mind can command the reverſe of the former action; for contracted, acting muſcles, can be extended at pleaſure by antagoniſt muſcles.

In this manner, muſcular actions, acquired gradually by the ſenſes, irritation, and long practice, are performed, in all thoſe inſtances nominated regular voluntary muſcular motion.

Convulſions being irregular involuntary muſcular actions may be cauſed by an increaſed excitement in the mind, or other irritating ſtimulus acting on the brain.

6. The increaſed excitement in the brain forces a greater quantity of arterial blood and heat in all the arteries running through the *tela celluloſa*, *nervous medulla*, and *pia mater*, accompanying, and making a conſiderable part of the nerves and nervous filaments, however minute.

7. This increaſed arterial action and heat in the nervous filaments, or the increaſed quantity and force of blood in the brain, when powerful action is neceſſary, may, by means unknown, increaſe the nervous influence. It has been obſerved, that either in *mental* or *bodily* exertion a greater quantity of blood always flows to the brain, and that the augmented quantity of blood aſſiſts in giving ſurpriſing intellectual, as well as bodily powers.

View men in violent paſſions; firſt pallor is obſerved from the mind ſummoning, or forcing an *over quantity* of blood to the heart. When the heart recovers its firſt ſhock, the blood is forced with great vehemence, the pulſations quicken, and the face becomes like a flame of fire, the eyes project from their ſockets, and the voluntary muſcles acquire additional force.

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The more *immediate cauſes* then of convulſions are:

I. Either mental affection, or any irritating, efficient, acrimonious cauſe exciting a greater action in the arterial ſyſtem of the brain and dependent nerves.

II. An increaſe of the inviſible, unknown, nervous principle, which ſeems to hold pace, or be equipotent with the increaſed arterial energy excited by the mind, or other cauſes in the brain and nervous ſyſtem.

III. This increaſed energy conveying its augmented effects without the direction of the will to any muſcles deſtined to voluntary motion, over irritates the muſcles.

IV. The muſcles, irritated by an increaſed nervous influence and arterial influx, contract more forcibly and involuntarily by their excited *vis inſita*, conjointly with the other cauſes, as long as the acting energy of the brain, or nervous principle, continue.

If the *vires inſitæ* in muſcles did not augment equally with the exciting powers propelled from the brain, alternate contraction and relaxation would not be the conſequence; but contraction, perhaps, without relaxation, which would produce rigidity, as in the *triſmus* or locked jaw, &c. or relaxation without contraction, as in palſies, &c.

v. This increaſed energy in the nervous ſyſtem may be excited either by the mind, or by any acrimony of the blood in the brain, or various ſtimuli, ſufficiently irritating to increaſe partial or general arterial action, nervous influence, or the *vires inſitæ* of muſcles.

vi. After muſcles have been once accuſtomed to act involuntarily, and with increaſed action, the ſame cauſes can readily produce the ſame effects on thoſe organs of motion; this experience daily confirms by the frequent return of epileptic or convulſive fits *.

vii. All parts that have muſcular fibres may be convulſed, therefore the diaphragm, ſtomach, inteſtines, uterus, Fallopian tubes, bladder, and the whole or any part of the arterial ſyſtem, may be convulſed. All arteries act by the muſcular fibres of which their tunics are compoſed, conjointly with the tela celluloſa; the coats of arteries being ſtimulated, act with

* Perſons ſubject to fits, on any ſlight emotions of the mind with facility re-produce them.

A lady of my acquaintance by mimicking a man, while ſhe was at ſchool at Cheſter, who had the *riſus Sardonicus*, with frightful diſtortions of the face and eyes, can now by the will, at any time, force the muſcles of her eyes and face into diſtortions reſembling the man ſhe imitated; which is really ſo horridly frightful as to give pain to ſuſceptible ſpectators, and induce them to ſhut their eyes.

greater

greater velocity, hence partial or univerſal heat, &c.

The ſenſations in the mind moſt capable of producing convulſions are timidity, horror, anger, great ſenſibility of ſoul, and ſympathy for the calamities of friends or aſſociates.

In female ſchools, any one of the girls having convulſion fits has ſtruck the minds of the others with ſuch fear and horror, that the diſorder has ſpread rapidly, like a contagion; inſtances of which from Kaaw Boerhaave, and *Rapport des Commiſſaires concernant le Magnetiſme animal*, &c. have been already produced.

From the ſingular opportunity I had while at Paris, to minutely examine the pretended powers of magnetiſm, it requires no heſitation to aver, that either the magnetiſers, patients, or both, were moſt groſſly deceived, or the former were impoſtors: magnetiſm had no power over the conſtitutions of the incredulous.

Medical practice daily confirms the mind's power in exciting convulſions amongſt females; a lady, or one female ſervant in a houſe, ſhall often produce the ſame effects to other attendant females; but *boys* or *men* are rarely affected.

Sympathetic convulſions of a ſimilar nature, *Meſmer*, and the other *magnetiſers* at Paris, nominated *Les criſes*, pretending they were produced

duced by magnetical powers; theſe glaring artifices and impoſitions credulity countenanced, believed, and protected, againſt the united voice of truth, reaſon, and ſcience. Men of ſuperior rank and erudition, genius and talents, famous for ſcepticiſm on other ſubjects, were the principal dupes to *magnetical fallacies*. The raging madneſs was very violent, but very tranſitory; confuſion and contrition have ſucceeded groundleſs faith, blind zeal, and thoughtleſs error.

Convulſions being cauſed by emotions of the mind, *tonical*, *atonical diſtention*, or ſtimuli of various ſpecies, the prognoſis and curative intentions ſhould be accommodated to thoſe different cauſes.

The *prognoſtics* of convulſions may be drawn from the force or magnitude of the cauſes: when convulſions have ariſen from fear, and are recent, they have been cured by exciting greater apprehenſion from the application of a painful remedy; but when they have originated in grief, anxiety, anger, love, &c. they are apt to return on any ſlight emotions of the mind.

Convulſions happening from wounds of the viſcera, as the ſtomach, the diaphragm, &c. poiſons, or other accidental cauſes, which are

not

not now intended to be treated of, are very dangerous, and frequently fatal.

Convulſions attending parturition joined with floodings, or from large hæmorrhages, are exceedingly dangerous.

Convulſive diſeaſes of the epileptic kind, the *choreæ Sancti Viti*, or St. Vitus's dance, the *riſus Sardonicus*, are all difficult, and ſometimes impoſſible to cure, particularly if they have been of long duration.

Recent convulſions, if not ariſing from any fatal cauſe, are curable, by exact regimen and proper remedies.

Numbers have different ſpecies of convulſions during life; in theſe inſtances the diſorder may be conſidered rather troubleſome than dangerous.

The *aura epileptica*, a ſpecies of convulſion originating in any contraction, wounded tendon, aponeuroſes, or nervous expanſion in the extremities; which creeping up in the direction of the nerves, at laſt excite ſufficient energy in the brain to throw the whole body into convulſions, is rarely, or with great difficulty, curable, unleſs by cutting the nerve.

Sympathetic convulſions from viſceral, menſtrual obſtruction, worms, &c. are often curable by removing the cauſes.

Convulſions

Convulſions from the *hydrocephalus internus*, dropſy in the pericardium containing the heart, or the hydrops pectoris, when ſerum or water is effuſed in the cheſt, &c. are moſt commonly fatal *.

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* Anatomical examinations of bodies after death, from convulſive diſeaſes.

Symptomata morborum.	*Extiſpicia cadaverum.*
Convulſiones artuum ſuperiorum cum paralyſi cruris ſiniſtri excipiunt, iſchuriam cum tumore circa cartilaginem enſiformem.	Aqua in abdomine & pericardio & cerebro.
——— apoplexiam ſubitaneam & lethalem ſibi accerſunt.	Venæ encephali flatu turgidæ, aqua & ſanguis in ventriculis, &c.
——— arthriticum moleſtant & in apoplexiam degenerant.	Sanguis concretus in cerebro.
——— invadunt melancholicum de dolore circa ſcapulam querulum.	Tumores ſcirrhoſi in cerebro, vaſa ſanguinea turgida, plexus choroides tuberculoſus, aqua in ventriculis cerebri.
——— cum capitis dolore gravativo, apoplexiam poſt ſe trahunt & prægnantem enecant.	Vaſa cerebri ſanguine turgida, aqua intus & extra cerebrum.
——— phthiſicum prehendunt quoties ſupinus decumbit.	Ventriculi cerebri humore flaveſcente turgidi.
——— cum delirio in febre.	Aqua in ventriculis cerebri.

Convulſiones

An enumeration of the *various remote* cauſes of convulſions will ſhew the total impoſſibility of

Symptomata morborum.	*Extiſpicia cadaverum.*
Convulſiones excipiunt dolores capitis inter febrem ſævientes.	Gelatina in cranio.
——— melancholicum dolore capitis laborantem invadunt.	Pus in cerebro ſtagnat.
——— ingruunt in febre bilioſa, cui ſuccedit aſcites.	Hepar ſcirrhoſum, cor dilatatum & lapideſcens.
——— cum ſpirandi difficultate ſeſe adjungunt cordis palpitationi.	Cor mire dilatatum.
——— quas prehendunt ventris tormina lethalia.	Pancreas exulceratum.
——— univerſales cum doloribus atrocibus, mente remanente ſana in apoplexiam abeunt.	Aqua in cerebro, plexus choroides putris.
——— univerſales ptyaliſmum totius corporis poſt ſe trahunt.	Tumor vertebris lumbaribus adnatus; glandulæ meſenterii ſteatomatoſæ.
——— convulſio oriens in brachio ſiniſtro brevi totum corpus invadit; aderat faucium dolor cum febre.	Serum in ſiniſtro cerebri ventriculo & in thorace, pulmones putridi, & aqua in pericardio.
——— variolis prægreſſis, fluunt aures, & ſæviunt capitis dolores lethales.	Abſceſſus in cerebro juxta oſſa petroſa carie affecta.
——— capitis dolori ſuccedunt & poſt ſe ſoporem trahunt.	Glandula pinealis ingens, aqua in pericardio, pulmones tuberculoſi.
——— preſſo pede cum ri-	Tumores ſteatomatoſi in ce-

ſu

of ſucceeding in any one plan of cure, much leſs by any ſingle medicine; as the *cardamine*, *arnica*,

Symptomata.	*Extiſpicia.*
ſus & olfactus abolitione ſequuntur ictum capitis.	rebro; oſſa ethmoidis & frontis cariosa.
Convulſiones adveniunt in colica Saturnina.	Omentum exeſum, colon contractum, cœcum dilatatum.
——— emetico propinato aſthmaticum invadunt.	Pulmones pure exeſi.
——— excipiunt ſputa purulenta abſque ullo dolore pectoris.	Pulmones putridi.
——— dextri lateris & paralyſis ſiniſtri ſibi febrem lethalem adjungunt.	Pia meninx purulenta in parte ſiniſtra, & vaſa ejuſdem lateris ſanguine turgida.
——— dolores capitis inſequuntur.	Plexus choroides hydatidibus exaſperatus, aqua in cerebro.
——— poſt inſolationem.	Cerebri durities.
——— cum cæcitate ſuccedunt doloribus atrociſſimis.	Abſceſſus cerebri prope ventriculos.
——— cum delirio poſt capitis vulnus.	Inteſtina contracta, cerebrum putridum.
——— pleuriticum torminibus ventris laborantem invadunt.	Inteſtina inflammata.
——— chloroticam cum ſpirandi difficultate cruciant.	Pia meninx varicoſa, gelatina in cerebro.
Convulſiones ſuccedaneæ: hæmorrhagiæ narium.	Meninges oſſeæ.
—— —— ſpirandi difficultati cum dolore pectoris.	Latex albicans in thorace & pulmones pure exeſi.

Convul-

arnica, &c.; for remedies proper for one claſs of cauſes may be highly injurious for others.

All

Symptomata.	*Extiſpicia.*
Convulſiones poſt vulnus inflictum occipiti.	Pus inter pyxidem oſſeam & cerebri involucra.
—— —— item.	Abſceſſus in cerebri latere.
—— —— item.	Pus in cerebro.
—— —— animi perturbationes & interea difficilis trahitur ſpiritus.	Pulmones putridi.
—— —— poſt caſum ab alto ebrium invadunt & delirium furioſum ſibi adjungunt, donec recurrentes ægrum jugulent.	Cranium illæſum, ſanguis effuſus inter hemiſphærium dextrum cerebri & duram matrem.
Tetanos. Juvenem lithiaſi laborantem corripit quoties decumbere tentat.	Calculus in veſica latens.
——— ſuccedit delirio poſt capitis contuſionem orto.	Aqua in ventriculis & juxta baſim cerebri meninges putridæ.
——— ebrium invadit.	Gelatina in cerebro.
Convulſiones vomitum cephalalgiæ ſuccedaneum excipiunt.	Viſcera putrida.
——— aſſiduo recurrentes dyſuriam accerſunt.	Calculus in rene ſiniſtro.
——— ingruunt in febre maligna epidemica ſtipata cardialgiis & doloribus.	Ventriculus, inteſtina, & meſenterium putrida; liquamen in abdomine.
Convulſiones in diarrhœa bilioſa cum animi deliquiis frequenter recurrentibus.	Hepar ingens & inflammatum, cyſtis fellea inanis: inteſtina flatulenta, liquamen in abdomine.

Convulſiones

All things which excite or act as ſtimuli on the brain, or nerves. Inanition, repletion, and irritation, are the principal cauſes of convulſions.

To

Symptomata.	*Extiſpicia.*
Convulſiones ſe adjungunt, buboni peſtilentiali.	Cor ſanguine turgens, pulmones inflammati; hepar ingens, cyſtis fellea bile turgida.
—— — —— ventris torminibus.	Inteſtina flatulenta, paſſim gangrænoſa.
—— — —— affectui ſoporoſo.	Lien magnus & quaſi oſſeus: aqua in cerebro, & gelatina juxta tractum vaſorum meningis.
—— — —— hydrophobiæ.	Pulmones ſanguine concreto infarcti.
—— — —— iſchuriæ.	Renes calculis aut pure infarcti.
—— — —— febri tertianæ.	Cor marcidum.
—— — —— doloribus veſicæ.	Calculus in veſica.
—— — —— capitis gravedini.	Aqua in cerebro.
Convulſiones apoplexiæ comites, mortem afferunt ſubitaneam.	Vertebrales & carotides arteriæ diſruptæ.
Convulſio ſuccedanea apopoplexiæ.	Meninges oſſeæ.
—— —— animi commotioni.	Cerebrum putridum.
—— —— vomitioni ſanguinis inter febrem quartanam exorienti.	Aqua in thorace & cerebri ventriculis.

Convulſiones

To *inanition* belong hæmorrhages, fluxes, effects of ſtrong purgings, the body exhauſted by venery, lactation, labors of body or mind, protracted wakefulneſs, acute or chronic diſeaſes, exhauſting the human body.

Symptomata.	*Extiſpicia.*
Convulſio ſuccedanea poſt labores immodicos quemdam corripiunt.	Sanguis in vaſis cerebri ſtagnat.
—— —— inter dolorem & tumorem abdominis.	Meſenterium hydatidibus infarctum.
—— —— poſt febrem lentam.	Medulla oblongata colluvie flaveſcente inquinata, &c.
Tetanos, ſævit operatione caſtrationis peracta.	Peritonæum inflammatum.
Opiſthotonos, ebrii in ſolo decumbentis.	Gelatina in ventriculis cerebri.

EXTISPICIA *poſt convulſiones.*

Ventriculus & inteſtina conſtricta, bilis effuſa in ventriculo.

Ventriculi cerebri turgent aqua ſubcærulea, diaphragma & hepar inflammata.

Pus in baſi cranii ſtagnat.

Vermes ſub cranio deliteſcunt, meninges eroſæ occurrunt.

Cerebrum putre.

Meninges inflammatæ.

Pulmones putridi.

Gelatina in cerebro.

Lumbrici in inteſtinis.

Inteſtina contorta.

Renes ſuccenturiati perquam tumidi.

Pia meninx inflammata cerebro inculpato.

To *repletion* belong over-action of the ſanguiferous ſyſtem, plethora, accumulations of ſerum or coagulable lymph, retentions of pus, cacochylia, cachochymiæ of various ſpecies, ſuppreſſed evacuations, &c. &c.

To *irritation* belong affections of the mind, pains, wounds, falls, abſceſſes, too great ſenſibility in the nervous ſyſtem, leſions of the brain or nerves, poiſonous vapors, acrid remedies, poiſons, acrimony, as arthritic, venereal, ſcrophulous, ſcorbutic, &c.; worms, ſtones in kidneys, bladder, or in the bile ducts, &c.; dentition, mechanical ſtimuli, hereditary affection, the mother's imagination during pregnancy, hard labors, &c.; extreme cold or iced water have ſuffocated ſome, and ſtopped reſpiration; the application of cold to the feet or other parts.

An extravaſated humor, on one ſide of the brain, has excited convulſions on the oppoſite ſide of the body, which is obſerved to be almoſt conſtantly the law of nature; the cure, therefore, ſhould be directed accordingly.

The *general prognoſtics* in convulſions are: if hereditary, or chronical in a body very weak, the diſeaſe is rarely curable. From repletion eaſier cured than from depletion; for it is eaſier to evacuate than reſtore to the body its former

ſalutary

ſalutary juices: convulſions are worſe amongſt adults than in youth; for in the latter they commonly ariſe from a lighter cauſe than the former. Convulſions in men are more unfavorable than in women; becauſe the nerves of the latter are moſt ſuſceptible. In acute fevers a bad omen; in the ſmall pox, before the eruption, favorable; in the ſecondary fever moſt dangerous, becauſe they ariſe from re-abſorption of the putrefactive variolous matter. Light convulſions are not injurious to pregnant women, according to Smellie; but I have ſeen them fatal when they happen in labor with floodings. When violent, during pregnancy, they injure, or ſometimes deſtroy the fœtus. In the *tuſſis convulſiva*, or hooping cough, ſalutary, for they force up the offending matter. Sneezing, in ſleepy, apoplectic, or lethargic diſeaſes, is a good ſign. Convulſions, frequently returning, promiſe no good: they are moſt common to infants and hyſterical women. In India, Bontius aſſerts, that the *ſpaſmi tonici*, as the tetanus, triſmus, or locked jaw, or rigidity of contracted muſcles, are, at times, endemical.

I have ſeen the tetanus both in America, and Weſt-India iſlands, happen from very light cauſes, as ſlight lacerated wounds of the faſcia, of tendons in the wriſt or inſtep, and in punctures, fevers, gun-ſhot, or other wounds;

in which the common modes of treating at that time, by muſk, camphor, opium, and hot bathing, did rarely ſucceed in a variety of inſtances *.

In the *cure* of convulſions, three general modes of treatment are requiſite, which, however, ſhould be judiciouſly accomodated to individual patients and circumſtances.

In convulſions from inanition, the cure requires repletion, which ſhould be gradually introduced into the habit, conſiſting chiefly of light but nutritious diet, ſuch as will aſſimilate with the leaſt labor to the ſtomach, as beef tea and bread, or other broths without fat, given in ſmall quantities, or meats boiled or roaſted, when the ſtomach can digeſt them; milk diluted with water, &c.; medicated waters, as the Hampſtead, Tunbridge, or Seltzer, bark, and ſteel. Theſe to be applied between the periods of convulſive fits.

The convulſions during dangerous hæmorrhages require peculiar treatment; the effuſion of blood is arterial. Blood ſhould be drawn

* See *Medical Advice* to the Army and Navy ſerving in Hot Climates, with the modes of preſerving health, curing fevers, fluxes, &c.

from

from the veins to aſſiſt in conveying that fluid in its proper channels, and to remove ſpaſm.

If convulſions ariſe from fulneſs or repletion, bleeding largely and evacuating cathartics are to be preſcribed, with a very abſtemious *dry diet*, either to adults or infants, except they be owing to the ſmall pox, &c.

Veſicatories are recommended in almoſt all caſes of convulſion, but, I think, imprudently: they act as ſtimulants; and where an overfulneſs is ſtimulating and convulſing the body, they are contrary both to ſound reaſoning and congruous medical practice.

Bliſters may be more judiciouſly applied in caſes of convulſions from inanition, where a torpidity or languor is induced; or in the caſes ariſing from irritation, in order to excite a new ſtimulus, or divert the attention to parts remoter from the brain, &c.

Suppreſſed evacuations exciting convulſions, ſhould be treated according to the ſpecies, whether they be menſtrual, hæmorrhoidal, fecal, urinal, or perſpirable, enough of which has already been delivered.

If *irritations* excite convulſions either of body or mind, tepid or vapor baths are frequently uſeful, particularly the former, in the convulſions of infants, whether they be from worms, dentition, or fever. *Hippocrates* recommends

warm fomentations to mitigate convulſions; for they relax and diminiſh the tenſion, and looſen the parts contracted. *Celſus*, likewiſe, ſpeaking of convulſions affecting the muſcles of the neck, has, "*itaque plerique aqua calida* "*multa cervices ſubinde perfundunt.*" This is a preſent alleviation. If *worms* irritate the inteſtines, anthelmintics ſhould be preſcribed; ſeveral ſpecimens of which are given in the former part of the preſent work.

If from *acids* in the *primæ viæ*, antacids, as magneſia, pulvis e chelis, calcined oyſterſhells prepared with or without rhubarb, are proper for children; but if plenitude abounds, bleeding in the jugular ſhould never be omitted.

Lime water is likewiſe an excellent corrector of acidity; but perhaps more adapted to adults than infants; volatile alkaline ſpirits, &c.

The *flores zinci* are much extolled by many in epileptic caſes, to one or two grains with ſugar diſſolved in ſome medicated or common water; and they are moſt proper when the uſe of tonical remedies are indicated.

Convulſions, from *venereal infection*, can only be cured by ſialagogues or other anti-venereal remedies, &c.

Opium has lately been much recommended, particularly by practitioners of reputation, as a ſovereign antiſpaſmodic in convulſive diſeaſes.

diſeaſes. As a phyſician of long experience and obſervation, I muſt remark, that, in this country, it has done conſiderable miſchief. In the *plethoric*, it renders the circulation tardier, thickens the blood, increaſes the fulneſs, and produces coſtiveneſs, at a period, and in caſes where evacuations are abſolutely neceſſary, checks the ſecretions and excretions, and therefore it is ineligible.

Where convulſions ariſe from *inanition*, or hæmorrhage, *opium* is leſs exceptionable; but it is contradictory to the uſe of *tonics* and *nouriſhing diet*: for opium palls the appetite, renders the performance of digeſtion and chylification feeble, retards, or, in a certain meaſure, prevents the generation or abſorption of a laudable and nutritious chyle. As a palliative only, then, ſhould opium be uſed in caſes of convulſion from inanition, hæmorrhage, &c.

In *convulſions* from *irritation*, *opium* has often increaſed the ſymptoms, and produced delirium; and certainly no judicious phyſician would preſcribe a mere palliative remedy in hopes of alleviating a ſmaller evil, and riſque the production of a greater.

Opium, therefore, ſhould be cautiouſly preſcribed: it is ſeldom a *cauſe-removing* remedy; but as a *palliative* may, in ſome inſtances, be uſeful.

It ſhould be obſerved, that, in the modes of treatment recommended in this work, the deep cauſes of diſeaſes are inveſtigated, and attempted to be removed: the total eradication of complaints, according to their viſible, and reſpective cauſes, not a mere palliation of ſymptoms; which laſt, though much in faſhion, only comprehends a very ſuperficial knowledge of medical practice.

Caſtor, *muſk*, *aſſafœtida*, *valerian*, or *camphor*, are certainly uſeful antiſpaſmodics; but it is much doubted whether theſe extend their effects much farther than to palliate ſymptoms, except in ſlight caſes. For ſuch purpoſes, theſe laſt-mentioned antiſpaſmodics are very neceſſary; while the more powerful cauſe-removing and eradicating remedies are applied according to the various cauſes which gave riſe to the convulſive diſeaſes.

In convulſions from wounds, fractures of the head, or wounded nerves, the aſſiſtance of ſurgery muſt be ſolicited; but in hot climates all remedies whatever frequently prove fruitleſs *.

Mechanical ſtimuli are to be removed by art, or obtunded by remedies, &c.

Theſe are general doctrines on convulſions.

The

* After the Havannah had ſurrendered to the Engliſh in 1762, a man was a patient of mine, who, with others, had been

The particular *curative indications* in convulſed diſeaſes are to be formed from their cauſes, conſidered ſeparately or conjunctly.

When clonic convulſions ariſe from great perceptibility, or emotions of the mind, placidity muſt be attempted by the patient, or medicine may not much avail. There are very few caſes, however, of convulſion in which the ſtate of the body does not require medical attention.

Great mental ſenſibility is generally accompanied, as before was obſerved, with a certain ſharpneſs or acrimony in the blood; in which inſtances the remedies ſhould be accommodated to the natural and peculiar conſtitution of individuals, whether they be florid, plethoric, and robuſt, pallid, thin, and debilitated, or laboring under ſome prevailing acrimony.

Convulſions, in which may be obſerved youth, floridity, *plethora ſanguinea*, and increaſed action of the arterial ſyſtem, repeated bleedings, antiphlogiſtic evacuants, camphor, nitre, and

been to the Bay of Matances aſhore in queſt of limes, &c. In jumping over pales he was catched by his wriſt, and, apparently, a ſlight punctured wound was the conſequence. Soon after the man had a *locked jaw*; his mouth was opened a few days by the *ſpeculum oris*, and opium, muſk, camphor, bathing, &c., were adminiſtered; but ſtrong convulſions ſucceeded, and this wound, which appeared a ſcratch, proved fatal, which is no uncommon event in hot climates.

other

other neutral or alkaline ſalts, are to be preſcribed, with an exceeding *ſpare* and *dry diet*, ſimilar to that recommended already in the mania.

Periodical or other uſual evacuations are to be promoted, if neceſſary, as menſes, perſpiration, &c.

The quantity and force of the blood ſhould be decreaſed, and its re-accumulation prevented, by only uſing half the accuſtomed quantities of cooling liquids.

Stimulants of every ſort ſhould be avoided; neither bliſters, cordials, nor volatiles, ſhould be preſcribed.

In *atonical convulſions*, comprehending debility, great ſenſibility of the nervous ſyſtem, a lax ſtate of the blood, feeble yet quickened arterial action; laxatives of the bitter claſs ſhould be adminiſtered conjointly with fetids, morning and evening, to prevent or remove conſtipation.

Bliſters, as evacuants, or ſtimulants, applied to the neck, back, or legs, are proper; cordials, antiſpaſmodics, and ſometimes ſtimulants.

Bark and vitriolic preparations, *colcothar of vitriol*, *ſal martis*, *rubigo ferri preparata*, the *flores zinci*, or ſmall doſes of the *vitriolum album*,

bum, with bark, have, under my own inſpection, much mitigated, rendered the paroxyſms more diſtant, or entirely cured epileptic and other convulſed diſeaſes, when united with a *dry* regimen.

The diet for the *atonical cerebral diſtention*, and debility, ſhould be more nutritious, but light, and half the uſual quantity of liquid food ordered; but, inſtead of cooling drinks, a glaſs of porter, or wine is preferable.

The *arnica* has been much extolled in Germany for the cure of epilepſy, palſies, &c.; but as convulſive diſeaſes ariſe from many diſtinct and oppoſite cauſes, a phyſician muſt have no ſmall portion of medical faith, and very little experience or judgment, who can ſuppoſe any ſingle remedy capable of anſwering ſuch a multiplicity of oppoſite intentions. I am certain no medicines will permanently cure any ſpecies of *convulſions*, or other *chronic* diſeaſes, without an *exact regimen*, which muſt continually be varied with remedies, according to conſtitutions and circumſtances, by the ſkill of the medical practitioner *.

Cold and ſea bathing, change of air, exerciſe, and amuſements, to divert the mind from con-

* The *arnica* cured many caſes of convulſions, according to Collin, and certainly may be tried. Its virtues are emetic,

contemplating on bodily affliction, contribute greatly, as auxiliaries, in obtaining the cure of theſe violent nervous affections.

Palliatives are numerous, and very uſeful in mitigating ſymptoms, though every day's practice proves their inefficacy in all the ſpecies of convulſions: fetid remedies, as muſk, caſtor, camphor, ſagapenum, &c., valerian, ſp. volat. fœtid. aſſafœtida joined with ſpiritus lavendulæ compoſitus, or ſpiritus ſalis ammoniaci, oleum ſuccini, ol. cajaput, arnica, cardamine, or ladies' ſmock, recommended by *Ray*, &c., alchymilla, &c., &c., are in great eſteem in convulſed diſeaſes. In ſome ſlight caſes, volatiles and fetids have performed the cure of convulſions; but they certainly are not to be depended on as effectual cauſe-removing remedies.

The *oleum animale verum Dippelii*, which is not eaſily obtainable in this country, has been much recommended in various parts of Germany and the Continent, from chemical piety and enthuſiaſtic credulity, as poſſeſſing powerful virtues in convulſed, epileptic diſeaſes*.

The

tic, errhine, diuretic, diaphoretic, and emmenagogue. It is likewiſe recommended in palſy. It has a ſtyptic taſte, and becomes black with a ſolution of *vitriolum martis*. The doſe of a dram in infuſion is given night and morning: it ſeems more calculated for the relaxed than the plethoric.

* I have met with ſeveral ingenious German chemiſts, while I was in Germany, very full of enthuſiaſtic, pious credulity,

The nauſeouſneſs of the common *oleum animale* may frighten away the diſeaſe; as happened by Boerhaave's remedy of the red-hot irons exciting a terror in the mind ſuperior to the terror that produced thoſe contagious convulſive fits amongſt the children at the Orphan Houſe. I have ſeen both the common as well as the oleum animale Dippelii often fail, but never ſucceed,

dulity, living in conſtant expectation of *heaven* ſhowering down *gold* from their chemical labors, or univerſal remedies to cure every diſeaſe. Theſe are commonly men of warm paſſions and weak capacities, by which they often impoſe their viſionary chemical flights, firſt on themſelves, and then on others. Chemiſtry, judiciouſly applied, is one of the nobleſt and moſt uſeful arts, particularly in medicine: it generouſly affords us the moſt certain of all remedies. But when a paſſion for chemiſtry leads men to ſuppoſe they comprehend medical practice, without the neceſſary knowledge and experience, nothing can be more erroneous nor injurious. I have known ſeveral deluded men of this claſs, chiefly imported from the Continent, who have, ſome intentionally, others undeſignedly, extracted conſiderable ſums of gold from my credulous countrymen under various falſe pretences of *chemical ſecrets*, which have all evaporated *in fumo*, when the parties, ſworn to ſecrecy, have been duped out of all the ready caſh they poſſeſſed. One perſon I know, living, at preſent, in extreme poverty, who once poſſeſſed 30,000l. ſterling, but was pillaged of the whole by chemical believers, pretenders, and hypocritical impoſtors: therefore ſome caution is neceſſary whenever new chemical medicines, or reaſoning, are received into practical medicine; but this will be more clearly proved in my Treatiſe on *Mineral Alteratives*, in which many chemical errors will be explored.

in

in totally eradicating convulſive diſeaſes: they are certainly allayers of irritation, and may be uſed whilſt more important cauſe-removing remedies are adminiſtered.

Convulſions, originating in any ſpecific or anomalous acrimony of the blood, or particular ſyſtem, require the remedies proper for the prevailing diſeaſes *.

If convulſions are evidently accompanied with ſcrophulous ſymptoms, as tumefactions of the upper lip, or ſtrumous ſwellings in the lymphatic glands about the neck or throat, the metallic alteratives are chiefly to be depended on as cauſe-removing remedies.

Glandular or *lymphatic tumors* about the throat, by compreſſing the returning internal and external jugular veins, cauſe ſwelling and redneſs of face, and ſometimes violent pains in the head, and convulſions. I lately cured a very dangerous caſe of this nature by a ſolution of tart. emet. and merc. corroſ. ſub. in very

* The venereal or ſcrophulous, as attacking the lymphatic ſyſtem in different modes, the gouty or rheumatic, as exciting pain in the joints or muſcles, I call ſpecific acrimonies; but where the blood is ſo acrimonious as to excite anomalous diſeaſes, without any ſpecific ſymptoms of gout, rheumatiſm, ſcrophula, venereal, or ſcorbutic diſorders, this may be called an anomalous acrimony, or depravation of the blood and other fluids, &c., &c., *ſine nomine*.

ſmall

ſmall doſes, joined with a ſtrong ſolution of camphor, nitre, and extreme dry diet.

Every other ſpecies of chronic-prevailing acrimony cauſing convulſions, from affecting the veſſels of the brain and its appendages, are rarely curable by the common fetid medicines, but are often permanently removed by long-continued courſes of metallic alteratives, preſcribed in the modes I have invented and long experienced, joined with a judicious regimen *.

Symptomatic convulſions, from worms, affections of the viſcera, or any ſpecific diſeaſe, the primary cauſes being removed, the effects will conſequently ceaſe.

From the *numerous effects* of convulſions, already delivered in the anatomical examinations after death, it muſt ſeem very evident what were the cauſes.

The major part of diſſections exhibit the brain and its membranes to have been in a very morbid ſtate, vertebral and carotid ramifications or arteries ruptured, accumulations of pus, turgency and ſtagnations in veſſels, or effuſions of ſerum in the cerebrum, medulla oblongata, ventricles, &c., the heart itſelf di-

* See Obſervations on Metallic Alteratives, their preparations and important uſes.

lated,

lated, the viſcera morbid, the apparent effects of inflammation, or chronic diſeaſes, &c.

Theſe accumulations could not have been in thoſe parts but by increaſed action in the exhalent or vapor-effuſing arteries pouring forth a greater quantity of fluids than the veins could abſorb, and an increaſed energy in the irritated *nervous influence* itſelf, exciting preternatural action, &c.

If the veſſels or cellulous cavities of the *tela celluloſa*, which compoſe the membranes in the brain, be much diſtended either with air or fluids, the brain itſelf will exceed its uſual dimenſions, and, by meeting with reſiſtance on all ſides from the bones of the ſcull, all the effects of irritation, or compreſſion of the medulla, or cortical ſtructure may be produced, in proportion to the enlargement of the cerebrum, cerebellum, or thickened membranes, &c. A *ſlow weak pulſe*, comatoſe ſymptoms, *lethargy*, and *death*, may be the conſequence.

This may happen without fractures, depreſſions, or other injuries of the ſcull, or concuſſions of the brain, &c. &c.

Diſtenſions of veſſels, or accumulations in the cellulous cavities of the *tela celluloſa* of other parts, produce evident tumefaction, where there is no compreſſing reſiſtance like the bones of the ſcull; as in the *anaſarcous dropſy*, *tumors* from inflammation

inflammation or contuſion, &c.; but, within the ſcull, compreſſion in the *adult* muſt be equal to the brain's increaſe in magnitude, as every reaſoning and well-informed anatomiſt or phyſiologiſt will readily acknowledge.

Various experiments ſhew that the brain, committed to evaporation, loſes 8508, 8450, 8100, or 8096 parts out of 10,000, or 24 parts out of 25 of its weight, which demonſtrates the natural humidity of the brain.

In the fœtus the brain is almoſt fluid, and ſimilar to ſerum; there appears little or none of that medullary or cortical conſiſtency which marks the brain of the adult, and is the probable cauſe of the deſtitution of ſenſe in the fœtus, or infantile ſtupidity. As the ſenſes give impreſſions, and the mind enlarges, the medullary and cortical ſubſtances of the brain become more ſolid, or of a firmer conſiſtence, though always containing a great quantity of fluids.

1. The brain, in its healthful or ſound ſtate, is perfectly ſecured from concuſſion, except from very great violence, by the *proceſſes* of that ſtrong membrane the *dura mater*, and ſurrounding bones.

2. The cerebrum and cerebellum thoroughly, and moſt exactly, fill their reſpective cavities formed by the *dura mater* and cranium, &c.

3. The *dura mater* ſo cloſely coheres with the internal ſurface of the ſcull, that the impreſſions of its blood veſſels appear on the bones in *furrows*.

4. All theſe facts, collectively conſidered, muſt prove that the brain is very much compreſſed, and confined on all ſides and in all parts by the ſcull.

5. If the brain be ſo intimately connected with the *dura mater*, and this latter with the bones in a ſound ſtate, which cannot be denied, the ill effects of the brain's enlargement by diſtentions of veſſels may be eaſily comprehended; or from a ſurcharge of ſerum or humidity, poured forth and retained in the *cellulous cavities* of the *tela celluloſa*, which compoſes not only membranes, but all coats of veſſels, except the muſcular.

6. The exhaling or vapor-effuſing arteries do poſitively pour forth a fine ſubtile vapor into every part of the *medulla* and *ſubſtantia corticalis* of the cerebrum and cerebellum.

7. The vaſcular ſtructure of the *pia mater*, or the cellulous ſtructure compoſing that membrane, may be conſiderably enlarged by overdiſtention of veſſels, or accumulation of ſerum, excluſive of irroration of the fine *fluids* tranſuding the cortical and medullary ſtructure of the brain.

The internal carotid arteries and the vertebral continue conveying, by their impelling force, a freſh ſupply of blood, or exhaling vapor, to veſſels, cells, or interſtices of the *cortical* or medullary ſubſtance of the brain, already in a ſtate of diſtention *.

8. The orifices of the ſmalleſt veſſels pour out humidity in form of a fine ſubtile *vapor*, not only into the cavities of the cellular ſtructure of the *pia mater*, but between the moſt minute interſtices of the medullary and cortical ſubſtances of the cerebrum and cerebellum.

9. The *ventricles* of the brain have been ſo enlarged by an effuſion of *ſerum*, not *coagulable lymph*, as to contain 1, 2, 3, 4, 9, or 13 pounds of water; but this has happened in in-

* Bergerus de Nat. Humana 283. Ex calore plexus choroidei exhalat vapor, qui collectus facit aquam in ventriculis cerebri; hæc aqua eſt pellucida, quam igne non concreſcere, ſed omnem exhalari cum J. Zambeccario, exiſtimat *Bellini*; quam nos quidem limpidam ſemper, factaque exhalatione, nihil glutinis vel albuminis, at tenuem interdum pelliculam relinquere obſervavimus.

I have made repeated experiments on the *ſerum* found in the ventricles of the brain, and find it exhales by heat; but have never obſerved it to concrete, as is common to the *coagulable lymph*: for this and other reaſons, I am certain the *minute ſanguiferous veins* abſorb and reconvey the fine ſerum and moſt volatile and aërial particles of human fluids to the blood.

fants, where the bones were capable of receding *.

10. The veins, from being compreſſed on all ſides, or the minute mouths of the veins opening into the cellulous cavities of the *tela celluloſa*, or the capillary veins united to arteries having loſt their tubular attraction, or propelling force to ſend the blood to the returning large venal trunks, may be ſeparately or conjointly the cauſes of the blood not paſſing off with

* Halleri, Elem. Phyſiol. Vol. viij. 7. de aqua ventriculorum.

" Ne lacunar ventriculi, pavimento connaſcatur, vapor fa-
" cit, qui undique de membrana ventriculum veſtiente, deque
" plexubus exhalat, & modico madore omnem internam ca-
" vam ſuperficiem oblinit. *Hic vapor* non *ſemper in aquam*
" colligitur, atque in recentiſſimis cadaveribus abeſt nonnun-
" quam. Ex arteriis exhalat vapor. Venarum officium quo-
" ties languet, ſolet autem in chronicis morbis languere, to-
" ties collectus mador in aquam colligitur & mole memora-
" bili ventriculos cerebri diſtendit. In *apoplecticis*, *ſoporoſis*,
" *phrenicis*, *lethargicis*, *convulſis*, *paralyticis*, *febribus vario-*
" *loſis epidemicis*, *affectibus catarrhalibus*, aqua uberius in
" ventriculis fuit reperta, in hydrocephalo etiam magis.

" In cerebro hydropico ℥113; inque ventriculis 1, 2, 3,
" 4, 9, 13, libras reperio viſas eſſe. Libræ 4. ℥xj. in ſacco
" a cerebro facto. Caput ob aquam in ventriculis collectam
" adulti, capiti æquale."

" Aqua fuit inventa in phrenitico ad ℔ij. in maniaco ſtu-
" pido, cephalalgia, delirio, epileptico. Ingenium ei eſt ge-

" latinoſum,

with a celerity equal to its tranſmiſſion from the arteries.

11. Thus congeſtion may ſucceed congeſtion; but as the parts diſtending or diſtended meet with an inſuperable reſiſtance from the bones of the adult ſcull cloſely ſurrounding them, all the effects common to membranous diſtention may be comprehended; as irritation, inflammation, or a quicker circulation in the part, dilatation, pain, convulſions, compreſſion, ſtupor, lethargy, death.

If the fluids of the whole body, or of the head in particular, had been timely diminiſhed in many of thoſe caſes where death enſued from

" latinoſum, affuſo acore minerali, aut vini ſpiritu aut igne in " membranas coit. Hewſonus coagulabilem eſſe negat."

Cauſæ ſunt glandularum obſtructiones. Tumores aquoſi viſi; ſpina bifida in lumbis, in occipite, in fronte, collo, dorſo, lumbis frequenter, pectore, oſſe ſacro.

Spina bifida rarior eſt morbus in adulto homine; medulla tamen ſpinalis aqua tumens viſa eſt.

I have ſeen a few inſtances of the *ſpina bifida*, and one, a very remarkable caſe, in an infant, whoſe mother I attended in labor in the year 1769. The medulla ſpinalis was laid bare by a kind of fiſſure, from the poſterior proceſs of one of the lumbar vertebra being wanting. The child lived a month, had the uſe of its lower extremities; but on the thirtieth day died convulſed. I gave this preparation to my friend, and preceptor in midwifery, the late Dr. Colin Mackenzie, of St. Saviour's church yard.

convulſions, does it not appear rational to every reflecting and candid phyſician that thoſe fatal effects might have been, in many inſtances, prevented? — If there were not a great quantity of blood for the heart and arteries to force up to the brain and its membranes, thoſe parts could not be irritated by turgency, though they might by the acrimonious quality of the blood; but this being corrected by mild alteratives and regimen, the convulſive motions would ceaſe *.

In all convulſive diſorders, then, let a ſtrict *dry regimen* be obſerved; which certainly diminiſhes the quantity of fluids in the whole human body: but this neglected, all medical preſcription will prove feeble or ineffectual.

It is not only neceſſary to obſerve a *dry diet* during the cure of maniacal and convulſive diſeaſes, but the ſame mode which cures ſhould be *continued through life* by thoſe who wiſh to prevent a relapſe of thoſe melancholy, grievous, and frightful diſorders.

It may be obſerved, that many eat, and particularly *drink*, much more than the conſtitution requires. People in health may indulge their appetites, perhaps, without immediate miſchief; but, in diſeaſes, patients ſhould ſubmit to the regimen moſt adapted to their complaints, or

* When the *air* is moiſt and cold, the human fluids are augmented; when dry and hot, decreaſed.

they

they unjuſtly cenſure medicine for a failure in its curative attempts.

In chronic complaints, a due regimen will perform much more without medicine than a load of remedies without an exact regimen. This is aſſerted from above thirty years attentive obſervation, in as full medical practice as ever occupied the attention of any ſingle phyſician *. The difficulty medicine labors under in gaining an aſcendency over patients, to acquire a ſtrict compliance in what regards diet, though even for their own benefit, is well known, and too often experienced: it made a very reſpectable phyſician declare in his writings that every ſick perſon had a right to kill himſelf after his own fancy. It is, however, the duty of medicine to appriſe irregular patients of the conſequences of their miſconduct in the moſt ſolemn and humane manner: it may certainly adviſe, though it cannot enforce its uſeful precepts.

Maniacal or chronical convulſions are not attended with fever, heat, nor thirſt; therefore large portions of drinks are not requiſite. If,

* Patients, who diſregard all preſcribed regimen, are apt to examine how phyſicians diet themſelves. In perfect health, an exact regimen is neither neceſſary in food nor drink; it would be very ſtrange to expect phyſicians ſhould diet themſelves becauſe their patients are ſick.

from the rigid dry regimen, a ſtrong deſire for more drink ſhould be excited in the mind than ſhould be reaſonably allowed, the mind being impelled and directed to a new deſirable object, may be diverted from thoſe mental perturbations which have occaſioned the inſane ſymptoms, by which the mental cauſes may, in time, be greatly diminiſhed, or, perhaps, totally obliterated. Stronger ideas from bodily ſenſations enfeeble or exterminate, *pro tempore*, the weaker or more moderate. Cutting or burning excite a ſtronger emotion in the mind than itching or ſcratching; acute pains, than obtuſe.

From all which may be inferred, independent of other important circumſtances, that a diminiſhed portion of liquid aliment may not only ſtrike at the root of diſeaſes ariſing from diſtention, but likewiſe, as far as the ſoul is concerned, introduce a new object for the mind's attention, inſtead of that which gave birth to its alienation.

It appears rational, from the anatomical facts, that the due intercourſe between the ſoul, brain, and nerves, is evidently interrupted by diſtention of veſſels and cellular ſtructure of membranes, or acrimony irritating or compreſſing the ſoft pulpy ſtructure of the medullary and cortical ſubſtance compoſing the brain and its membranous parts.

The

The medullary and cortical ſubſtance being irritated by acrimony, or compreſſed by the diſtention of veſſels, cellular ſtructure, or by a plenitude of their fine fluids transfuſed through their minuteſt parts, they cannot receive the regular impreſſions of the ſoul, nor convey ſuch impreſſions to the nerves or moving muſcles.

Involuntary muſcular contractions are excited, or muſcles become rigid, from an over excitement of the nervous influence and arterial influx, or from an increaſed or diminiſhed power of the *vires muſculorum inſitæ*.

The cauſes that exiſt in the brain may extend to the nervous filaments, their medullary and vaſcular ſtructure in all parts, and produce inordinate or irregular effects: in the brain, mental diſtraction; in the muſcles, involuntary actions, or convulſive motions.

Diminiſhing the quantity of fluids, or correcting the vitiated acrid quality of the blood, are the grand curative objects: theſe deſirable ends, evacuants, abſtinence, or correcting metallic alteratives, frequently effect.

In whatever point of view the theory may appear, it may be aſſerted, from long practical experience, that the modes of treatment in convulſed diſeaſes, reſulting from the antecedent reflections, have, in numerous inſtances, ſucceeded:

ceeded: this certainly is the moſt important object in medicine.

A variety of experiments, proofs, and arguments might be ſtill adduced to ſupport theſe doctrines; but they will appear in the *Schola Medicinæ* with greater propriety.

After theſe general doctrines concerning clonic convulſions, the particular ſpecies may be introduced; the treatment of which will be eaſily conceived from what has been already mentioned.

Of the cereal Convulſion, or *Convulſio cerealis*.

The *cereal convulſion* is a ſingular diſorder of the ſpaſmodic convulſive kind, not common to this country, but mentioned by Cartheuſer under the denomination of *convulſio cerealis*, from the peculiar tingling and formication perceived in the arms and legs; *motus ſpaſmodicus vagus*, by Hoffman; and in German it is called *kriebelkrankheit*, or *krampfsucht*, of which a learned treatiſe has been publiſhed by Dr. Buddæus.

The diſeaſe is deſcribed in the following manner:

A laſſitude is firſt felt in the limbs, a heavy grievous pain in the head, an oppreſſion of the

præcordia

præcordia and anxiety; then follow twitchings or *ſubſultus ſpaſtici* in the fingers or feet, ſometimes in one, ſometimes the other ſide, with a moſt troubleſome ſenſe of formication. In progreſs of time the diſorder proceeds to all the ſuperior and inferior extremities; the trunk of the body itſelf is invaded with a particular ſtricture in the muſcles, contortion of the limbs, and painful rigidity. There are likewiſe vomitings from the irritating cauſes acting in *primis viis*; cardialgia, tormina, voracity, dilatation of the pupils, and not unfrequently an excretion of worms; dry gangrene, &c.

The diſeaſe invades with a ſudden and great loſs of ſtrength, or *proſtratio virium*, which ſhews the penetrating, poiſonous, and ſeptic or putrid-tending quality of the cauſes.

After the preſſing ſymptoms have been ſubdued, there always remained a very great debility in the limbs, ſo that the patients hardly were able to walk or to ſtand upright on their legs.

The diſorder is ſometimes ſolved by ſweats, or a diarrhœa; but moſt commonly it deſtroys life by apoplexy, epilepſy, delirium, atrophia, or by an internal mortification. It not unfrequently terminates in madneſs, ſtupor, palſy, or obſcurity or loſs of viſion from a *gutta ſerena*,

rena. Some ſuffer a relapſe *; others recover. It is endemical in ſome places; but more a rural than urbanical diſorder, which ſpares neither age nor ſex, but principally infeſts children. Some phyſicians account it epidemic and contagious; others not: what *Hippocrates* affirms, *Galen* denies, according as they perceive things differently. Every phyſician may ſtudy and practiſe phyſic; but every phyſician does not equally poſſeſs powers of diſcernment and judgement to diſtinguiſh with accuracy: hence ſo many contradictory opinions on the ſame ſubjects. Moderate abilities are common; ſuperior mental faculties ſcarce: but ex-

* *Anatomical diſſections after death.*

Veſica fellea magna, plena, bilis copia in venis gaſtricis loco ſanguinis, inflammationes eryſipelatodes hinc inde in ſuperficie pulmonum, hepatis, lienis, ventriculi, inteſtinorum, mucrone cordis.

Quod ultimum phænomenon de cauſtica indole hujus frumentacei veneni ſatis ſuperque teſtatur, quum ex plurium venenorum aſſumptorum effectu idem ſæpiſſime conſequatur.

Ex obſervatis Brunnerianis conſtat corpora hominum hoc morbo correptorum jam durante affectu ſphaceloſa reddi coepiſſe: unde ſepulturam mortuorum, non citra prægnantes rationes urgendam ſuadet, ne corruptio iſta ſphaceloſa colliquatione ſua effluvia latius per aëra diffundat & in contagioſam indolem convertat.

From hence it appears how ſeriouſly Brunner conſidered the diſeaſe and its putrid conſequences, when he could be ſo ſolicitous to have the dead, as ſoon as poſſible, buried.

traordinary

traordinary genius as ſeldom appears in medicine as in the fine arts of poetry, painting, and ſculpture.

The diſorder, however, is not epidemical; for opulent people, who are not neceſſitated to eat ſpoiled *corn*, never experience its attack, though whole villages of the poor are ſuffering at the ſame time and place from its dreadful devaſtation *.

The

* *Wepferus*, de affectibus capitis, p. 556.

" Marcus M. ex pago Ebner menſe Septembris 1693, paſ-
" ſus eſt morbum convulſivum, quem vocant *Kriebelſucht*;
" tunc in hoc pago epidemium, qui adhuc non paucos affligit:
" non pepercit pueris, puellis, fœminis aut viris, adultis aut
" ſenibus. Incipit cum ſenſu formicationis in manibus & pe-
" dibus. ſequitur ſpaſmus flatulentus: caput quibuſdam dolet,
" aliis non valde. In principio V. S. adhibent, quibuſdam
" illa morbum præcavit: *Marcum* non juvit. Poſt princi-
" pium vero manus & pedes convelluntur valde, ut ejulare
" & exclamare cogantur. Quidam delirant ſine convulſioni-
" bus. Uxor Marci valde doluit in capite & deliravit, non
" tamen convellebatur. Duravit paroxyſmus per dies 14 dia
" tamen mentem non recuperavit, &c. &c.

" *Cauſam* adſcripſerunt *Pagi* incolæ ſeu uredini ſeu uſtila-
" gini frumentorum, quum ante annum ros melleus frequen-
" ter frumenta oblinens, ob lentorem attactis ſpicis adhæſe-
" rit digitis: ſemina forinſecus nigricabant, intus candebant,
" & multum nihilominus farinæ ſuppeditabant. Ob annonæ
" caritatem ſemina nigra non ſeparabat *Marcus iſte* & *alii* a ſano
" frumento, reputantes nullum damnum allaturum, &c. &c.

" In

The *cauſes* of this diſeaſe have occaſioned contentions amongſt different phyſicians. Many attribute its origin to recent rye, bad bread, or corrupt, mildewed, ruſty wheat. Many deny thoſe cauſes; becauſe ſome few eat rye in thoſe places voraciouſly without injury, particularly people who cleanſe their grain: this, according to my reaſoning, is a very ſuperficial objection, and ſcarcely merits refutation. If ſome eſcape the contagion in the ſmall pox, it is no proof that the diſorder is not contagious: nor is it a truth that Goulard's extract is not a poiſon, becauſe one gentleman drank two ounces, and yet, by timely aſſiſtance, recovered. Many, again, attribute humid and cold air to be the cauſe of theſe ſingular convulſions, joined with eating unripe, new, or unwholeſome corn; amongſt

"In autumno tunc morbus hic convulſivus erat epidemius "in *Gravenhauſen*, ubi quinque homines mortui ſunt terribili "genere mortis, nam a motu convulſivo caput ad latus aut "retrorſum trahente & diu durante, liveſcebant & ſuffoca- "bantur. *Lenzkirch*, *Grunwald*, in *Capell*, ubi 150 hoc "malo afflicti numerabantur." *Wepferus*.

Grana hujus corrupti ſecalis venenato ſali ſubtili cauſtico, ſulphuri ejus viſcoſo inhærenti, deberi videntur, quod peculiari plane ratione in nervoſas partes graſſatur ſævitiamque ſuam exercet. *Hoffman*.

Brunner has obſerved gangrenes to have happened.

Muller has written a diſſertation which is amongſt the *Diſputationes practic. Halleri*.

which

which is too great an abundance of *lolium temulentum*. Others think ſcurvy, gout, a vitiated fancy, worms, an acrimony of lymph, ſaburra of the inteſtines, or violent percuſſion, to be the cauſes. It is produced in autumn, in the harveſt time, or ſoon after; in ſpring it is mitigated, and in ſummer entirely ceaſes.

By accurate obſervation it has been diſcovered,

1. That wherever that convulſive twitching diſorder has prevailed, the inhabitants all ſaid that the *rubigo* had been in the grain.

2. That thoſe who uſed old wholeſome grain in their bread were never troubled with that diſeaſe; but thoſe alone who were obliged, for want of better, to uſe the new grain, were attacked immediately after the harveſt was reaped, if they had employed that muſty grain in their diet.

3. The rich, and all who could afford good aliment, eſcaped the ravages of the diſeaſe; but the poor, and all thoſe who chiefly ſubſiſted upon bad bread, ſuffered principally at ſuch time.

4. When the harveſt had been got in, the diſeaſe made its appearance in the ſhape of an acute ſickneſs, and afterwards mitigated into a chronic diſeaſe, with milder ſymptoms.

5. It

5. It was obſerved that the gravid ſwine miſcarried by being fed on that ſpoiled grain; and thoſe corrupt and duſty grains put in milk killed the flies.

6. A man, out of pure curioſity, chewed ſome of thoſe corrupt grains, which produced pains in his limbs, of which he could not get cured but by ſeveral dejections.

7. The bread and flour of the ruſty corn has a diſagreeable flavor and taſte, turns the ſtomach, ſo that nobody would eat it, except poor people out of neceſſity, and for want of better.

The hiſtory of the diſeaſe, the times of its attack, and total ceſſation, clearly prove that theſe convulſions ariſe from the effects of unripe, vitiated, or new corn, producing mephitic air, or acrimony, and acting with ſufficient energy on the ſtomach and inteſtines to produce, by the ſympathy and irritability of the *par vagum*, intercoſtal, and other nerves, all the effects obſerved *.

The

* Not alone the corn, wheat, rye, &c., are affected by the *rubigo* or mildew, but other plants and trees alſo, as Ramazzini, an Italian phyſician, witneſſeth, in theſe following words:

" *Non ſolum cereales opes abſumſit hæc peſtis, ſed omne etiam* " *ſubſidium, quod pomifer autumnus ſolet ſuggerere, ſuſtulit:*" and adds farther, " *Uvarum quoque proventus ob eandem cau-*

" *ſam*

The unripe or vitiated corn, eaten amongſt the poor of thoſe countries where there is a ſcarcity of meat, produces a corrupted, flatulent, and acrimonious digeſtion; mephitic air, &c., vellicating the nervous parts of the ſtomach.

The vitiated food digeſted in the ſtomach paſſing to the duodenum, produces air and a vitiated chyle.

A ſharp acrimonious chyle, with vitiated air, enters the lacteal veſſels, and conveys the morbid effects to the blood.

"*ſam non niſi parciſſimus prævidebatur.*" In another place he ſays, "*Rubigo peſſimus omnium frugum morbus eſt paulatim* "*augeſcens, frumenta & omnia legumina, ſed præſertim fa-* "*bas occupavit, neque ſolum in locis humidioribus ubi compu-* "*truerant, ſed & in editioribus.*"

But there are other contrary obſervations, that the *rubigo* has not affected other plants or trees, ſo as to cauſe any inſalubrity on their products.

When the rubigo has attacked the corn, the ſeaſon has been obſerved always wet, at the time when the grain was forming, after the falling of the bloſſom; the ſpoiled grain was mortified, loſt its vegetative power, and, by the conſequent putridity, turned the contained vegetal earth into a noxious, unwholeſome powder, which, when made into bread, and uſed as an aliment, worked as a cauſtic poiſon in the body of thoſe who eat ſuch bread. It has been obſerved, that thoſe who uſed good wholeſome bread were free from that diſeaſe.

The blood, being rendered acrimonious, acts as ſtimuli on the medullary and vaſcular parts of nerves, and by ſympathy irritates the whole nervous ſyſtem, acting partially or generally on muſcular parts, &c.

Independent of the morbific changes produced in the blood circulating through the whole arterial, venal ſyſtem, or changes in the lymph circulating in the lymphatics, the force of ſharp or putrid-tending ſtimuli on the ſtomach and inteſtines is ſufficient to produce all the effects obſervable in the *convulſio cerealis*. By analogy this is proved; for wind, worms, acrid remedies, or poiſons acting on the ſtomach or inteſtines, without proving fatal, throw various parts, or the whole body into ſtrong convulſions.

The *cure* of this diſorder requires,

1. An abſtinence from the vitiated corn.

2. The removal of the irritating cauſes in the ſtomach and inteſtinal canal.

3. The appeaſing the convulſive or ſpaſmodic ſymptoms.

4. The invigorating the habit, ſo as to prevent or reſiſt the putrid-tending diſpoſition of the fluids or moiſt cold air.

As, in general, the diſeaſe has a putrid tendency,

dency, which proves that the blood is contaminated; bleeding, except in great plethora, robuſtneſs, youth, and floridity, ſhould be avoided.

The ſtomach and inteſtines ſhould be thoroughly emptied, both by cathartics and clyſters, on the firſt appearance of the diſeaſe; afterwards, if there be the leaſt tendency to a putrefactive diſpoſition, purging violently would be injurious, if not dangerous. From the violence and rapidity of the diſeaſe, the firſt efforts of medicine ſhould be directed to remove the irritating cauſes in the ſtomach and inteſtines; but it ſhould be recollected the poor people who ſuffer are not very robuſt from the poverty and impurity of their food. Stomachs accuſtomed to a vegetable or farinaceous diet in ſwampy, moiſt ſituations, ſeldom bear, without injury, draſtic purgatives; yet they ſhould be ſufficiently powerful to cleanſe the inteſtines thoroughly.

No. 96. ℞. Calomel. ppt. gr. vj.
Extract. cathart. ʒſs. M. f. pilulæ No. vj. quarum capiat j. ſecunda vel tertia quaque hora, donec alvus bene reſpondeat, ſuperbibendo coch. ij. miſturæ ſequentis.

No. 97. ℞. Infuſ. ſen. ℥ivſs.
Crem. tart. ʒiſs.
Tinct. ſen. ℥iſs. M. f. miſtura.

No. 98. ℞. Aq. pur. tepid. ℥vjſs.
Sal. amar. cathart. ℥ſs.
Ol. olivar. ℥j.
Tinct. ſacr. ℥ſs. M. f. enema, pro re nata injiciendum.

For the debilitated, females, or children, leſs powerful cathartics are neceſſary. Infuſions of ſena and cremor tartar, electuarium lenitivum and cremor tartar, lac ſulphuris and magneſia, rhubarb and cremor tartar, manna and oil, oleum Ricini, &c., may be adminiſtered; but it ſhould be obſerved that the inteſtinal canal is to be, at all events, effectually deterged.

If the irritating air, extracted from the farinaceous ſubſtances, ſhould inflate the ſtomach or inteſtines, occaſioning ſpaſms, pains, hiccups, or eructations, it ſhould be corrected or neutraliſed by volatile alkali, with vinous ſpirits and ſome medicated water.

No. 99. ℞. Sp. volat. ammoniac. ʒjſs.
— lavend. c. ℥ſs.
Aq. menth. vulg. ſimp. ℥vſs. M. f. miſtura, de qua capiat coch. ij. tertia vel quarta quaq. horâ.

Or,

No. 100. ℞. Sp. lavend. c. ℥jſs.
— volat. ammon. ℥ſs. M. cujus capiat ʒij. ſecunda, tertia vel quarta quaque horâ in coch. iij. infuſ. zingiberis.

It

If it may be deemed neceſſary to keep the inteſtines lax, infuſion of ſena and ſpirituous tincture of rhubarb may anſwer the purpoſe better than purgative ſalts, which laſt are certainly improper in diſorders that have a putrid tendency.

The foregoing plans having deterged the inteſtines, or corrected the irritating cauſes, the allaying the convulſive twitchings or involuntary motions, if they continue, becomes the next object.

Nitre and *camphor*, in feveriſh inflammatory caſes, are excellent; but nitre would be improper in putrid-tending ſymptoms, or in debility: camphor in large doſes is proper in all caſes of convulſion.

Fetid medicines, with thoſe that excite perſpiration, are the moſt effectual for this purpoſe.

No. 101. ℞. Gum. aſſafœtid. ℈ij. ſolve in
Julep. e camphor. ℥viij.
Tart. emet. gr. j. ſolve et f. miſtura, cujus ſumat. coch. ij. tertia quaque horâ.

Solutions of myrrh, ſagapenum, olibanum, &c., inſtead of aſſafœtida, may be uſed according to circumſtances and conſtitutions; but their antiſpaſmodic effects ſhould be directed by antimony as much as poſſible to the ſurface of the body, in order to excite perſpiration.

1. The irritating air, extricated from the impure farinaceous ſubſtances in digeſtion, enters the lacteals with a ſharp impure chyle.

2. The vitiated air and chyle mix with the blood.

3. The injurious air, by its elaſticity and forcible action, diſcharged from the minuteſt mouths of arteries, enters and expands, and irritates the minuteſt cavernous cavities of the *tela celluloſa*, ſimilar to the emphyſema from putrefactive or other cauſes.

4. The *tela celluloſa* is interſperſed not only amongſt the interſtices of muſcles, but even between the moſt minute muſcular fibres, as far as the eye or microſcope can carry their examinations.

5. A vapor or moiſt air is always exhaling from the mouths of arteries into the moſt minute cellular cavities of the *tela celluloſa*, to moiſten the parts and render muſcular action and attrition imperceptible to the ſenſes, except in diſeaſe.

6. This air or vapor becoming mephitic or acrid, preſſes and irritates, like artificial ſtimuli, the muſcular fibres deſtined to voluntary action, and cauſes convulſions, pains, &c., by affecting the nervous ſyſtem.

7. The evacuation of this air, without weakening

kening the habit, is moſt likely to be affected by generating and continuing perſpiration.

In perſpiration a moiſt air or vapor exhales; when this air or vapor is vitiated, acrid, or corrupt in the tela celluloſa of muſcles, what can be more rational than to promote its expulſion? therefore James's powder, tartarum emeticum, or any antimonial preparation, in ſmall doſes, joined with antiſpaſmodics, as camphor, &c., are moſt effectual cauſe-removing remedies, as far as perſpiration can promote thoſe ſalutary purpoſes.

Diuretics, as the ſp. nitri dulcis, ſal. diureticus, may be proper; the former may be united with every thing the patient drinks.

Oily frictions, recommended by the German and Swiſs writers, are objectionable; for they would prevent, in a great meaſure, the expulſion of the morbific irritating vapors through the external pores.

If there be delirium, ſtupor, atonia, debility, and a low pulſe, or other ſymptoms requiring ſtimulants, bliſters may be applied to the arms, legs, and back. How far bliſters have been uſeful in evacuating ſerum has not yet been determined: but as the *tela celluloſa* of muſcles communicates all through the body, an evacuation from continual bliſters, in caſes

moſt approaching to inſenſibility or torpidity, ſeems a very rational practice.

The appeaſing the violent, acute muſcular diſtractions having been effected, by emptying the inteſtinal canal, and evacuating the irritating acrid fluids vellicating the muſcular fibres, by perſpiration and diuretics, the next indication, according to the ſymptoms of the diſeaſe, is to reſiſt the putrefactive tendency of the viſcera or fluids.

For theſe purpoſes, antiſeptic laxatives of ſena and tamarinds, cremor tartar and rhubarb, with more active purges occaſionally to prevent the lodgment of any putrid-tending particles of matter in the ſtomach or inteſtines; for their abſorption by the lacteals may eaſily contaminate and ſpread their baneful influence to all the fluids of the body. Thus the effects of the diſeaſe may become a freſh cauſe, producing more dangerous conſequences than the original convulſions. This frequently happens to children in meſenteric fevers, and can only be cured by thoroughly and repeatedly evacuating the ſtomach and inteſtines of any ſlime or other pernicious particles *.

The

* Children's fevers are moſt frequently excited and protracted by the abſorption of pernicious particles from their *farinaceous* food, or by glandular meſenteric obſtruction preventing

The bark, camphor, myrrh, ſagapenum, olibanum, valerian, and ſnakeroot, the vitriolic acids, or any other approved antiſeptic and antiſpaſmodic, conjointly preſcribed, are the moſt effectual modes of correcting or preventing the putrid-tending diſpoſition of this extraordinary convulſed diſeaſe.

Though the diſorder itſelf is certainly not contagious, yet when the air is moiſt, and putridity exhales from putrefactive vegetables or diſeaſes, putrid low fevers may not only be generated, but likewiſe communicated.

Thus this convulſed affection may have been conſidered infectious, when it was only accidentally united with putrid-tending diſeaſes, in ſeaſons of the year, and in low moiſt places, where they moſt commonly predominate.

This *convulſio cerealis*, though not common in this country, where the poor have wholeſome bread, and greater plenty of animal food than perhaps in any other; yet it may be of great conſequence in diet to have the pureſt corn, and to have all that is foreign accurately examined, leſt with the grain direful diſeaſes may be imported.

venting the conveyance of a healthful chyle: this many of my diſſections indiſputably prove. See *Treatiſe on Diſeaſes of Children.*

To

To enforce a due obſervation in the ſelecting and cleaning corn for the purpoſes of life, belongs more to the Legiſlature than phyſicians.

St. Vitus's Dance.

This diſorder ſometimes affects young females, and is differently deſcribed by authors. The muſcles of the limbs are diſtorted, and thrown involuntarily into various gyrated or circular directions: the muſcles of the face or eyes are convulſed, and the countenance generally conveys evident marks of bodily indiſpoſition.

The *immediate cauſes* are, an involuntary contraction or convulſion of particular muſcles exciting irregular motion.

The *remote cauſes* are, nervous affections, or irritation from acrimony, efforts to menſtruate, or difficult irregular menſes, worms, plethora, inanition, &c.

The *cure* muſt be accommodated to the cauſes; cathartics, aloetics, mercurials, mineral alteratives, bark, ſteel, cold bath, air, exerciſe, frictions, &c., and a dry diet, are, under different circumſtances, uſeful.

The general remedies are, cortex Peruvianus, pilula Rufi, and ſmall doſes of calomel; Æthiops mineral, Plummer's pill, cinnabar and valerian root powdered, camphor, aſſafœtida, oleum

oleum cajaput, cardamine, *flores zinci*; chalybeates, as *rubigo ferri preparata*, *tinctura florum martialium*, *ſal. martis*, &c.; anthelmintics; cold bath, and proper diet, aloetic evacuants with cremor tartar, frequently expedite the cure.

Epilepſy.

The epilepſy has been ſo copiouſly treated, under the *paſſio hyſterica epileptica*, that little more on the ſubject is neceſſary.

In the epilepſy, the patient ſuddenly loſes the power of commanding the muſcles, falls proſtrate, and is convulſed, with a loſs of the ſenſes.

The diſorder is hereditary, ſymptomatic, idiopathic, or accidental.

The *cauſes* and *prognoſtics* are the ſame as convulſions in general, and the treatment requires ſimilar remedies.

An hereditary epilepſy, or if it happen to adults, is frequently incurable, without the exacteſt *dry regimen* and proper remedies. After a perſon has once labored under the diſorder, on affections of the mind, ſuppreſſed evacuations, colds, &c., it frequently returns.

The exciting cauſes are infinite in ſolids and fluids, from various ſtimuli acting on ſeveral parts.

In the ſolids occur frequently leſions of the brain, tumors, compreſſions, ſtones in the kidnies, gall bladder, urine bladder, or irritations of the uterus, &c.

In the fluids, plethora, cachochymia, purulent or eruptive acrimony, venereal virus, acrid or viſcid lymph, extravaſations and ſtagnations in the brain, hydrocephalus, &c.

Amongſt the other cauſes occur, *achores*, *tinea*, ſmall-pox, ſuppreſſed diarrhœa, quickſilver found in the brain, worms, crudities, wind, &c., in the ſtomach and inteſtines, cholics, green excrements, &c.

Beſides theſe, acrid aliments, draſtic medicaments, poiſons, too great an evacuation of blood, *venus immodica*, &c.; profound meditations, pains, commotions of the mind, drunkenneſs, ſudden frights and ſurpriſes from terrifying unexpected ſounds, dreadful thunder, noiſe of fire-arms, inſolation, faſting, acrid exhalations or vapors; dread from nurſes ignorantly toſſing infants with vehemence, or the anger of a wet nurſe, has cauſed epileptic fits to the child; pregnancy, ſuddenly chilling the body when heated, &c.

The *cure* comprehends the treatment during the paroxyſm and intervals of the fits.

In the fit great care ſhould be taken leſt the head be injured by contuſions againſt the floor; the

the arms and legs ſhould be prevented from contorſions, being firmly held by the aſſiſtants in a gently extended poſition; the hands ſhould be retained open, and, if poſſible, the mouth ſhould be prevented from firmly cloſing by a ſmall handkerchief or a moderate-ſized pack-thread placed between the teeth, the *dentes molares*, in particular: by theſe means the tongue cannot receive injury, which has ſometimes been bitten quite through by the increaſed involuntary power of the temporal, digaſtricus, &c., muſcles.

A ſoft bed is the beſt ſituation for any perſon while in the epileptic fit, and the head ſhould be elevated, for the violent convulſions are leſs likely to injure or contuſe the body than when on the floor, &c. *

During

* A very extraordinary caſe of the epilepſy happened while I practiſed ſurgery in 1769.

Mr. R., picture-frame maker in Holborn, near Red-lion Street, had been many years ſubject to epileptic fits. He had taken various remedies under the direction of the moſt celebrated phyſicians, but the diſorder baffled every attempt of cure.

The patient, deſpairing of relief from regular practitioners, was recommended to a famous advertiſing empiric, who, without heſitation, undertook the cure, with the moſt ſolemn aſſurances of ſucceſs. Some remedy was given three times a day, a tea-ſpoonful of drops in water. I was attending Mrs. R., at the time, in ſome complaint, and had curioſity

During the paroxyſm or fit in plethoric habits bleeding may be preſcribed; but in the pallid,

to look at the ſilver ſpoon, which was turned black and corroded; from which I concluded ſome ſharp acid or cauſtic preparation was given. The empiric never left the bottle; therefore it was impoſſible to analyſe the medicine.

After this remedy had been taken a conſiderable time, I was called, with the moſt earneſt ſolicitude, to viſit the patient, who, the meſſenger informed me, had broke his thigh in bed.

On examining the thigh, I found the os femoris obliquely fractured, and the ſharp points of the bone, about four inches below the *trochanter major*, pointed outwardly, through the *faſcia lata*, *adeps*, and ſkin.

Upon the cloſeſt inquiry of all the family preſent, no doubt remained, if their account might be credited, of the thigh bone having been thus broke by the force of the convulſed muſcles, although the patient was kept firm in a ſoft bed by ſtrong aſſiſtants, who had attended on many prior fits, and therefore accuſtomed to the buſineſs.

One of the aſſiſtants preſent to aſſiſt the reduction of the fracture was Dr. Huber, of Great Wild Street, whom I had known, in 1764, when he attended at Guy's Hoſpital; the other aſſiſtant was Mr. W. Duff, one of my pupils in midwifery and anatomy at the time I gave lectures, who is now a ſurgeon in His Majeſty's ſervice.

This ſingular caſe required reflection: there ſeemed three circumſtances requiſite to be particularly attended.

1. To reduce the fracture.

2. To retain the limb and body ſo firmly after the fracture was reduced, as to ſecure it againſt the violence of future convulſions.

3. To

pallid, debilitated, or patients ſuperabounding with ſerum, this operation ſhould be avoided.

Fetid

3. To diminiſh or prevent the force of the fits themſelves while the *callus* was forming.

The reduction of the fracture was accompliſhed in the uſual manner, by extenſion, and bringing the ends of the fractured part in oppoſition: on which the uſual bandage was placed, leaving an opening to dreſs the contuſed wound.

The retention of the limb againſt the force of future convulſions was effected by an apparatus of my own invention for this ſingular caſe: it conſiſted of long, narrow laths, about a quarter of an inch thick, and three quarters of an inch broad, ſmoothly plained, and rounded at the edges, to prevent uneaſy or ſharp compreſſion. Three laths were placed on the inſide of the thigh, from near the *inguen* to beyond the ſole of the foot; three longer laths were likewiſe placed on the outſide of the thigh: they reached above the upper margin or ſpine of the *ilium*, and extended beyond the bottom of the foot. The laths were all ſecured together at equal diſtances, above and below, by means of a broad tape, and on the parts wherever compreſſion or friction were likely to be conſiderable, compreſſes of ſoft tow, covered with fine linen, were placed under the laths. The leg, thigh, and foot, were thus ſecured. Strong napkins were placed round the body, acroſs the ſuperior part of the cheſt, under the arms, in the direction of each axilla, and ſecured to the upper poſt of the bed: another was ſecured to the wood work at the middle of the bed, running acroſs the inferior part of the abdomen: a third encompaſſed both feet near the ancles, and was firmly attached to the foot poſt of the bedſtead. Theſe ligatures were thus placed and faſtened to prevent, if poſſible, the convulſions from diſuniting the bones, retarding the generation of the *callus*, or breaking the *callus* recently formed.

In

Fetid remedies, as aſſafœtida, ſagapenum, volatiles, &c., for the pallid; camphor, valerian,

In order to diminiſh the force of the fits while the *callus* was forming, the patient was bled, abſtinence from liquids was ordered, and the cool, antiphlogiſtic regimen preſcribed, with mild antiſpaſmodics of camphor, valerian, gentle diaphoretics, &c.

In a few days the convulſions returned, and the new-formed *callus*, notwithſtanding the methods adopted, was injured, though not in a very great degree.

In about three or four months after this extraordinary accident the bones had re-united; the patient was able to walk with the aſſiſtance of a ſtick and crutch; the fractured leg being a little ſhortened, a high-heeled ſhoe was directed to ſupply the defect.

Some few months after I viſited the patient, who ſeemed very chearful; but in my preſence, while drinking tea, was ſeized again with an epileptic fit, accompanied with very ſtrong convulſions, in which the arms and legs were thrown into various contortions, jerked, extended, and contracted with uncommon violence and rapidity. The patient was ſeated in a large elbow child-bed chair, ſurrounded with ſoft cuſhions and pillows.

During the force of the fits, without the limbs touching any hard ſubſtance whatever, a ſudden crack was heard; the convulſions ceaſed, and I preſently perceived that the thigh bone of the other leg was broke, without any wound or protruſion of the fractured ends of the bone: in ſhort, it was a complete ſimple fracture, about three inches below the *trochanter minor* of the os femoris.

I muſt confeſs I doubted the former relation of the other thigh bone having been fractured in bed by no other violence than

rian, cold water, and evacuations, are proper for the florid and plethoric. Theſe muſt be conducted according to circumſtances.

In the intervals of the fits, the plans of cure ſhould be directed to prevent their return. Theſe muſt ever vary according to cauſes, conſtitutions, ſeaſons of the year, age, ſexes, climate, modes of living, &c.

The *cardamine*, or *ladies ſmock*, *orange leaves*, and ſuch like medicines, are frequently expe-

than convulſions; but being preſent at this latter ſcene, from the beginning to the accident of the fracture, I could no longer doubt the truth of the former extraordinary fact.

This ſecond fracture was reduced and ſecured in a manner ſimilar to the firſt; and though convulſions frequently happened during the time the callus was forming and obtaining its proper hardneſs, yet the cure was effected in three or four months; but this laſt leg was more crooked and ſhorter than the former. The patient remained a cripple, but could walk with the ſupport of crutches; had, at different times, the convulſive fits, which were afterwards ſucceeded by a gradual loſs of memory and a ſpecies of fatuity, until death cloſed the unhappy ſcene.

The moſt earneſt ſolicitation was made to open the body after death; but this not being agreeable to the family, no opportunity was afforded of inveſtigating the ſtate of the brain, its appendages, the fractured parts, or muſcles, which were the only probable means of diſcovering the true cauſes of ſuch extraordinary effects.

rienced very inſufficient, as may be eaſily conceived by reflecting on the appearances of the effects found in the brain by anatomical inquiries, &c., &c. A mountain cannot be moved by the force of a feather; nor the various cauſes of the epilepſy by many of the reputed ſpecifics.

An extreme dry diet, evacuants of the mercurial and powerful kind, change of air, and altering the diet; the regulating the ſecretions and excretions; ſerenity of mind; antiphlogiſtics, tonics, mineral alteratives, bliſters, ſetons, iſſues, nitre, camphor, and ſaline purges; bark, ſteel, and vitriolic preparations, zinc, &c., &c., have all advantages in the cure of the epilepſy. The more judicious the application of theſe remedies are, ſo much with greater reaſon may ſucceſs be expected.

Salivation has in ſome inſtances ſucceeded; in others failed: in ſhort, there is no ſingle curative plan adapted to the variety of cauſes and parts affected; therefore, cauſes being firſt inveſtigated, medicine ſhould be preſcribed judiciouſly for their palliation or removal. It muſt, however, be confeſſed, that the diſeaſe is frequently incurable, even when the origin is well underſtood, and the moſt ſkilful preſcriptions adminiſtered, under the guidance of rational medicine.

The

The *aura epileptica* is a moſt curious phenomenon of diſeaſe, in which an irritated, wounded, or lightly compreſſed nerve in the foot, hand, or wriſt, will gradually throw the whole body into ſtrong convulſions. The patient feels ſomething aſcending like an electric ſtream, in the direction of the nerve; or rather a kind of obtuſe tingling or ſlight titillation; this gradually increaſes in force; the brain, its appendages, the medulla oblongata and ſpinalis, all become affected, and the whole body is thrown into the ſtrongeſt convulſions. This is a convincing proof of action, re-action, conſent of parts, and energy in the nervous ſyſtem.

A ſcratch or puncture in the wriſt, foot, or tendinous aponeuroſes, have produced univerſal convulſions, locked jaw, tetanus, and even death, in hot climates; to all which I have adminiſtered the moſt-eſteemed remedies, but rarely with ſucceſs.

Strong compreſſes in the direction of the nerve above the part affected with ligature, have prevented the paroxyſm; dividing the nerves, if ſmall and not intereſting, nor belonging to more noble parts, or deſtroying their connection with the other nerves, is more eligible, but ſeldom practicable; as the morbid part is commonly amongſt the tendons or ten-

dinous expanſions of the hand, wriſt, ancle, or foot *. The general remedies ſhould be the ſame as in the other convulſive diſeaſes.

Humid air, rain, thunder ſtorms, &c., are hurtful to the epileptic; as likewiſe all rich, over-generous or acrid food. Light diet, dry air, moderate exerciſe, amuſements, and chearful company, are beneficial.

Spaſmus cynicus, or *cynic ſpaſm.*

The *ſpaſmus cynicus*, or Sardonic grin, is a convulſive affection of the muſcles of the face and lips on both ſides, which involuntarily forces the muſcles of thoſe parts into a ſpecies of grinning diſtortion.

If one ſide only be affected, the diſorder is nominated *tortura oris.*

When the maſſeter, buccinator, temporal, naſal, and labial muſcles, are involuntarily excited to action, or contorted by contraction or relaxation, they form a ſpecies of malignant ſneer.

It ſometimes ariſes from eating hemlock, or

* I had a caſe of this nature under my care, from a ſcrophulous cauſe, lately, and ordered a dry diet, mineral alteratives, &c., by which the patient was ſo well for many months, that he was conſidered cured; but in this he was diſappointed: for, on returning to his uſual diet, and omitting the remedies, the ſymptoms returned equally violent.

other

other acrid poiſons, or ſucceeds an apoplectic ſtroke.

I have obſerved, that the perſons who are moſt affected with this diſorder, in the latter part of life, are thoſe who previouſly had a turn for ſatire and ſneering.

I remember accidentally meeting and converſing with M. *de Voltaire* at a famous ſtatuary's in *Paris*, to whom this philoſopher, wit, and ſatiriſt, had been ſitting: his face always repreſented the ſarcaſtic cynic grin, without diſeaſe; but it is eaſy to conceive that ſuch a face, involuntarily convulſed, would naturally aſſume the muſcular actions to which it had been long accuſtomed *.

The nerves, from which all theſe parts receive their branches, are *olfactorii*, *optici*, *naſales*, *linguales*, *acouſtici*, *recurrentes*, and by means of their ganglions and plexuſes the whole ſyſtem is agitated, which demonſtrates how faultering of ſpeech, deafneſs, loſs of ſmelling,

* If I recollect right, the artiſt's name was M. *Pigall*: he had juſt finiſhed a fine monument to the memory of *Marſhal de Saxe*, which is erected at Straſbourg, by order of the preſent French monarch; and, by the ſame ſovereign's royal requeſt, M. *de Voltaire* was ſitting for a whole-length ſtatue. I do not remember ever to have ſeen a perſon ſo meagre and emaciated, the ſubject for the chiſſel of a ſtatuary, as M. *de Voltaire*'s: his body was ſimilar to a dried mummy.

or convulſed action of the *alæ* of the noſe or lips happen, in conjunction with theſe muſcular affections.

The *cure*, beſides the general remedies, ſhould be attempted by applications of cupping, bliſters, liniments, whether ſpirituous, ætherial, volatile, ſtimulating, or anodyne, near to the nervous trunks, from whence theſe branches of the nerves originate. Common practices, however, more commonly apply medicaments to thoſe morbid parts, in which the effects of the diſorder are moſt manifeſt; the abſurdity of which muſt appear ſtrikingly evident to every reflecting anatomiſt and phyſiologiſt.

Where relaxation on one ſide, and contraction on the other ſide of the face happen, after reflecting on the parts from whence the nerves deſcend to the contracted ſide, reſolvents of common ſalt and warm water, ſolutions of camphor, by means of blanched almonds and water, *ſpiritus Mindereri*, weak ſolutions of *ſal diureticus*, foſſile or fixed alkaline ſalts, or oleaginous volatile liniment, with camphor or opium, ſhould be frequently applied, excluſive of cupping, leeches, or bliſtering, if thought neceſſary, to relax the contraction; to nervine liniments, *oleum ſuccini*, or *ol. terebenth. ætherial.*, may be added. *Linimentum ſaponaceum*, or volatile alkaline ſpirits diluted with water, ſtrong frictions,

frictions, partial cold bathing, &c., are proper, and ſometimes, by perſeverance, ſucceſsfully remove the complaints *.

In this diſeaſe, when ariſing from eating the *cicuta* or hemlock, or other poiſons, an active vomit is firſt neceſſary; then plenty of warm milk, or oil and warm water, are beneficial. There occurred a melancholy inſtance of a young gentleman of fortune, to whom hemlock had been preſcribed: the extract was taken in ſuch increaſed doſes, that it proved fatal. The particulars of this caſe will hereafter be publiſhed, as a caution to the favorers of this dangerous drug. Hemlock has failed in numerous inſtances in the cancer and other diſeaſes. It has been extolled and recommended, more through the obſequious conduct of the adulators of the Vienna-court phyſicians, than from any conviction or teſtimonies of its efficacy †. Upon ſimilar principles, and the want of due reflection, have many other poiſons,

* "Ex cicutæ eſu quoque contigiſſe certum eſt," ſays a learned author. "In ſimilibus vero & vomitus & cardial-
"giam cum mentis alienatione excitat, & niſi prompte ſup-
"petiæ ferantur, mortem inducit. Venenum hoc quam
"promptiſſime vomitu rejiciendum, dein lac tepidum copioſe
"hauriendum, oleoſa demum non omittenda."

† I have ſeen between two and three thouſand caſes of the cancer treated with hemlock, by different practitioners, with-

ſons, as the *digitalis*, *ſolanum*, preparations of lead, arſenic, and all ſorts of poiſons, &c., &c., been lately introduced, not without fatal effects, in diſorders where ſafe and ſucceſsful methods of cure were already eſtabliſhed. Though moſt powerful medicines, in too great quantities, may poiſon or deſtroy, yet thoſe of which the doſes are known, and their efficacy experienced, ſhould be preferred to dangerous novelties, eſpecially poiſons of the acrid ſpecies, wherein the greateſt caution and circumſpection ſhould always be obſerved.

Sternutatio, or *ſneezing*.

Sneezing is a convulſive motion of the abdominal and other muſcles of reſpiration and diaphragm, from ſome irritation of the olfactory and phrenic nerves; when it is violent, it may be claſſed amongſt the convulſive diſeaſes.

In the action of ſneezing, the mouth, thorax, or cheſt, are dilated, and a larger column

out ſucceſs; and I can poſitively affirm, from my own and the experience of moſt of the candid ſurgeons and phyſicians through Europe, that this drug never cured a true cancerous ulcer. Upon examination, many caſes have been nominated cancers by perſons who could not give the true definition or deſcription of a cancer. See my *Remarks on cancerous Diſeaſes*. When I was at Vienna in 1785, I ſaw, at the grand hoſpital, above fifty pounds of the extract of hemlock intended for internal uſe.

of

of air is received into the lungs than uſual; then a violent ſpaſmodic contraction of the muſcles follows, with an anxious compreſſion in the region of the heart, and the air received is expelled through the noſtrils with great noiſe and force.

If ſneezing be moderate, it is in many inſtances uſeful; for it augments the motion of the blood, ſharpens the ſenſes, recovers loſt or diminiſhed ſmelling from inſpiſſated mucus; it, likewiſe, aſſiſts in labors, and expulſion of the ſecundines.

When, however, ſneezing is violent in plethoric bodies, and often repeated, it has produced many evils; as head-achs, blindneſs, a rupture of the veſſels of the brain or meninges, and ſudden death *. Ruptures of the pulmonary veſſels likewiſe have happened; pulmonic hæmorrhage has been the conſequence. It has been the cauſe of abortions in pregnancy, and has by its violence produced

* Hildanus and Lanciſius give inſtances of blindneſs, and even death, being the conſequence of violent ſneezing.—"Quod ſane a Famiano Strada, exemplo piſtoris ſuburbani "confirmatur, qui cum ter ac vicies ſternuiſſet, in vigeſimo "quarto ſternutamento, animam efflavit."

"Cucumeris aſinini ſucco, ruſtici utentes ad icterum cu-"randum, ſternutant ad mortem hæmorrhagia excitata." Referente *Sauvagio*.

hernias,

hernias, or a deſcent of the inteſtine or omentum into the inguen, or vaginal ſac of the ſcrotum.

It is excited by errhines; the juice of wild cucumber, which ruſtics uſe for the cure of the jaundice, has occaſioned ſneezing to ſuch a degree, as to end fatally by hæmorrhage. From worms in the frontal ſinuſes, or in *primis viis*, ſneezing may happen by conſent of parts: it is common to the nervous, irritable, and hyſterical.

The meaſles and other eruptive fevers are preceded by ſneezing; it is frequent in the catarrh; was formerly accounted epidemic, and by ſome of the ancients the meſſenger of death; from hence the prayer or benediction ſo common amongſt many nations on perceiving ſternutation *.

In the time of Pope Gregory, the ſneezing diſeaſe deſtroyed numbers ſuddenly. The diſorder now known by the denomination of the *influenza*, is of this ſpecies. The *membrana pituitaria* is inflamed and irritated from acrid particles in the air; violent ſneezing is excited; the membrane being continued all through the bronchial ſtructure and air veſicles of the lungs,

* *Petronius Arbiter* ait: *Gyton* collectione ſpiritus plenus ter continuo ita ſternutavit, ut grabatum concuteret, ad quem *Eumolpus* converſus, ſalvere *Gytona* jubet.

accounts

accounts for the pulmonic inflammation accompanying ſometimes the *influenza*. Violent peripneumony, pleuriſy, abſceſs of the lungs, and *hæmoptyſis*, have been the conſequence *.

Sneezing is conſidered critical in ſome acute diſeaſes, and often precedes a ſalutary naſal hæmorrhage, particularly to the plethoric.—"*Quando jam ad ſanitatem venit corpus, ſternu-*"*tamentum etiam inter bona indicia.*" Celſus.

According to Hippocrates, ſternutation ſolves the ſingultus or hiccup. It is conſidered ſalutary to the paralytic; but injurious, if violent, in pulmonic affections of the inflammatory claſs. In ulcers, polypus, cancer of the noſe, in inflammation or other diſeaſes of the part, the force of ſneezing augments the ſymptoms; therefore it ſhould be reſtrained.

The *cure* muſt be adapted to the cauſes: ſneezing is impeded by preſſing with the fingers, the root of the noſe, or covering them on the internal canthus of the eye; by aqueous

* In the laſt *influenza*, which raged a few years ago, two very remarkable inſtances of pulmonic inflammation and abſceſs happened, amongſt others of a ſimilar, though leſs violent, nature. They were both patients of Mr. Hogarth's, Swallow Street, by whom I was conſulted. Copious bleedings, antimonial diaphoretics, with nitrum and pectoral remedies, cured both theſe caſes. Where the *influenza* was leſs violent, elix. paregoric., *acet. ſcillit.* bleeding, inhalations, pediluvia, diaphoretics of ſpirit. Minder. &c., according to circumſtances, were beneficial.

vapor,

vapor, or warm milk attracted up the noſtrils, it is mitigated. In the plethoric, venæſection is proper; pediluvia, bliſters to the neck or back, with antiphlogiſtic remedies and regimen. If periodical, bark is efficacious; if from worms, anthelmintics; if ſpaſmodical, fumes of camphor, valerian, or aſſafœtida; and in ſome caſes opium is uſeful.

Palpitation, tremor, and *angor of the heart.*

The tremor, angor, or palpitation of the heart, only differ in degrees of violence; therefore they may be included under the general name of palpitation.

The palpitation of the heart is an inordinate motion of that organ. The action is ſo ſtrong as to be perceived, by placing the hand on the outſide, and the pulſations are ſo ſenſibly felt, that the heart ſeems as if extruding from its cavity.

The palpitation of the heart is attended with an unequal intermitting pulſe, anxiety, tremor of the extremities, pallor, difficulty of breathing, deep inſpiration, weight and oppreſſion of the præcordia, a fixed pain under the ſternum, and, according to the greater or leſs degree of diſeaſe, ſo is its duration or violence.

The *immediate cauſe* is increaſed irritability of the

the cardiac nerves exciting the heart to augmented action.

The *remote cauſes** are numerous, both external and internal: in the heart itſelf and veſſels;

* Dissections after Death.

Symptomata morborum.	*Extiſpicia cadaverum:*
Cordis palpitatio: cum anguſtia præcordiorum, ſpiritu difficili, animi deliquiis frequentibus, pulſu intermittente, & tandem hydrope.	Hepar volumine nativo ſolito majus, pancreas induratum, cor pericardio deſtitutum.
— — Cum dolore in latere ſiniſtro & poſtico pectoris, febre, anxietatibus, &c.	Pulmones putridi, & aneuriſma aortæ.
— — Cum dyſpnœa, interdum ſedatur rejectione ſanguinis per os, ſed denuo recrudeſcens, lypothymias lethales ſibi adjungit.	Cor ſanguine concreto infarctum, volumine ingenti præditum.
— — Quolibet motu fovetur & ſudores frigidi ubertim profluunt.	Cor maximum, valvulæ ejus oſſeæ.
Palpitationibus quidam obnoxius de repente moritur.	Cor ingens, infarctum ſanguine.
— — Cum lypothymiis frequentibus & atrophia ſubſequenti.	Tumor in pericardio, materiam purulentam recondens.
— — Doloribus pectoris & abdominis ſtipatur, lypothymias ſibi accerſit, & morte ſubitanea ceſſat.	Tumore aneuriſmatico dilatata arteria aorta.
— — Interdum recurrit	Cor ſanguine polypoſo incum

ſels; in other viſcera extrapoſited from the thorax; in the blood, and other humors; in digeſtible or indigeſtible foods; affections of the mind; excretions and retentions, &c.

To

Symptomata morborum.	*Extiſpicia cadaverum.*
cum ſpirandi ſumma difficultate.	farctum, aorta oſſea.
Cordis palpitatio: Cum ſpirandi difficultate, tuſſi, & ſputo cruento.	Cor ſanguine concreto turgidum.
— — Dolores capitis & abdominis concomitatur in gravida muliere, & dein poſt paſtum ſibi adſcribit dolorem lateris ſiniſtri cum ventris intumeſcentia, lypothymia & ſpirandi difficultate.	Quantitas maxima humoris ſubflavi inter laminas peritonæi,
— — Cum difficili ſpiritu.	Meſenterium ſcirrhoſum & aqua in pericardio.
— — Cum doloribus in ſiniſtra thoracis parte & ſpirandi difficultate.	Aneuriſma pectoris.
— — Juvenem ſubito extinguit.	Pericardio cor accretum, valvulæ lapideæ.
— — Cum ſpiritu difficili, nauſeis ſæpe accedentibus.	Lapides in thalamis cordis.
— — Cum ſenſu eroſionis in thorace & dyſphagia.	Hepar durum & aqua in ventriculo.
— — Cum ſyncope frequenter recurrente.	Sanguis concretus in corde, pro verme habetur.
— — Melancholicum hæmorrhagiæ narium obnoxium,	Lien & hepar ingentia. Siniſter pulmonum lobus inſtar

&

To the heart and contents of the thorax appertain, an increaſe of its volume or ſize, polypus, aneuriſm of the aorta, or its oſſification, a collection of fluid in the pericardium, abſceſs, empyema,

Symptomata morborum.	*Extiſpicia cadaverum.*
& difficultate ſpirandi laborantem cruciat.	hepatis denſus & tabe ſqualens.
Cordis palpitatio : Cum ſenſu aquæ in thorace, abſque ſiti. Pulſu molli, reſpiratione frequente, oculis concavis.	Aqua in thoracis cavo & pericardio.
— — Ægrum palpitationibus cordis infeſtatum, mors ſubitanea tollit.	Cor ſanguine concreto diſtentum, valvulæ oſſeæ.
— — Interdum recurrit, ſed tandem continua evadit.	Cor ſanguine repletum.
— — Spiritum difficilem trahit.	Pericardium aqua turget.
— — Cum dolore pectoris & dyſphagia : quibus ſe jungit vomitus continuus.	Tumor ſteatomatoſus œſophagum comprimit.
— — Extra ſedem coſtam protrudit, & aſphyxiam creat.	Venæ pulmonis cartilagineam referunt ſubſtantiam.
— — Cum tuſſi concomitatur dolorem continuum capitis ad ſcapulam uſque protenſum.	Pericardium purulentum, hepar ſcirrhoſum, lien obſtructus & pectus ſero lymphatico turgens.
— — Subito lethalis de medio tollit lethargicum.	Aqua & ſanguis in ventriculis cerebri, cor & vena cava dilatata.
— — Cum ſpiritu difficili & abdominis extremitatumque œdematia.	Aqua in pericardio, cor dilatatum.

empyema, calcareous concretions, worms, ſmall offifications in the ſubſtance of the heart, ſcirrhoſities and tumors of the lungs.

The

Symptomata morborum.	*Extiſpicia cadaverum.*
Cordis palpitatio: Coſtas carie exeſas frangit.	Auriculæ ſanguine turgidæ, admodum dilatatæ.
— — Narium oboriente hæmorrhagia, miteſcunt palpitationes, ſed denuo recrudeſcentes mortem accerſunt.	Pulmo putriditate affectus.
— — Cum tuſſi & aſthmate in tabem degenerante.	Pulmonum ulcus, concretiones in cordis thalamis, lien durus & inteſtina inflammata.
— — Adſtantium auditu diſtinguitur.	Cor dilatatum & lapideſcens.
— — Cum ſpirandi difficultate, artuum œdematia, tuſſi & ſputo purulento.	Cor tumidum & ſanguine atro infarctum.
— — Cum animi commotionibus vehementioribus, quas excipit mors ſubitanea.	Cor ingens, ſanguine obrutum, & valvulæ quaſi lapideæ.
— — Cum hydrope.	Pancreas & meſenterium ſcirrhoſa, latex in pectore, valvulæ cordis oſſeæ & cor turgens ſanguine.
— — Aſthmaticus, de ſummo pondere in hypocondrio dextro queritur, dein colica & lypothymiis cruciatur.	Pulmones cum nonnullis hærentiis putriditate affecti; inteſtinum colon flatulentia diſtentum, diaphragma ſurſum pellens, hepar putridum, & abſceſſus circa jecur.
— — Lypothymias ſibi adjungit frequenter.	Cor purulentia affectum.

Cordis

The leſions in the other viſcera are capable of cauſing the palpitation of the heart. The ſtomach is frequently the cauſe; infarctions of the liver, or ſpleen; ſtones in the gall bladder; wind

Symptomata morborum.	*Extiſpicia cadaverum.*
Cordis palpitatio: Item.	Pericardium ſero turgidum & cor ſanguine diſtentum.
— — Cum ſpirandi difficultate concomitatur febrem acutam pertinaci gonorrhœæ ſuccedaneam.	Abſceſſus in regione hypogaſtrica & in apice cordis.
— — Invadit leucophlegmatia laborantem, affectum ſoporoſum accerſit.	Aqua inter laminas omenti ſtagnat, ventriculus cerebri & pericardium aqua turgent; pulmones undique pleuræ annectuntur.
— — Periodica ſonum edit ingentem, & ſumma ſpirandi difficultate ſtipatur.	Pulmones putriditate affecti & cor ingens.
— — Cum corporis totius intumeſcentia ſeſe adjungit ſpirandi difficultati.	Cor portentoſum, valvulæ oſſeæ.
— — Cum anhelitu, anxietate, tuſſi.	Cor illæſum, pulmones vix inflammati, lumbrici tres in inteſtino ileo.
— — Cum ſpirandi difficultate, animi deliquiis & agrypnia & tandem morte ſubitanea.	Aneuriſma pectoris.
— — Invadunt lypothymiæ ſubito lethales,	Maſſam adipoſam uterque cordis ventriculus fovet.
— — Item.	Cor tumidum unico thalamo conflari videtur.

wind in the ſtomach and inteſtines, or flatulency, particularly common to the hypochondriac during digeſtion, by the air riſing up the œſophagus and diſtending that tube. In the brain itſelf,

Symptomata morborum.	*Extiſpicia cadaverum.*
Cordis palpitatio: Scabie defoedatum cruciat, & hydropem ſibi adjungit.	Omnia viſcera ſana, excepto corde ulceroſo.
——Hypochondriacum laceſſunt, & in hydropem degenerat.	Cor tumidum & ſanguine infarctum.
—— Tandem ſyncopes lethiferæ aſthmaticum moleſtant.	Arteria aorta ſanguine concreto turget.
Palpitationes cordis & dein ſyncopes, chloroticam invadunt.	Cor diſtentum, & valvulæ oſſeæ, hepar induratum.
—— Cum pertinaci ſpirandi difficultate.	Aorta oſſea.
—— Cum pulſu inordinato & perquam debili.	Valvulæ cordis oſſeæ & cor dilatatum.
—— Cum anxietate & ſpirandi difficultate.	Aqua in pectore, valvulæ quaſi oſſeæ.
—— Nulla.	Cor lapideſcens; pericardium aqua turget.
—— Seſe adjungit tumori ventris.	Hydrops cyſticus.
—— Chloroticam invadit, & lypothymiam lethalem ſibi adjungit,	Cor ingens & ſanguine obrutum, valvulæ oſſeæ.
—— Subito ingraveſcit & plura gtaviſſima ſymptomata accerſit.	Cor ſanguine infarctum, ad maximam molem protenditur.
—— Cum torminibus	Pancreas ſcirrhoſum.

ventris;

itſelf, alſo, the cauſe of palpitation of the heart has been diſcovered.

To vitiated blood are to be referred plethora, cachochymia, various acrimonies, gout, ſcurvy,

Symptomata morborum.	*Extiſpicia cadaverum.*
ventris; ad quem accedit dyſpnœa & brachii ſideratio.	
— — Cordis palpitationi obnoxia, erratica febre prehenditur. Urget denuo cordis palpitatio & convulſiones ſibi accerſit.	Cordis ſubſtantia tactu flaccida ſanguine diſtenta, meſenterium ſcirrhoſum.
— — Cum præcordiorum anguſtia, & ſpirandi difficultate, leucophlegmatiam ſibi adjungit.	Aqua in abdomine, cor difforme, valvulæ ejus oſſeæ.
— — Poſt ſe trahit phthiſin.	Hepar ingens; cor portentoſum; pectus & abdomen fero turgent.
— — Hæmoptyſin & ſyncopem.	Cor ſanguine diſtentum.
Palpitatio cordis ſuccedanea. Palpitationes cordis cum crurum & pedum œdemate oriuntur poſt animi pathemata.	Cor dilatatum & ſanguine infarctum.
— — — Poſt citiſſimas equitationes ſævit.	Cor pericardio accretum.
— — — Anginæ ſuccedit.	Cor tumidum.
— — — Poſt ſummum exercitium ſeſe adjungit ſpirandi difficultati.	Cor ſanguine coacervato diſtentum.

vy, &c. From ſtrong coffee, or quantities of hot tea, leguminous foods, lentils, &c., according to *Senac. Malpighius*, whenever he eat leguminous foods, was tormented with the moſt

Symptomata morborum.	*Extiſpicia cadaverum.*
Palpitatio cordis ſuccedanea. Animi pathemata prehendit cordis palpitatio, & ſibi adjungit ſpirandi difficultatem cum artuum œdemate.	Cor ſanguine polypoſo diſtentum.
— — — Spirandi difficultatem ſequitur nulla accedente cubandi difficultate.	Aqua in pericardio ſtagnans.
— — — Auditu & viſu ſenſibilis, difficultate ſumma ſpirandi ſtipata poſt contuſionem pectoris.	Cor volumine majori, quam par erat præditum.
— — — Viget cum dyſpnœa & ſummo dolore ſtomachi, pulſu duro ſuperſtite poſt pectoris inflammationem.	Aqua pericardii laminas a ſe invicem diducit.
— — — Succedit vomitioni cum pulſatione in fundo ventriculi.	Pancreas ſcirrhoſum tredecim libras ponderans.
— — — Cordis palpitationes ſuccedunt lypothymiis.	Cor dilatatum & lapideſcens.
— — — Cum pulſu validiore poſt vehementiora animi pathemata; interea tumet regio hypochondriaca; ingruunt convulſiones & urget ſumma ſpirandi difficultas & extremorum frigus intenſiſſimum.	Cor ingens & mere diſtentum.

vehement

vehement palpitations of the heart. From acid fruits the ſame has been experienced. Hemlock uſed inſtead of parſley, cold draughts when the body has been overheated, antimonial vapors, fumes of charcoal, arſenic, &c., putrid or fetid exhalations, long uſe of mercury, have all excited this inordinate action of the heart.

From commotion in the blood, and from every vehement motion of the body, particularly thoſe actions that require increaſed inſpiration, as running, jumping, when the lungs receive by the will a greater inflation in the air, and, in ſome inſtances, a longer retention in the reſpiratory organ. Suddenly changing the ſituation in bed, or *in veneris actu*, palpitations ariſe; from hard riding the palpitation has been ſo vehement, that the waiſtcoat has been elevated: the ſame effect has been produced by a tight compreſſion, or bandage on the pectus *. From the heat of anger, and other emotions of the mind, a penury of blood from large hæ-

* The rolling of infants round the cheſt has been one of thoſe abſurd practices that no reaſoning, nor examples of miſchiefs ariſing, can eradicate. The ſuperior ranks in this country avoid thoſe bandages, the inferior not. In Italy I have obſerved the children rolled up, like mummies, in ſwaddling clothes, by which the free functions of the cheſt are impeded, and the foundation of a narrow cheſt and pulmonary complaints laid.

morrhage after wounds, lying-in, from ſuppreſſed evacuations of blood, from menſtruation in the chlorotic, are ſeen palpitations.

If the diſorder be chronical, it is ſcarcely curable; if idiopathic, or tranſitory, it is ſometimes removed; if complicated with other morbid affections of the viſcera, &c., which is moſt common to thoſe who are afflicted with the complaint, they cannot live many years, but commonly die ſuddenly, which ſeveral practical facts have clearly demonſtrated. The palpitation is leſs dangerous when ariſing from paſſions of the mind, or any ſharp acrimony, than when it originates in any real morbid ſtate of the heart, its large veſſels, or the lungs, &c. In ſome inſtances the palpitation of the heart is followed by pulmonic hæmorrhage, aſthma, dropſy of the thorax, ſyncope, &c.

The *cure* is very doubtful, as muſt appear from the evident cauſes; but it ſhould be attempted on rational principles. Depletion and abſtinence are neceſſary to the plethoric; in inanition the cortex and tonics are proper. In a ſtate of the blood, productive of polypi, alkaline ſalts, either foſſile or vegetable, lixivious or ſaponaceous preparations, nitrous and other neutraliſed ſalts, are to be recommended; as ſal ſodæ, ſal tartari, ſapo, nitre, ſal Rochelle, &c., &c.; bleedings and other evacuations long

continued:

continued: but all theſe are likely to fail, if the inſpiſſation of the coagulable lymph, forming the polypi, ariſe from a gouty or chronic rheumatic ſtate of the blood.

In the aneuriſm of the aorta, many caſes of which I have ſeen, the diſorder is incurable; and the patient's life can only be prolonged by an extreme dry diet, dry air, evacuations of the alvine feces, urine, and perſpiration *.

The difficulty of aſcertaining the true cauſes of palpitation, in many inſtances, renders the ſtricteſt inquiry of the ſymptoms abſolutely neceſſary, or the miſchief may be too far advanced before it is clearly diſcovered; of courſe remedies may be applied when they cannot become uſeful.

An increaſe in the ſize of the heart, fluid, or a dropſy within the pericardium, are irremediable; but, as theſe happen, perhaps abſtinence from fluids, in both inſtances, may be

* Great care ſhould be taken, by young or inexperienced ſurgeons or phyſicians, not to miſtake the aneuriſm of the aorta for an abſceſs, an inſtance of which I once ſaw, where the tumor had been poulticed, was opened by a lancet, and ſoon proved fatal. Another inſtance I was witneſs to, where a ſurgeon of conſiderable reputation poulticed an aneuriſm of the *ſubclavian artery*, and who was extremely angry on my informing him that he had miſtaken the caſe, and haſtened the patient's death, though this was told gently and from a tenderneſs of his reputation.

uſeful; in the former to diminiſh the force of the heart, in the latter to promote the poſſibility of a reſorption of the extravaſated fluid by the non-admiſſion of a freſh ſupply. Chalybeates and tonics are likely to avail, as theſe effects are commonly owing to laxity after over diſtention.

The oſſification of the aorta, could it be aſcertained, which is moſt common to very old age and gouty habits, abſceſs of the heart, oſſifications in its ſubſtance, calcareous concretions, ſcirrhoſities and tumors in the lungs, oſſifications of the valves of the heart, accretion of the heart with the pericardium, and other affections of the organ of circulation occaſioning palpitation, which the diſſections prove to have exiſted, are all, or moſtly, of the incurable claſs: but medicine is juſtified in attempting to penetrate into theſe cauſes, and to afford the moſt rational remedies and diet for checking the progreſs of the diſeaſe, or prolonging life by judicious management, even when cures cannot be expected.

In ſcirrhoſities of the abdominal viſcera, as the liver, meſentery, ſpleen, pancreas, hydrops celluloſa, &c., though the cure is difficult, yet the danger is leſs: in ſuch caſes a mild mineral alterative courſe may be tried conjointly with the alkaline ſalts, &c.; or, in laxity, tonics of bark,

bark, ſteel, and ſmall doſes of calomel occaſionally, particularly this laſt remedy, if the bile ducts are ſuppoſed to be obſtructed.

In plethora, bleeding, evacuations, and abſtinence, are uſeful; in vitiated blood, or perverted ſecretions or excretions, correctors of the prevailing acrimony and removers of obſtruction are to be preſcribed, whether ſcorbutic, ſcrophulous, rheumatic, gouty, venereal, cancerous. Any other diſcoverable cauſe ſhould be treated according to circumſtances.

If the palpitation ariſes from emotions of the mind acting on the heart, medicine ſhould recommend ſerenity; which, however, is a preſcription ſeldom followed by perſons of exquiſite ſenſibility.

Bile in the ſtomach or inteſtines is to be evacuated downward by mild doſes of aloetics, or corrected by acids. If fixed air is the cauſe in the firſt proceſs of digeſtion, as this is acid, magneſia, alkaline ſalts, or lime water, are uſeful. If the palpitation be intermittent, bark has cured it, according to Stork. In worm caſes, anthelmintics; in affections of the nervous ſyſtem, camphor, ſteel, &c.; in temporary ſpaſmodic attacks, ſometimes opium and carminatives remove the evil. Pediluvia, bliſters, moderate exerciſe, and medicated waters, are all occaſionally to be uſed. It may be obſerved,

ſerved, however, the idiopathic palpitation of the heart rarely admits a radical cure: palliation of the ſymptom is commonly all that medicine can effect.

Hiccups.

A convulſive motion of the ſtomach and diaphragm, by which the latter deſcends, and the former aſcends, and forces and expels the air with a ſingular clangor or acute ſound through the œſophagus, is called ſingultus or hiccups. It is tranſitory, acute, chronic, or periodical.

The *tranſitory* hiccups ariſe from flatulency and other cauſes; from the food too ſuddenly ſwallowed; the inferior part of the lungs accidentally reſting on the elevated diaphragm, according to Foreſtus; taking cold, particularly amongſt infants; ſudden cold applied to the feet, cheeſe curd, dry food, ſudden grief and crying, hyſteric affections, and the commencement of every menſtruation, have all produced this ſymptom.

The *acute* hiccups ariſe from a metaſtaſis, gout, rheumatiſm, poiſons, an incarcerated hernia, the ileus, inflammation of the ſtomach, leſions of the brain; likewiſe, in acute diſeaſes, aphtæ, dyſentery, diarrhœa critica, improperly ſuppreſſed by opiates or aſtringents, wounds, diſtortion

diſtortion of the ribs, a depreſſion of the cartilago enſiformis, a ſudden depletion by a violent purging, &c.

The chronic hiccups are cauſed often by worms, which irritate the empty ſtomach, or ariſe from a turgency of bile, from reiterated abdominal viſcera.

Singultus, or hiccup, from an internal cauſe, with vomiting, is frequently a bad omen, as in the ileus, gangrene, wound of the ſtomach or diaphragm, inflammation of the inteſtines, &c.

The tranſitory hiccups are frequently checked by a draught of cold water, by the narration of ſome ſtory which engages the attention, by ſudden fear, by ſurpriſe, by an inhibition of reſpiration. Sneezing, according to Hippocrates, ſolves the hiccups. If from a turgency of bile, a full ſtomach, hard drinking, or poiſons, it is neceſſary to empty the ſtomach by promoting nauſea and vomiting; and, immediately after the ſtomach is emptied, to preſcribe gentle eccoprotics until the whole inteſtinal canal is cleared of redundancy *.

If worms be the cauſe of the hiccups, the remedies already recommended againſt worms are

* The ſucceſsful treatment of a gentleman, who had drank two ounces of extractum ſaturni Goulardi, may be mentioned, being a very extraordinary caſe.

CASE.

are proper; if *ab aphtis deciduis*, mucilaginous demulcents may be prescribed. In acute putrid diseases,

CASE.

On Friday night, November 26, 1784, near twelve o'clock, Mr. H., a gentleman in Harley Street, Cavendish Square, drank, by accident, twelve drams of Goulard's extract of lead.

Mr. Tronson, apothecary in the same street, and myself, being presently called, an emetic was immediately ordered.

On being first introduced to the patient, the symptoms chiefly complained of were, a great roughness in the throat, the sweet taste of the lead in the mouth, and slight eructations from the stomach of a similar nature. The patient was extremely calm, intrepid, and spoke of his expected death, which he considered certain, with extraordinary courage.

There was no sensation of pain; but as these preparations destroy all nervous sensibility, it was rather an unfavorable circumstance.

The total destruction of the nervous powers and sudden death were to be expected from the known qualities of the lead *; therefore a quick determination and a rapid execution of whatever was to be attempted became necessary.

* I had seen a case, where a lady had taken, by the advice of an ignorant female Doctress, only ten drops of the above extract diluted: it produced torpidity in the abdomen, and coldness of the extremities, and proved fatal in twelve hours. The present gentleman had taken 720 drops of the undiluted extract. If ten drops diluted had proved fatal, what might naturally have been expected from 720 undiluted extract of lead?

The

diſeaſes, muſk, and a ſtrong camphor emulſion made

The following were the principles on which the cure was attempted:

1. To remove, as much as poſſible, every idea of danger from the patient's mind, by aſſuring him of there being every hope of recovery: this greatly tended to diminiſh his apprehenſions.

11. To ſtimulate the rectum, and prepare the inteſtines for an evacuation of their contents; for an incurable coſtiveneſs was moſt to be dreaded, ſhould the lead not ſoon prove fatal.

The following enema was preſcribed, to be repeated:

℞. Decoct. com. pro clyſter. ℥viij.
Sal. Glauber. ℥j.
Ol. olivar. ℥ij. ſtatim injiciendum.

111. To prevent the adheſion of whatever particles of lead might remain in the ſtomach, and to lubricate the inteſtines with oil.

1v. To excite griping pains and an increaſed action of the inteſtines, in order to expel the poiſon, by a warm cathartic.

v. To prevent a palſy of the ſtomach and inteſtines, and preſerve heat by volatiles, the following draught was preſcribed:

℞. Ol amygdal. dulc. ℥vj.
Tinct. ſen. ℥ſs.
Aq. menth. vulg. ſimp. ℥j.
Sp. c. c. gtt. xxx. M. f. hauſtus ſæpe ſumendus.

After the firſt three or four operations from the above preſcriptions, the patient was left to the care of Mr. Tronſon; it being then between three and four o'clock in the morning: entertaining ſome hopes of ſucceſs, as ſome feces had been evacuated; without which, in all human probability, the caſe muſt have terminated unfortunately in a few hours.

made with blanched almonds, bark, mild antiputreſcent

At eight o'clock on Saturday morning, Nov. 27, finding the evacuation of the feces not ſufficiently copious, the following draught was preſcribed, to be taken every half hour:

℞. Ol. amygdal. dulc. ʒvj.
Infuſ. ſen. ʒx.
Tinct. jalap. ʒij. Mucilag. gum. arab. ʒiſs. M. f. hauſtus.

By eleven the ſame morning this draught had operated five times; but, leſt any ill conſequences might happen from the lodgment of any particles of lead in the folds of the inteſtines, or *valvulæ conniventes*, a repetition was directed. Some griping had intervened from the irritation of the purge, which plainly indicated a degree of ſenſibility in the inteſtines, and was a very favorable circumſtance.

At two o'clock the ſame day Mr. John Hunter, Surgeon Extraordinary to His Majeſty, attended; at which time the laſt-preſcribed draughts had operated ten times: it was, however, thought adviſeable to continue the ſame draught every three or four hours, though it was concluded the patient was out of danger.

At ten in the evening of the ſame day the patient was viſited again: he had eat ſome light food, and was in good ſpirits: the very dangerous ſituation he had been in was concealed from himſelf, and, in ſome meaſure, perhaps, contributed to our ſucceſs.

The patient complained of ſlight gripings, which was an object of the utmoſt importance, as they were unaccompanied with coſtiveneſs: it clearly demonſtrated the undiminiſhed nervous ſenſibility of the ſtomach and inteſtines, and afforded the higheſt proſpects of cure.

tiputreſcent eccoprotics, &c.* In hyſteric or hypochondriac affections, the hiccups commonly ariſe from fixed air in the ſtomach in the firſt proceſs of digeſtion, or by the air that remains in the ſtomach after digeſtion; in both caſes the experiments which I have made prove the acidity of this air vellicating the ſtomach and œſophagus; calcined magneſia, lime water, or volatile alkaline ſalts or ſpirits, in ginger tea, frequently, by neutraliſation, and thus forming a neutral ſalt, remove the complaint, by proving gently laxative. Preventing conſtipation is another effectual remedy, and avoiding ſallads and other vegetables, or leguminous food, or malt liquors in a fermentative ſtate.

If from gouty ſpaſms, an aloetic draught,

On Sunday morning I met Mr. John Hunter again: we found the patient perfectly recovered, and made no appointment to repeat our conſultation.

On Monday morning, the 29th of November, no farther medical attendance was neceſſary. The gentleman is now (June, 1788) in perfect health, and officiates as preſident at one of the moſt convivial muſical meetings in London. This is mentioned, becauſe it had been ſuggeſted the patient would die a lingering death.

* See the *Eſſay on the putrid, malignant, ulcerated Sore Throat*, lately publiſhed, where the reaſons are given why antiſeptic laxatives ſhould be frequently preſcribed to prevent or remove putrid accumulations in the inteſtines, or to oppoſe their dangerous contaminating abſorption by the lacteals, &c.

and

and mixtures of *confectio cardiaca*, cordial waters, and volatile ſalts, are proper; but, above all, the pediluvium compoſed of ʒij. *ſpiritus ſalis marini fumans*, to three or four gallons of tepid water, as recommended in the treatiſe I wrote ſome years ago, called *The Gout alleviated*, &c. When the hiccups originate from cold air, the abdomen ſhould be embrocated with camphorated ſpirits of wine, or flannel ſhould be applied, being firſt moiſtened with a ſpirituous embrocation of volatile liniment, &c. If the hiccups are conſequent to a wound, or diſtortion of the ribs, the dextrous aſſiſtance of a ſkilful ſurgeon will be neceſſary.

Oſcitation, or *yawning*.

A very deep, ſlow, involuntary inſpiration, with a large hiatus of the mouth, and a ſonorous expiration, is called oſcitation, or yawning. It is attended with or without pandiculation, or diſtention of the ſuperior and inferior extremities. Amongſt the healthful it occurs after much fatigue either of mind or body; in great cold, and a propenſity to ſleep, or on waking. It ariſes from idleneſs, or a tedious, unintereſting diſcourſe, and by ſympathy; on ſeeing oſcitation, we naturally yawn; *tritum enim eſt, oſcitante uno oſcitat et alter*.

It argues a tardier motion of the blood through

through the lungs: its efforts are to accelerate the motion of the humors, and to liberate the body from a moleſting weight, by producing an increaſed ſenſibility, which is conſequent to oſcitation. It does not portend miſchief, nor does it require medicine, unleſs joined to lethargic ſymptoms.

It frequently happens to the hyſteric and hypochondriac, and in the commencement of intermittents; nor is it unuſual to thoſe whoſe ſtomachs are overloaded, or abound with crudities. In parturition, it is believed by ſome to ominate evil, and induce ſoporiferous ſymptoms; but experience does not countenance this opinion.

On ſpaſmi tonici, or *tonic ſpaſms*.

Tonic ſpaſms are rigidity of muſcles, as the tetanus, catalepſis, triſmus, or locked jaw, &c. The tonic ſpaſm, therefore, agreeably to this deſcription, differs from the clonic; becauſe, in the former, the parts are convulſed by the muſcles alternately contracting and relaxing; but, in the latter, after the firſt attack, the parts become rigid and immoveable. If the deſcriptions of authors be examined, it will be found that the catalepſy and other diſorders of this claſs are, in many inſtances, complicated, and in general

partake of thoſe ſymptoms which conſtitute both clonic and tonic ſpaſms *. Theſe diſtinctions are of little conſequence in the modes of curing theſe diſeaſes; for both clonic and tonic ſpaſms require, in many reſpects, a ſimilar treatment, namely, the mitigation of the ſymptoms, and relaxation of the ſpaſm or contraction by antiſpaſmodics, pediluvia, diaphoretics, &c., during the paroxyſm, and a removal of cauſes, if poſſible, in the intervals.

It may not be altogether uſeleſs, to give a few more obſervations and diſtinctions concerning clonic and tonic convulſions, or ſpaſms.

The clonic convulſions have already been defined an alternate involuntary contraction and relaxation of muſcles, the tonic are rigidity and immobility, as in the *ſpaſmus phyſodes*, or cramp, which often affect the fingers, calves of the legs, neck, &c.

The alternate relaxation and contractions which are felt with the pulſe, in *articulo mortis*, is called *ſubſultus tendinum*, and is a very dangerous ſymptom in acute diſeaſes. When

* Obſervationes Wepferi de affectibus capitis.

the

the internal and external ſenſes are aboliſhed, with violent, univerſal, alternate contraction and relaxation of muſcles, it is called *epilepſia*; but if it happen but once, as in dentition, or in the ſmall pox, amongſt children, it is nominated *eclampſia*. The ſenſes are not altogether loſt always in the hyſterical epilepſy; for hearing is frequently preſerved, though the patient may not be able to ſpeak. In febrile convulſions, there are commonly a delirium and *carphologia*, or catching or picking at the bed clothes, or ſome imaginary things, which is likewiſe called *collectio floccorum*.

In particular, or local convulſions, or ſpaſms, the ſenſes are not injured, as in the ſpaſmus cynicus, triſmus, &c. The ſpaſms or convulſions are univerſal in the epilepſia and catalepſis; but leſs general in the tetanus. A particular member in ſome ſpecies is affected, as in the *ſpaſmus cynicus*, or *priapiſmus*, &c.

In the tonic ſpaſms, if the body be drawn forward, it is an *emproſthotonos*; if forced backward, an *opiſthotonos*.

The muſcles are rendered altogether rigid in that violent tonic ſpaſm called *tetanus*. The body becoming rigid, with loſs of ſenſes, appearing like a ſtatue, is nominated *catalepſis*. If the cauſes reſide in the origin of the nerves, or in

the cerebrum itſelf, the convulſions are idiopathic; if originating from any other part, and affecting, by ſympathy, the cerebrum, as in the *aura epileptica*, morbid viſcera, &c., ſympathic, or ſymptomatic.

From the variety of parts affected, ſpaſms or convulſions derive their names: a tonic contraction of the eyelid, *cataclaſis*; a clonic convulſion of the bulb of the eye and eyelids, *nyſtagmus*; *gloſſocoma*, when the tongue is retracted towards the fauces in acute fevers; *triſmus*, or locked jaw, when the inferior maxilla is firmly cloſed, which is a very fatal ſymptom in gun-ſhot or other wounds, particularly in the hot tranſatlantic climates. Catching or picking the bed clothes in the latter ſtages of acute, febrile diſeaſes, *carphologia*, or *collectio floccorum*, as it is nominated, with an obſcure delirium; an involuntary rigidity of the viril member, *priapiſmus*, or *ſatyriaſis*: ſuffocation from a cough in the trachea, *dyſphagia* in the œſophagus, when deglutition is impeded; anxiety in the lungs; cardialgia and vomiting in the ſtomach, *ſingultus*, or hiccups in the ſtomach, colics, *ructus* and wind in the inteſtines; together with the *teneſmus* in the rectum; *dyſuria* and *iſchuria* in the bladder; ſneezing, yawning, pandiculation, tremor, palpitation of the heart, and

gnaſhing

gnaſhing or grating of the teeth, may all be referred to ſpaſmodic, or convulſive affections.

Catalepſy.

The catalepſy is defined to be a tonic convulſive ſpaſm, in which the patient ſuddenly becomes immovable and rigid, appearing like a ſtatue, retaining the ſituation and poſition of the limbs and other parts in which he was placed, when attacked, with an external and internal loſs of ſenſes. This diſorder is very rare, and its deſcription by different authors not altogether uniform *.

The

* The great Hoffman gives the characteriſtics of the catalepſy as follows:

The paroxyſm of a catalepſy generally attacks the patient ſuddenly, in this manner:—He remains fixed in whatever poſture he happens to be in when ſeized, whether ſtanding, ſitting, or lying. If his eyes are ſhut, they generally remain ſo; but as the diſtemper generally comes on in the daytime, the eyes are moſt frequently open, and immovably fixed, as it were, upon one object, and cannot be made to wink, though touched or rubbed with a handkerchief. Mean time the limbs are capable of being moved and bended, but remain in whatever ſituation they are put in. All manner of ſenſation is aboliſhed; for the patient neither ſees, hears, nor feels, even though pinched, hurt, or pricked. The involuntary actions are notwithſtanding carried on regularly: thus the pulſe is natural and reſpiration eaſy; and, as Foreſtus obſerves, whatever put into the mouth is ſwallowed down. Sometimes the abdomen and inferior ribs are convulſed, ac-

The *proximate cauſe* ſeems to conſiſt in a general compreſſion of the medullary ſubſtance of the nervous ſyſtem, and a temporary inſpiſſation

cording to the reports of Foreſtus, Sylvius, Platerus, and Dolæus; at the ſame time the anus is ſo contracted, that it will not admit of the ſlendereſt pipe. *N. Piſo* reports, the face continues florid; at laſt they begin to ſigh deeply, and then come to their ſenſes, and give ſurpriſing accounts of what they have ſeen and heard, as if they were revived from a trance.

Curious and remarkable caſes of the catalepſy, which give a proper account and hiſtory of this diſtemper, are found in *M. Donati, Hiſt. Med. Mir.* C. i. p. 91.—*Hollerii, Comment. in Coac. prænot.*, p. 66. — *Piſonis de Cognoſc. & curand. Morbis*, L. i. c. 13.—*Diverſi de affect. partic.* p. 425.—*Fernelii Patholog.* L. v. c. 2.—*Ballonii Conſil.* L. ii. c. 1. — *Hagendorn, Cent.* i. *hiſt.* 35.—*H. ab Heers*, L. i. *obſ.* 3.—*Rondelet Meth. curand.* L. i. c. 20. — *Zacut. Luſit.* ii. 42. — *Foreſti*, L. i. *obſ.* 42. — *Miſcell. Nat. Cur. Dec.* i. *ann.* 4. p. 245. *Dec.* ii. *ann.* 1. *obſ.* 1. *Dec.* iii. *ann.* 3. *obſ.* 61. *Cent.* v. p. 195. — *Act. Hafn. Vol.* iii. 52. — *Philoſoph. Tranſactions*, N°. 437. — *Act. Vratiſlav. Tent.* xxv. p. 240. — *Act. Nat. Cur. Vol.* i. *obſ.* 25. — *Hiſt. de l'Acad. des Sciences de Paris*, 1738, p. 56. — *Act. Med. Berol. Dec.* i. *Vol.* ii. p. 62. — *Van Swieten, Comment. in Boerhaavii aphor. Tom.* iii. p. 313, 316. — *Hoffmanni, Med. rat. Syſtem. Tom.* iv. p. 1. *ſect.* 1. *cap.* iv. *obſ.* 1, 2. — *Boiſſier de Sauvages, Noſolog. Meth. Tom.* ii. *cl.* vi. p. 415, 417, 418, 420.—*Targioni, Raccolta prima di Oſſervaz. Mediche*, p. 97.—*Recueil period. d'Obſerv. de Medicine, par Vander Monde, Tom.* v. vi. p. 41.—*Journal de Medicine, par M. Roux, Tom.* xx. p. 407. *ſeq.* — *J. F. de Pré, Diſſ. de raro affectu Cataleptico*, Erf. 1721. — *H. F. Delii, Diatr. de Catalepſi*, Erlang. 1754. 4.

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ſation of the oleaginous or other fluids in the minuteſt cells of the tela celluloſa.

It may here alſo be obſerved, that many cataleptical caſes have been deſcribed and publiſhed by ſeveral writers, which really do not belong to this claſs, but rather were *tetanus*, *coma*, or *ſtupor*, where the limbs would not take the arbitrary or voluntary ſituations, which is the eſſential character of a true catalepſy.

Such ſpurious cataleptics are mentioned by *Platerus*, L. i. obſ. p. 31.—*Klaunigius*, *Noſocom. charit.* Obſ. vii. p. 25.—*Nov. act. Nat. Cur.* Tom. i. obſ. 99.—*Sauvages*, l. c. p. 418, n. 3.—*Commerc. Nor.* 1731, p. 330.

Catalepſis de Haen, Rat. Med. 334.

Trew, caſus a menſium ataxia.

Do. ab officulis in cerebro.

Simſon on animal actions, 239.

Septal. caut. 150. an calida fugienda.

Wepfer, de affect. capitis 361. a fumo carbonum; 558 obſ. in puella, 15 ann.; 564 in ſacerdote, 53 ann.; 563 puella, 7 ann.; 573 pueri, 12 ann.

Catalepſis triduanæ febri ſuperveniens.

Boneti Sepulchr. a conſternatione, a flatibus, a male curata eryſipelate, ab intentione animi, amore, melancholia, inanitione, &c.

In the tetanus all the limbs are fixed and immovable; in the catalepſy they are fixed indeed, but eaſily flexible, and remain in whatever poſition they are placed.

This diſtemper occurs very ſeldom. The fits laſt ſome hours. Foreſtus gives an inſtance of one in a young man, which continued three days. It is ſeldom preceded by any ſigns before its approach.

The *remote cauſes* are many; as ſudden vehement terrors, grief, hopes fruſtrated, unexpected joy. *Tulpius* mentions an inſtance of the catalepſy happening from extreme love, and an unexpected refuſal of marriage to a young Briton. There have been examples where the cataleptic have died on the ſight of affectionate friends who had been long abſent, and thought dead. Unuſual clangor, clamor, or a view of any thing dreadfully horrid. The mind intent on one object; abſtracted meditations; an aſſiduous reading of books containing cabaliſtical myſteries; alchemy; religion, or rather ſuperſtition, and an anxious concern for happineſs, or fear of puniſhment or helliſh torments in a future life; ſtrokes by lightning; the fumes of charcoal; extreme cold; worms; are all mentioned by authors as cauſes of this extraordinary diſeaſe; as likewiſe ſuppreſſed evacuations, or hæmorrhages, to which patients have been accuſtomed; violent affections of the mind, &c.

The fit, in a moderate time, remits of its own accord by a naſal hæmorrhage, or terminates in a fatal apoplexy. Sometimes reverting, it produces fatuity, madneſs, epilepſy, an atrophy, or dropſy.

The *cure* ſhould be conducted in a manner ſimilar to other convulſive diſeaſes, according

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as circumſtances ariſe, and agreeable to the cauſes, or conſtitutions of the afflicted. Bleeding largely in the plethoric, with antiphlogiſtics and antimonial diaphoretics, purges, pediluvia, warm bathing, cuppings, ſcarifications, and bliſters, as evacuants. To the pallid, debilitated, and nervous, volatiles, antiſpaſmodics, tonics in the intervals of the paroxyſms, bark, &c., will be moſt eligible.

Tetanus.

The tetanus is an involuntary *tonic* contraction and rigidity, without relaxation, of almoſt all the muſcles of the body.

The idiopathic tetanus is rarely ſeen in Europe; but it is nearly endemial in hot regions. *Trenka*, *Starke*, and *De Haen*, have written expreſs treatiſes on this diſorder.

In the paroxyſm the body becomes altogether rigid and extended, immovable, and ſuddenly falls.

If the body be curved and drawn backwards, it is called *opiſthotonos*; if bent forwards, *emproſthotonos*. Some add the *pleurothotonus*, when the body is inflected towards either ſide; but obſervators have rarely ſeen this third ſpecies.

The *triſmus*, or locked jaw, is a partial diſeaſe ſimilar to the *tetanus*.

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The *phænomena* which occur are the following:—The face is now pale, then reddens; the eyes movable, and full of tears; diſtention of the hypochondria; ſingultus; tumors in the throat, not diſſimilar to the globus hyſtericus, but more vehement; the pains are acute and exceſſive in the muſcles affected, ſimilar to what is felt in the cramp, but univerſal in the tetanus inſtead of partial; the patient is wakeful, and not inſenſible: in ſome inſtances a ſlight delirium is a concomitant; reſpiration moſtly continues without interruption, but ſometimes ſibilous and ſtertoroſe. The fever, which always accompanies the tetanus, and the non-abolition of the ſenſes, diſtinguiſh this diſeaſe from the catalepſy. The blood appears ſometimes, though rarely, inflammatory; a pertinaceous conſtipation attends; the ſaliva is ſpumous, and continually flows from the mouth.

The immediate cauſes of convulſions, regular and irregular, or involuntary, muſcular actions, have been already conſidered from page 338 to 345; but thoſe obſervations are more confined to clonic convulſions than to the tonic, of which laſt the *tetanus*, *opiſthotonos*, *emproſthotonos*, and *triſmus*, are examples, and may be treated under one head.

The determination of the will to move the muſcles affected, in the *tetanus* remain; the arterial

arterial influx with the vital principle of the nervous influence are apparently conveyed, to the muſcles, without effect, the ſenſes not being aboliſhed.

The *vires inſitæ* of muſcles do not obey the intention of the will, but ſuffer muſcles to become rigid, inſtead of acting and re-acting, or occaſioning relaxation to ſucceed contraction.

The muſcles reſiſt the natural impulſive powers of the mind; both flexors and extenſors become rigid, immovable, and very painful, as in the cramp; which laſt, however, is local and more tranſitory *.

The arterial muſcular influx with the nervous influence being irregularly diſtributed, ſent in greater abundance, or fluids accumulated in the minuteſt parts of muſcular ſtructure, ſeem to overbalance the *vires inſitæ* of muſcles: hence rigidity without relaxation; hence action without re-action.

The muſcles ſtill receiving the arterial and nervous irritating influx, which accompanies the nervous and arterial ſyſtem †, for the purpoſes of

* The *cramp*, which attacks the *gaſtrocnemii* and *ſoleus* muſcles, or their tendons in the legs, is a common diſeaſe, and extremely painful: the tetanus ſeems a ſimilar diſeaſe, but univerſal inſtead of local, and of longer duration.

† In the *Schola Medicinæ* is a plate demonſtrating the ſtructure

of muſcular action, and the diſtraction of the nervous *fibrillæ*, account for the exquiſite pain of the cramp and tetanus. This pain ſeems to reſide in the *tela celluloſa*, which is interwoven amongſt all the diviſions and minuteſt ſub-diviſions of muſcular fibres, and is in a ſtate of diſtenſion.

The impelling powers muſt be equal to irritating muſcles to action: they powerfully act on the muſcles for the office of contraction, and the *vires inſitæ* of muſcles ſtimulated to action, have a power of aſſiſting, or perhaps performing, the office of relaxing muſcles.

The tetanus is, therefore, attempted to be accounted for on the principles of an over-abundance of the nervous and arterial influence forced and directed involuntarily to the muſcles, and a debility, reſiſtance, or other impediment, in the *vires inſitæ* of muſcles to receive, or convey the impelling powers.

The over-abundance of arterial and nervous influx irritates or over-acts the *vires inſitæ muſculorum*, and compreſſes the medullary expanſions of the nervous ſyſtem; the *vires inſitæ*, by this compreſſion, become paſſive. The oleaginous, or other fluids contained in the cells of the *tela celluloſa*, which pervade

ture of muſcles according to very minute microſcopical obſervations, which more fully explain muſcular ſtructure and action than the limits of this work admit.

not

not only the diviſions and ſub-diviſions of muſcles, but every minuteſt muſcular fibre, become coagulated, or nearly ſo, inducing painful rigidity without relaxation.

It may be remarked, that as the ſenſes remain in general not injured, and vital actions continue; neither the cerebrum nor cerebellum are, at firſt, materially affected, except in thoſe inſtances that are attended with a ſlight delirium.

It muſt be confeſſed that diſſections ſhew little, and the immediate cauſes of this dangerous diſeaſe have been conſidered very obſcure: they, in ſome meaſure, bid defiance to rational indications, according to the ingenious and learned Dr. *Cullen;* but, notwithſtanding the difficulty, ſome attempts will be made to ſhew, by a phyſiological and pathological review and ſcrutiny into the proximate cauſes of the diſeaſe, ſome methods of cure, on rational principles.

The *remote* or original cauſes of the *tetanus* muſt be ſought for in the nervous conſenting ſyſtem. Authors have given inſtances of its ariſing from the effects of hunger; great labor or exerciſe; immoderate venery; large evacuations; metaſtaſis arthritica, podagrica, eryſipelatoria, exanthematica, ſcabioſa; abſorption of purulent or putrid pus; various cachexies; wounds

wounds in which the nerves or tendinous expanſions have been injured, particularly punctures of thoſe parts which have produced the ſymptoms after the puncture ſeemed cicatriſed; amputations; contuſions; luxations; carious teeth; indigeſtion from hard ſubſtances received into the ſtomach; poiſons admitted either by the mouth, lungs, or rectum; ſordid colluvies in *primis viis*; worms in the ſtomach or inteſtines; cold or extreme hot weather; from ſleeping *ſub Jove* after hard wine or ſpirit drinking; from the puncture of the *draco marinus*; from the uſe of funguſes: to theſe may be added *pathemata animi omnia*. — I remember an inſtance at Guy's hoſpital above twenty years ago, where, in caſtration, on tying the ſpermatic chord, univerſal ſpaſms ſeized the patient; which, on Mr. Way's ſlackening the ligature, diminiſhed, and ſoon totally ceaſed. A ſtrong proof of nervous ſympathy!

The explanation of the *immediate cauſes* of the effects obſerved in the *tetanus*, *opiſthotonos*, *emproſthotonos*, *triſmus*, or locked jaw, and all *tonici ſpaſmi*, may be accounted for in the following manner, which perhaps conveys a clearer idea on the ſubject than has yet appeared, though not altogether ſo ſatisfactory as could be wiſhed:

1. Voluntary motory muſcles are inactive, except

except by the command of the will, or, in diſeaſe, by the influence cauſing convulſions.

II. The mind commands muſcles to action either partially or generally; either a particular finger, or the arm, legs, toes; or extremities and head all together.

III. The firſt power the mind has, to communicate to the muſcles deſtined to obey action, or the mind's intentions are equal to a certain degree of irritation, either of mechanical or chemical ſtimuli.

IV. This is certainly conveyed by the nervous powers, as impediments, by compreſſion, &c., on nerves going to parts fully prove, for deprivation of motion follows. It is eaſy to conceive the coagulation of oleaginous, or other fluids, in the *tela celluloſa* accompanying the nervous *faſciculi* capable of producing a like effect, and impeding the free *tranſitus* of the nervous powers.

V. The influence of the *vires inſitæ* is the ſecond action, namely, contraction, or relaxation, according as the will commands.

VI. The *tetanus* and *ſpaſmi tonici* are contractions, or extenſion joined with rigidity, without mobility or relaxation.

VII. This contraction, or extenſion of muſcles without mobility, ſeems nothing more than ſome influence equal to the ſtrong electric ſhock,

or

or ſome poiſons, and ſufficiently powerful to inſpiſſate or coagulate the oleaginous or other fluid contained in the cells of the *tela celluloſa.*

VIII. For all muſcular motion is facilitated and preſerved by the fluidity of the oleum or other fluids, in the diviſions, ſub-diviſions, and even between the moſt minute muſcular fibres diſcernible by the microſcope.

IX. The mind can eaſily conceive the coagulation of the oleum, coagulable lymph, ſerum, &c., through all the interſtices of muſcles, through all the diviſions, ſub-diviſions of the ligaments, aponeuroſes, faſciculi, and minuteſt muſcular fibres, intertext with the *tela celluloſa*, the cells of which evidently contain an oleous, or other fluid, &c.

It is perhaps an acrimonious change of that fluid, that irritates and occaſions the exquiſite pains in the rheumatiſm, which is entirely a muſcular diſeaſe.

X. The tranſitus of the ſubtileſt arterial fluid may be firſt accelerated in the cellular ſtructure of the *tela celluloſa.*

XI. The cells having received, and being overcharged with more fluid than uſual, neither the venal, ſanguiferous, nor lymphatic veſſels, are capable of abſorbing, or propelling the increaſed quantity of fluid forced into the cells, brought by the arteries.

XII. An

XII. An inſpiſſation or ſtagnation of the fluids may happen in the minuteſt cells; the abſorbent or venal ſyſtem cannot then eaſily reconvey the humors.

XIII. This ſtate of the cellular ſtructure probably reſiſts the nervous influence, or the energy of the nervous and even the minute arterial powers may be diminiſhed; hence rigidity and immobility.

XIV. For the *arteriolæ* opening in the cellular ſtructure pour forth their fluids into the cells; whether this be fat, lymph, ſerum, or a ſubtile moiſt air, with which the minuteſt cells are irrorated. This can be proved by minute anatomical injections, by maceration and inflation, &c.

XV. The communication of the cells in the *tela celluloſa* of the whole body is well known to every phyſiologiſt, and it is evidently demonſtrated by the anaſarca, emphyſema; by abſceſſes forming in one part, and conveying the matter through the interſtices of muſcles to parts diſtant, as in the *pſoas* diſeaſe, and many others. The inflation of veal is well known to be a conveyance of air to fill up the cells of the *tela celluloſa*.

XVI. In the *tetanus* neither the cells of the cutis nor the *membrana adipoſa* are injured; but the cellular ſtructure all through the muſcular

ſyſtem containing fat, lymph, ſerum, or aërial fluids. There is a circulation of fluids not only through the arteries, veins, and lymphatics, but likewiſe through the cells of the *tela celluloſa*; the cells receive fluids from arteries, and return them to the veins.

XVII. Therefore the fluids, either filling the larger cells, or irrorating the moſt minute cells with a fine aërial ſubtile vapor, inſtead of a free and conſtant circulation, as in health, become, in the tetanus, ſtagnated, either by ſome ſedative powers acting on the nervous and arterial ſyſtems, or by being rendered, through accumulation or inſpiſſation, incapable of reconveyance through the capillary tubes to the larger veins. A cloſer coheſion of the particles compoſing fluids may, in ſome meaſure, effect this minute obſtruction, while the larger arteries and veins of all parts continue to perform their offices until the venal blood itſelf becomes coagulated, and this ends in death.

XVIII. The rigidity and immobility of muſcles is cauſed by the coagulation of the adeps, or other fluids, counteracting, reſiſting, and overcoming the nervous powers deſtined to convey from the mind muſcular action, &c.

In diſſections after death, therefore, nothing can preternaturally appear; for this adeps, or any other fluid, in the cells, is always coagulated

gulated by death, which is the actual cauſe of the rigidity of the body, or ſtiffneſs, obſervable in the dead ſubject. This is demonſtrable in preparing the body for anatomical injections, where the reliquefaction of the oil or adeps by the warm water renders the muſcles and joints pliable.

The electric ſhock deſtroys life inſtantaneouſly in a ſimilar manner, as likewiſe lightning; for they probably coagulate all the adeps, deſtroy the animal and vital powers, without any evident marks of violence. Whether the increaſed nervous influence is ſimilar to the electric ſhock is difficult to determine; but their effects, however, ſeem not very diſſimilar.

The importance of the *tela celluloſa*, then, appears ſtill greater than has been imagined, when we conſider that no arterial motion can exiſt or proceed without its office: it compoſes the greateſt part of arterial coats, the vagina and interſtices of nervous faſciculi, and every part of the human body, the muſcular fibres excepted, and its unctious cellular fluid facilitates and preſerves parts deſtined to every action through life by its conſtant ſupply.

Wherever the fluid contained in its cells coagulate, motion muſt abſolutely ceaſe: this idea may be carried to all the minute ramifications of arteries, nerves, lymphatics, their coats be-

ing compoſed principally of the *tela celluloſa*, and the cells of this membrane always contains a fluid, either oleous, lymphatic and coagulable, or ſerous, as in dropſies, excluſive of aërial fluids, which penetrate through every part, however minute.

The immediate cauſe, then, of the *tetanus* is ſuppoſed to be an inſpiſſation, or coagulation of the adeps, oleum, lymph, &c., in the cells of the *tela celluloſa*, occaſioning a reſiſtance ſuperior to the nervous influence for the purpoſes of muſcular action.

The *cure* of the tetanus and other *ſpaſmi tonici* have been attempted by bleeding, which ſome adviſe and others reject; cuppings, ſcarifications, leeches, arteriotomy in the temples, emetics, cathartics; by the oleum ricini in worm caſes; diaphoretics, if ariſing from eruptions retropulſed; emollient fomentations, and frictions with oil, by warm horſe dung. *De Haen* recommends cold fomentations, but in young perſons hot, veſicatories, errhines, electricity. Bontius gives opium to a ſcruple, which Lind and Chalmers, with many others, adopt. Monro adviſes ſalivation; and mercury is preſcribed by many internally and externally. Collin adviſes his favorite medicine, *flores arnicæ*; muſk, and bark, if periodical.

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The celebrated Dr. Cullen thinks any ſcientific plan of cure vain and fruitleſs; in which, with the utmoſt reſpect for that truly great and rational phyſician, I muſt beg leave to differ. The Doctor remarks, from the judgment of others, that opium, in large doſes, often repeated, has been efficacious, and unites muſk and camphor; warm bathing has proved injurious; mercury has been found uſeful lately, bliſters hurtful. The Petroleum Barbadenſe, or Barbadoes tar, and cold bathing, has lately been introduced with ſucceſs.

It may be neceſſary for me to repeat the remark I formerly publiſhed in the *Medical Advice to the Army and Navy ſerving in hot Climates, which I preſented to His preſent Majeſty*, that, having ſeen numerous inſtances of theſe tonic ſpaſms, particularly the locked jaw after gunſhot and other wounds, fevers, &c., I muſt confeſs, that muſk, camphor, bliſters, warm bathing, opium in full doſes. &c., generally failed, and the patients died: indeed ſo frequently, that I was induced always to conclude the caſe very deſperate whenever thoſe ſymptoms appeared.

From repeated reflection on the ſubject, the frequent ill ſucceſs of opium, warm bathing, bliſtering, muſk, camphor, and electricity, &c.,

I was determined to attempt the cure by other methods; namely, by antimony and mercury combined. Two inſtances occurred in London: the one a lady, who taught many of our nobility the harp, had a *triſmus*, or locked jaw, which was cured by *Plummer*'s pill to two grains every ſix hours; a ſtrong ſolution of camphor and the eighth of a grain of *tartarum emeticum* after each pill. Theſe remedies cauſed a continual perſpiration; the patient was kept in bed, but a free air was circulated through the room, and in the courſe of a few days the diſorder was perfectly cured.

Another inſtance was Mrs. G., of Broad Street, Carnaby Market, who was cured of an emproſthotonos and locked jaw, not indeed ſo ſoon, but by a ſimilar treatment with the former. The doſe of the *pilula Plummeri* did not exceed one grain about every eight hours, and a ſixteenth of a grain of tartarum emeticum diſſolved in camphor ſolution; this patient's ſtomach being more irritable, and the habit weaker than the former.

A *ſpeculum oris* is commonly neceſſary during the cure, to render the mouth ſufficiently open to receive light broths and medicines, &c.

As this diſorder is rare in England, it might perhaps be eligible to attempt the cure in the hot

hot climates by the method here communicated.

The reaſoning which gave origin to this treatment was from obſerving calloſities ſurrounding ulcers often become ſoft by the combination of mercury and antimony, cinnabarine fumigations, &c.*

This calloſity I repeatedly demonſtrated, while I practiſed ſurgery, to be a coagulation of the adeps in the cells of the cellular membrane immediately under the cutis.

Conceiving the rigidity in the *ſpaſmi tonici*, and other immobility of muſcles, to be nothing elſe than the coagulation of the oleum, lymph, &c., it was imagined, from analogy, that ſome ſucceſs would follow a ſimilar treatment.

Rigidity in muſcles I have often relaxed by ſuch treatment. Two years ago a patient of Mr. Billinghurſt's, near Shepherd's Market, May Fair, was cured of an induration, rigidity, and lameneſs, in the *gaſtrocnemii* and *ſoleus* muſcles, by a pediluvium compoſed of ſal. commune and aqua tepida, and ſolution of *mercurius corroſivus ſublimat.* and *tartarum emeticum* united, in the doſe of a ſixteenth of a grain, internally, of each *ter de die*, mixed in

* See *Treatiſe on the Cure of ulcerated ſore Legs, and other Impurities*, &c., 4th edition; in which obſervations made for near thirty years are unreſervedly communicated, &c.

a decoction of ſarſaparilla with nitre. A weak mercurial ointment ſtrongly impregnated with camphor was rubbed into the ancle, being below the direction of the lymphatics proceeding to the muſcles affected. Numerous inſtances of this ſort might be adduced; but as this caſe had reſiſted every other mode many years, and the gentleman had long ſuffered miſerably from his lameneſs and pain, it is mentioned to induce other practitioners to attempt the cure of rigidity of parts by ſuch like methods.

It ſhould be obſerved, that though the diſorder is very common in hot climates, yet it rarely happens in England. For the ſpace of twenty-two years that I have been ſettled in this great metropolis, during all which period I have ſeldom ſeen leſs than between one and two hundred patients on my public days, weekly, and ſometimes more, I ſcarce ever recollect having this diſorder to preſcribe for, except in the inſtances now mentioned.

The attempts to *cure* the *tetanus*, *emproſthotonos*, *epiſthotonos*, and *triſmus*, or locked jaw, or any other rigidity of the tonic ſpaſmodic claſs, may be conducted in a ſimilar manner.

The removal of the evident local cauſe, as compreſſions or wounds of nerves; for which purpoſe diviſion of the nerve is recommended by numerous authors. When the nerves of the hand,

hand, wriſt, ancle, or foot, from previous wounds, laceration, puncture, &c, are the cauſes, the diviſion of the nerve can ſeldom be performed, becauſe the tendinous aponeuroſes moſtly cover thoſe nerves and nervous filaments; therefore, unleſs it ſhould be an external cuticular nerve, the operation is impracticable. If the deep-ſeated trunk of the nerve ſending branches to the part could be divided, which is very difficult, on account of its contiguity with the artery, excluſive of the uncertainty of its exact ſituation, and the improbability of diſcovering it even by a careful diſſection; yet the ſucceſs of the operation would be dubious, and would injure all the other parts below, wherever it ſpreads filaments or penetrates membranous expanſions.

The diviſion, then, of the nerve is not always ſo eaſy as phyſicians who preſcribe it imagine; but in general muſt be impracticable, hazardous, or injurious, as every one verſed in anatomy, and who has ſeen, by practical experience, the danger of punctures, wounds, or laceration of tendinous expanſions, or nervous membranes, muſt acknowledge.

From the foregoing conſiderations on the nature of tonic ſpaſms, and the ill ſucceſs attending the methods formerly experienced in hot climates by opium, muſk, camphor, warm bathing,

bathing, &c., I ſhould be induced to attempt the cure by the combination of mercury and antimony, as more likely to ſucceed than either opium alone, or when joined with antiſpaſmodics.

It appears rational to raiſe and continue a gentle perſpiration, without increaſing heat; by this means, if the inſpiſſated or coagulated fluids occaſioning the rigidity become reliquified and thinner, abſorption might follow, and thus a cure might be effected by a reſolution and a recirculation of the cellular fluids, and a relaxation of the cauſe of rigidity.

Antimonium tartarizatum, in ſmall doſes, with *ſolutio camphorata*; the *pulvis antimonialis*, with calomel, fumigations of cinnabar, or Æthiop's, received gradually by the mouth; mercury rubbed into the arms and legs, with camphor, in the form of an ointment; James's powder alone, or joined with calomel; Plummer's pill; *Kermes mineralis*, with *argentum vivum* or calomel; Plenk's ſolution, with *tartarum emeticum*, and ſuch efficacious preparations; with frictions, and pediluvia of *aqua tepida* and *ſal. commune* diſſolved; might bid the faireſt to remove this terrible affection.

As the diſorder is not only rigidity of muſcles, but likewiſe a ſtrong affection of the nervous ſyſtem, muſk, camphor, oleum animale,

oleum

oleum ſuccini, and other volatiles or fetids, may be preſcribed, though their evident effects are much more ambiguous than antimony and mercury in very ſmall doſes and frequently repeated. If opium be given, let it be joined with our *pulvis antimonialis*, *tartarum emeticum*, James's powder, &c., and then two indications are anſwered — the attempt to relax the ſpaſm, and the diſlodgment of the impacted fluids in the cells of the *tela celluloſa*.

From the little ſucceſs I have obſerved by the uſe of opium, I muſt confeſs I ſhould not be ſtrenuous to preſcribe it in theſe kinds of diſorders, but proceed to what appears more rational and efficacious. Indeed there ſeems to be ſufficient conviction of its inutility, from ſeveral eminent phyſicians in the hot climates lately omitting it, and preſcribing mercury, cold bath, &c., in preference to opiates.

The imminent danger and acuteneſs of the diſeaſe require prompt remedies, and a ſpirited exertion in the preſcriber: there is no time for expecting any wonders from what is called nature; therefore art muſt give vigor to the ſolvent and expulſive powers, and drive, if poſſible, the cauſes of the diſeaſe from the habit, or the deſtruction of the patient is the inevitable conſequence; many inſtances of which I have formerly obſerved. In ſuch deſperate diſeaſes, where

where recovery is very doubtful, and death almoſt certain, it is juſtifiable to preſcribe boldly an active remedy; for if it ſhould not ſucceed, the patient cannot be rendered worſe by any humane, liberal, and rational attempt.

As to warm bathings, pediluvia excepted, they perhaps rather inſpiſſate the fluids in the *tela celluloſa*, which is perhaps the reaſon why they have proved injurious by too much increaſing the heat, which, in hot climates, is very intenſe. If baths or pediluvia are uſed, their heat ſhould be very moderate, and thus might be more uſeful, if, according to circumſtances, either *ſal commune*, *borax*, *ſal nitre*, *ſal volatile c. c.*, or weak ſolution of fixed alkaline ſalt, be added *. I have known theſe tepid baths very beneficial in many inflammatory diſorders, acute rheumatiſm, &c. It is certain if theſe ſpecies of baths be prepared weak, ſome of their particles are received by abſorption; not indeed by the lymphatic ſyſtem, which I believe excludes ſaline particles, but by the minute venous abſorption communicating immediately with ſanguiferous veins. This can be proved to exiſt, contrary to the late re-

* Experiments ſhew that heat in certain degrees inſpiſſate or coagulate fluids; lymph by 114, ſerum 150, of Fahrenheit's thermometer, the latter not without loſing a great portion of its volatile parts, &c.—*Haller*, lib. v. ſect. iii.

ceived

ceived opinion of ſome very ingenious and eminent anatomiſts and phyſiologiſts.

Obſtipitas, or *Spaſmus of the Neck.*

The tonic ſpaſm of the neck prevents the mobility and flexility of the head. When it is accidental from cold, known by the name of ſtiff neck, it is cured by fomentations of warm water and common ſalt, and volatile liniment; to which may be added *oleum terebinth. æther.* and *tinctura thebaica.*

I have obſerved in practice a great miſtake in the application of external remedies. The muſcles on the ſtretch occaſion moſt pain, and are rubbed with liniments, &c.; whereas thoſe that are contracted are alone diſeaſed; therefore remedies ſhould be applied to the contracted parts of the muſcles, in order to relax the ſpaſm.

If the wry neck ſhould ariſe from a diſtortion or inflexion of the vertebra, it is rarely or with great difficulty curable.

In the wry neck ariſing from a fixed contraction of the maſtoid muſcle, the diviſion of that muſcle by a chirurgical operation is neceſſary, which liberates the patient from the diſfiguring diſorder.

ON

DEBILITY, &c. &c.

On nervous Debility.

The diminiſhed or impeded faculty of performing the natural vital and animal functions proper and uſual to each individual is called debility, and by the Greeks adynamia.

Various are the cauſes that may induce nervous debility, and it may be univerſal or partial, from impediments in the nervous ſyſtem; as defect in the brain or nervous powers, their activity or electricity diminiſhed, or the tranſitus of the nervous influence being diminiſhed or impeded.

Electricity in the human body is diminiſhed by moiſture, augmented by pure clear air; the former is common to ſwampy and low ſituations, and occaſions depreſſions of ſpirits; the latter renders the inhabitants volatile, impetuous, and lively, and is found in open or lofty countries, and in warmer climates.

The electrical fluid and the nervous influence are greatly obtunded and weakened by putrid, cadaverous, poiſonous, and narcotic exhalations,

halations, contagious miaſma in malignant epidemic diſeaſes; or by pathemata animi, as terror, grief, &c.; ſedentary life, too much ſleep, groſs, viſcid, or farinaceous diet, too delicate attention to the conſtitution: hence the children of the opulent are often leſs robuſt than ruſtics.

The avoiding theſe cauſes, which diminiſh the nervous powers, proves the prevention or cure.

The impediments of the nervous influence are, compreſſions, ligatures, tumors, calloſities, plethora, cacochymia, &c.; all which are, if poſſible, to be removed.

There are, beſides, profuſe evacuations, prolapſus, herniæ, diſtenſions, varices, aneuriſms, rupture of veſſels and effuſions of blood, dropſies, diabetes, &c., &c., which may occaſion general or partial debility, and ſhould be treated according to art.

The more weakly children have ſoft bones: hence rickets, diſtortions of the ſpine, &c.

In ſuch caſes, beſides evacuations to cleanſe the ſurface of the inteſtines, &c., and tonics or alteratives, animal food ſhould be preſcribed, and all vegetables, fruits, roots, puddings, &c. avoided.

From the laxity of the *tela celluloſa*, and a diminiſhed energy of the nervous ſyſtem, women

men are ſubject to hyſterical and ſpaſmodical affections; men to the hypochondriacal. Debility, from ſlight compreſſion in the *cerebrum*, produce delirium, dulneſs, ſtupor, in the eyes dimneſs, in the ears tingling and deafneſs. From the leaſt bodily motion the heart beats with velocity, with ſhort cough, particularly on laughter, ſneezing, calling, ſinging, or any exertion; the arteries likewiſe beat with greater velocity; the nerves and tendons vibrate, as thoſe ſubject to tremors frequently experience.

This nervous debility ſhould always be treated according to its reſpective cauſes, which, being diſcovered by the ſymptoms, and reflection of the medical practitioner, are to be, if poſſible, removed.

In plethora, evacuants and venæſection; in pallor and weakneſs, tonics of bark, ſteel, &c., and a nutritious, dryiſh diet; in obſtruction and cacochymia, alteratives, mercurials, or antimonials, in ſmall doſes, are occaſionally eligible.

Pure air, proper exerciſes, cold bath, and amuſements, much contribute to remove nervous debility.

Electricity, as it augments the circulating powers when ſparks or the electrical ſtream are conducted through the body, may be likewiſe of conſiderable utility; but it would be improper in plethora.

The Vertigo.

The vertigo is a diſorder in which objects at reſt ſeem to turn round: it is called a giddineſs or ſwimming in the head, and is not diſſimilar to intoxication by ſtrong liquors.

The vertigo ſeems often the firſt ſtep towards apoplexy. Various colors appear before the eyes, objects are often ſeen double, with ungrateful dinning or ſound in the ears, &c.: if the diſorder be more vehement, the patient totters, and is ſcarcely able to ſtand erect without ſupport; and it is accompanied ſometimes with nauſea and vomiting.

The proximate cauſe is in the ſanguiferous and nervous ſyſtem of the encephalon; but the remote cauſes are numerous: the vertigo, therefore, may be ſymptomatic, or idiopathic. This diſſections clearly demonſtrate*; for the cauſes and

* Dissections after Death.

Symptomata morborum.	*Extiſpicia cadaverum.*
Vertigo, cum febre, capitis & hepatis dolore, convulſionibuſque ſine ulla purulenta exſpuitione.	Pulmones & hepar putriditate affecti.
Accerſit vomitum & dolorem ventriculi.	Omentum putridum, ventriculus rigeſcens.
Invadit crapuloſum.	Ventriculus inflammatus in parte inferiore.

and effects are not only diſcoverable in the head, but in the thoracical and abdominal viſcera, communicating the ſenſations by means of the *par vagum* and intercoſtal nerves, their ganglions, &c., to the brain.

The idiopathic vertigo ariſes from injuries of the ſcull, or brain; as wounds, contuſions, compreſſions, overfulneſs of veſſels, or extravaſation of fluids in the ventricles or other parts of the brain, &c., ſtrong paſſions of the mind, &c.

The ſympathic vertigo takes its origin from the ſtomach or inteſtines oppreſſed with wind, or

Symptomata morborum.	*Extiſpicia cadaverum.*
Cum cephalalgia, delirio & affectu comatoſo interdum recurrentibus.	Pars ſuperior corporis calloſi, putrida.
Febre acuta enecatur puella vertigini obnoxia.	Subſtantia cerebri humida, aqua in ventriculis, vaſa meningum repleta.
In affectum caroticum abit.	Cerebri anfractus & ventriculi, colluvie ſeroſa madebant.
In apoplexiam.	Aqua in cerebri ventriculis.
Item.	Glandula pinealis ingens, carcinomatis naturam redolens.
Item.	Vaſa cerebri & pulmonum ſanguine turgida, ſanguis præterea effuſus intra ſubſtantiam cerebri.

Cum

or overloaded with ſtrong liquors; in ſuperabundance of bile; worms; from the uſe of henbane, hemlock, opium, belladona, or narcotics, poiſons, &c.

The metaſtatic vertigo may ariſe from acrimony, as gouty, rheumatic, or venereal; or ſuppreſſed evacuations, coſtiveneſs, from humid and cold air, &c.

Dr. Mead, and many celebrated phyſicians, recommend vomiting; but ſuch practice I con-

Symptomata morborum.	*Extiſpicia cadaverum.*
Cum convulſionibus ſævit & ſpirandi difficultatem accerſit.	Inteſtina flatu turgida; renes calculoſi, aqua in thorace; pulmones duri & exeſi, aqua in pericardio, & cranio.
Apoplecticum affectum accerſit; quo curato ingruit aſthma cum ictero & febre lenta.	Pulmonum tubercula, hepar durum.
Succedanea: Capitis contuſioni & apoplexiam accerſit.	Tumor tunicatus in ſiniſtro cerebri hemiſphærio.
Cum vomitu & ſtupore poſt caſum ab alto invadit ebrium, quem ſuſtulit apoplexia inopinata.	Ventriculi cerebri ſanguine turgent, cranium fractum occurrit.
Succedit dolori capitis.	Aqua in cerebro.
Poſt vulnus occipiti inflictum paralyſim ſibi accerſit.	Ventriculus cerebri dexter aqua limpida turgens, illæſo ſiniſtro ventriculo.
Abuſu meri fovetur & in apoplexiam lethalem degenerat.	Sanguis concretus in cerebro.

ſider hazardous, as it forces a great quantity of blood to the head, and may rupture veſſels that previouſly were in a ſtate of diſtention.

The *cure* of the vertigo, like all other diſeaſes, ſhould be conducted according to cauſes and conſtitutions, age, ſexes, and climates. In plethora and threatening apoplexy, bleeding, evacuations, and abſtinence; in nervous irritability, antiſpaſmodics; in flatulency, lime water, &c.; in debility, tonics; and in acrimony, correctors, according to the ſpecies.

All flatulent diet, ale, ſmall beer, &c., ſhould be avoided.

On ſoporoſe Affections.

The ſoporoſe affections comprehend the lethargy, carus, coma, &c., which are properly conſidered lighter ſpecies of the apoplexy.

The *lethargy* is a profound ſleep, accompanied with fever and loſs of memory: the patient aſſiſts not himſelf in the evacuation of urine, and commonly ſleeps with the mouth open*.

The

* Dissections after Death.

Symptomata morborum.	*Extiſpicia cadaverum.*
Lethargus, cum ſtupore & paralyſi dextri lateris.	Cerebrum & cerebellum in parte dextra & poſtica omnino ſanioſa, putrida & corrupta.

Lethargicus

The *carus* is the moſt profound ſleep, from which the patient cannot be awakened, and is the neareſt in degree to the apoplexy; but it proceeds

Symptomata morborum.	*Extiſpicia cadaverum.*
Lethargicus evadit quidam cordis oppreſſionibus & leipothymiis laborans cum œdemate corporis & dein ſphacelo ortis.	Pericardium cordi adnatum.
Cum paralyſi totius fere lateris ſiniſtri, ſeſe adjungit fluxui purulento e naribus.	Pus e cerebro ad nares, mediante foramine carie efformato appellit.
Poſt capiti inflictum vulnus ſubſequuntur convulſiones.	Cranium illæſum, ſanguis in cerebro ſtagnans.
Succedit capitis intumeſcentiæ.	Hydrocephalus.
Doloribus nephriticis & iſchuriæ.	Renes & ureteres calculis infarcti.
Catalepſia, ſæpius recurrens in epilepſiam lethalem abit.	Sanguis effuſus inter anfractus cerebri, vaſa encephali turgida, & colluvies ſanguinolenta in cranio.
Amentiæ ſuccedit.	Cerebrum exſuccum.
Affectus ſoporoſus. Carus concomitatur iſchuriam.	Ren ſiniſter ingens calculis infarctus.
Noſtalgiæ ſe adjungit.	Ventriculi cerebri & cor ſanguine polypoſo turgent.
Motus convulſivos lethales accerſit.	Lien magnus & quaſi oſſeus; aqua in cerebro; gelatina juxta tractum meningis.
Excipit dolorem capitis.	Tumor ſteatomatoſus in latere ſiniſtro cerebri.

proceeds with a freer reſpiration and without ſtertor.

The

Symptomata morborum.	*Extiſpicia cadaverum.*
Vertigine prehenditur cui dein ſuccedit ſenſuum abolitio.	Sanguis effuſus in cerebri ventriculos.
Somnolentus digitos continuo naribus admovet, febricitat & vermibus ſtrangulari conclamitat.	Abdomen intactum, ventriculi cerebri aqua ſcatent.
Quem excipit catarrhus.	Aqua limpida inter corticem cerebri & corpus callosum; pulmones putridi.
Exoritur in febre continua.	Pulmones putridi partibus vicinis annexi.
Succedaneus. Vertigini.	Aqua in cerebro.
———-. Iſchuriæ.	Renes & ureteres calculis infarcti.
———-. Item.	Colluvies circa vias urinarias.
—— Vomitui & doloribus ventris.	Pylorus ſcirrhoſus; aqua in cranio, & cerebri ventriculis.
—— Epilepſiæ cum dolore in ſiniſtro capitis latere.	Abſceſſus in cerebro in doloris ſede.
—— Cephalagiæ, pulſu ſano ſuperſtite.	Abſceſſus in cerebello.
—— Vertigini & cephalalgiæ.	Meninges craſſæ.
—— Paraphrenitidi.	Cerebrum intactum, veſicula fellis, bile atra tumens.
—— Delirio cum palpitatione cordis.	Cerebrum & cerebellum duriora; ventriculi cordis concretionibus ſcatent.

Excipit

The *coma ſomnolentum* is a propenſity to ſleep, in which, however, the patient can be awakened by external moving objects, and then immediately falls again into doſing or ſleep.

Theſe diſorders are commonly accompanied with others, or lead to the apoplexy, palſy, &c.

The diſſections ſhew various cauſes in the head, polypoſe concretions in the large veſſels; their treatment will be conſidered under the diſorder called apoplexy, to which they are nearly allied.

Symptomata morborum.	*Extiſpicia cadaverum.*
Affectus ſoporoſus. Excipit ictum cranio inflictum.	Contra fiſſura cranii & ſanguis ſtagnans in cerebro.
Item.	Pus inter cranium & duram meningem ſanguis effuſus in ventriculos cerebri.
Item.	Sanguis effuſus in ventriculis cerebri.
Circa os temporum.	Abſceſſus cerebri juxta locum percuſſum.
Item.	Sanguis effuſus in cranium.
Frontis.	Abſceſſus in parte antica cerebri.
Vulnus acinace occipiti inflictum cui ſeſe implicat hemiplegia.	Aqua & pus in ventriculis cerebri.
Inflammationi palpebarum.	Fractura in orbita & abſceſſus in cerebri parte antica.
Poſt eruptionem petechiarum in febre.	Cerebrum, hepar, ventriculus & inteſtina inflammata.

The *coma vigil*, *pervigilium*, or *agrypnia*, are diſeaſes contrary to the preceding.

The *coma vigil*, or *typhomania*, is called a ſpurious lethargy, in which there is a propenſity to ſleep, with delirium, yet no ſleep follows. The eyes are ſuddenly opened, the aſpect looks wild, the patients are clamorous, and talk incongruous.

The *pervigilium* is a ſtate in which the patient cannot ſleep, neither day nor night; ſometimes with delirium. This is ominous in acute diſeaſes.

Theſe ſymptoms ariſe from irritation on the brain and its membranes, and various are the cauſes, both remote and proximate, as acrimony, fractures, contuſions, wounds, the ſtone, and other vehement pains; ſpaſms, whether topical or univerſal; inflammations, plethora, diſeaſes of the ſtomach, diaphragm; pains in the bowels of infants, &c.

The *cure* conſiſts in removing the cauſes.

On the Apoplexy.

A ſudden abolition of the ſenſes, profound ſleep, with ſtertor or ſnoring, is called apoplexy.

This diſorder was formerly divided into two ſpecies, the ſerous and ſanguineous.

-mical inquiries and practical obſerva-

tio-

tion, however, ſhow various cauſes capable of producing the apoplexy; therefore thoſe ancient diviſions, as they neither afford a preciſe idea of the diſeaſe, nor comprehend its original cauſes, other diviſions more applicable to the different ſpecies are eligible.

In the former part of this work the treatment of the hyſteric apoplexy is explained; therefore the different ſpecies, and cauſes producing this dangerous diſeaſe, ſhall be briefly delivered.

The *apoplexia ſanguinea*, *ſanguineous apoplexy*, or the ſpecies of this diſeaſe ariſing from plethora.

This commonly attacks patients with ſhort necks, florid complections, and is induced by muſcular inactivity, overabundance of foods and drinks, and an inattention to conſtantly procuring ſufficient evacuations, violent paſſions, particularly anger, &c.

The effects produced are diſtended veſſels in the brain and its membranes, water in its ventricles, &c., and, if the diſorder prove fatal, extravaſation of blood, &c.

A greater quantity of blood is conveyed to the head by the carotids, both external and internal, and vertebral artery, than the ſinuſes, internal and external jugulars and occipital veins,

veins, are capable of returning; hence compreſſion of the medullary ſubſtance of the brain, rupture of veſſels, and death,

The arteries and veins within the brain are of a weaker ſtructure than in the other parts of the body; hence dilatation, rupture, and extravaſation of fluids.

As there are no muſcles within the brain, nor elongation or contraction in thoſe parts, the circulation is leſs vivid; yet by the means of the ſinuſes fewer accidents happen than might otherwiſe have been expected.

When the apoplectic ſtroke proves fatal, a ſudden ſtagnation of blood in the veins ſeems to be a principal cauſe; therefore venæſection fails.

The heart and arteries ſeem convulſed; the blood is violently projected towards the head; the venal ſyſtem not returning, the blood is the cauſe of firſt redneſs, and afterwards lividneſs in the face, lips, diſtention of veſſels in the conjunctiva of the eyes, &c.

The blood is forced by the aorta and arteries to the head and other parts; the ſubſtance of the brain is compreſſed by plenitude either of viſcid or ſerous blood; the will loſes ſuddenly the power of commanding the voluntary muſcles; the patient totters, reels, and falls down either

either dead or in a ſtate of ſtupid inſenſibility, froths at the mouth, and ſnores *.

If, after a large bleeding, as before recommended,

* Dissections after Death.

Symptomata morborum.	*Extiſpicia cadaverum.*
Apoplexia. Cum convulſionibus ingruit & ſubito virum enecat.	Vertebrales & carotides arteriæ diſruptæ.
——— Curatur, ſed denuo cum paralyſi dextri lateris recrudeſcit.	Aqua in cerebro.
——— Hemiplegiam, cui gangræna ſuccedit, poſt ſe trahit.	Aqua in cranio & theca ſpinali.
——— Prehendit virginem, cephalalgia cum convulſionibus, laborantem.	Aqua in cerebro.
——— Excandeſcit febris & hemiplegia ingruit.	Aqua in ventriculis cerebri, vaſa piæ meningis ſanguine infarcta, plexus choroides hydatidoſus.
——— Derepente mulierem cephalalgia laborantem invadit, & de medio tollit.	Serum in ventriculis cerebri. Gelatina obducuntur ejus vaſa & ſanguine fluidiſſimo turgent.
——— Poſt ſe trahit paralyſim dextri lateris, convulſiones ſiniſtri & lapillos excernit æger.	Cerebrum putridum, renes lapillis ſcatentes.
——— Cum convulſionibus, ſingultu & cephalæa ſeſe adjungit.	Aqua & ſanguis effuſa in cerebro.

Apoplexia.

mended, the patient ſurvives the firſt attack, and no extravaſation of blood or ſerum has happened in the brain, ſome, after remaining in

Symptomata morborum.	*Extiſpicia cadaverum.*
Apoplexia. Stipatur paralyſi utriuſque lateris.	Sanguis effuſus intra ſubſtantiam cerebri & ejus vaſa infarciens.
——— Cum reſolutione brachii ſiniſtri.	Ventriculi cerebri aqua cruenta ſcatent, & foveola intra ſubſtantiam cerebri inſculpta, ſanguine turget.
——— Dextri.	Aqua in cerebro.
——— Cum reſolutione dextri lateris.	Vaſa encephali varicoſa & ſanguine infarcta.
——— Inter uſum aquarum mineralium plures enecat.	Sanguis effuſus intra ſubſtantiam cerebri.
——— Quadragenarium e medio tollit.	Aqua in cranio.
——— Arthriticus convulſionibus laborans, apoplexia tollitur.	Sanguis concretus in cerebro.
——— Bibacem prehendit.	Sanguis effuſus intra ſubſtantiam cerebri. Aqua in dextro ventriculo.
——— Ebrium.	Duræ matris vaſa aneuriſmatica; ſanguis effuſus in ſubſtantia cerebri.
——— Scorbuticum jamdiu reſpiratione anheloſa, & capitis gravitate laborantem, corripit.	Cerebrum inculpatum; pulmo ichore infarctus.

in a ſtate of ſtupefaction for hours or days, recover, without any recollection, or ſcarce any, of what has happened.

The

Symptomata morborum.	*Exti∫picia cadaverum.*
Apoplexia. Poſt ſe corporis paralyſim trahit.	Ventriculi cerebri ſanguine concreto turgent.
—— Apoplexiam ſubitaneam prehendunt convulſiones.	Venæ encephali flatu turgidæ; ſerum in ventriculis. Grumus ſanguinis occurrebat in thalamis nervorum opticorum & in quarto ventriculo.
—— Febre ſtipatur.	Sanguis concretus in ventriculis cerebri.
—— Seſe adjungit febri intermittenti.	Viſcera corporis præcipua corrupta.
—— Tollit quemdam fumo tabaci & maſticationi nicotianæ familiarem.	Materies nigricans inſtar fuliginis in cranio.
—— Ingruit inter prandium.	Cranium & theca vertebralis aqua turgent.
—— *Succedanea.* Inſolationi.	Sanguis concretus in ventriculis cerebri, & hydatides in plexu choroideo.
—— Quam prehendunt paralyſis partis ſiniſtræ & convulſio dextræ, ſuccedit vertigini cum capitis dolore gravativo.	Ventriculi cerebri aqua diſtenti.
—— Vertigini, octo poſt capitis contuſiones.	Hydatides in cerebri ſubſtantia.
—— Doloribus ſincipitis.	Sanguis intra ſubſtantiam cerebri.

Apoplexia

The Diagnoſtics of the Apoplexy.

The *ſanguineous* apoplexy is known by the redneſs and fulneſs in the face.

The

Symptomata morborum.	*Extiſpicia cadaverum:*
Apoplexia ſuccedanea. Vulneri infra orbitam inflicto.	Vulnus pertingebat cerebri ventriculum, & cranium ſanguine turget.
——— Epilepſiæ.	Cerebrum inflammatum & ſanguis concretus in ventriculis cerebri.
——— Vertigini.	Aqua in cerebro.
——— Bis vertigini ſuccedit.	Glandula pinealis ingens, ſubſtantia cerebri inculpata.
——— Item.	Vaſa cerebri & pulmonum ſanguine turgida, ſanguis effuſus in ſubſtantiam cerebri.
——— Hemicraniæ.	Abſceſſus in cerebro.
——— Narium hæmorrhagiæ & vertigini.	Sanguis concretus in cerebri ventriculis.
——— Stipata immani ptyaliſmo, poſt aſſumtos flores antimonii.	Materia mucoſa in cerebro, pectore & ſtomacho.
——— Vertigini & tremori.	Aqua in ventriculis cerebri, plexus choroides hydatidoſus.
——— Poſt caſum ab alto, ſanguis per aures & os fluit, & dein ſævit apoplexia.	Sanguis effuſus in cerebrum; cranium fractum occurrit.
——— Item.	Sanguis in ventriculis cerebri.
——— Poſt ictum oculo ſiniſtro inflictum.	Sanguis effuſus in baſi cranii: vaſa oculi diſrupta.
——— Poſt capitis dolores.	Membranarum coalitio.
——— Item.	Hydrocephalus.

Apoplexia.

The *ſerous* by a pale or livid color; but on this ſign no certain dependence can be made: the conſtitution of the patient and the preceding cauſes ought to be conſidered particularly.

Apoplexy affects the whole body, and differs from *ſyncope*, this being attended with a ſmall pulſe and little reſpiration, and often with a great coldneſs.

It differs alſo from *ſoporous*, *lethargic* fits, or ſleepy indiſpoſition, in a ſmall degree only: in theſe the patient can be rouſed by irritation, but ſoon falls again to ſleep, which does not happen in the apoplexy.

From the *convulſive catarrh* it differs; for

Symptomata morborum.	*Extiſpicia cadaverum.*
Apoplexia ſuccedanea. Poſt capitis dolores.	Cerebrum putridum.
——— Ictum in bregmate excipit.	Lamina interna oſſis coronalis fiſſa, aculeis cerebrum vellicat, externa erat illæſa.
Succedit iſchuriæ & poſt ſe trahit hemiplegiam.	Tumor ſteatomatoſus in abdomine.
——— Ventris intumeſcentiæ cum cruribus œdematoſis.	Pulmones pleuræ adhærent.
——— Cum convulſionibus poſt colicam.	Inteſtina inflammata.
——— Paralyſi cum difficultate ſpirandi.	Pulmones tuberculoſi; pericardium aqua turget.

here

here is a great whiſtling or rattling in reſpiration, with ſome difficulty; a weak and ſlow pulſe, and the patient retains his ſenſibility.

From the *epilepſy* it differs; for the body is convulſed in the epilepſy, but not in the apoplexy.

The *prognoſtics* of the apoplexy are well known; a warm ſweat ſupervening is better than a cold ſweat: it is eaſier to afford and expect relief when the patient can ſwallow remedies than when ſwallowing is totally impeded. In gouty patients, and thoſe who have lived high and drink ſpirits, the diſorder is more dangerous than amongſt the more abſtemious and moderate potatores of wine. Paralytic affections ſucceed often to the apoplexy; the patient's life is ſaved, but embittered with loſs of the uſe of one ſide of the body or particular member.

The various Cauſes and Species of the Apoplexy.

The *apoplexia traumatica*, from wounds, contuſions, fractures of the head, or concuſſions of the brain. This requires the art of ſurgery; but opium, as recommended by ſome, ſhould ever be avoided, being contrary to any rational intentions of cure.

The *apoplexia temulenta*, from drunkenneſs.

This

This is owing to the effects of ſtrong liquors, of which patients recover by ſleep, &c. Vinegar drink is proper. *Opium* has produced the ſame effects, when injudiciouſly given during lying-in, or under other circumſtances. Lemon juice or vinegar are the beſt correctors of opium, which the people in the Eaſt experience, where this ſoporiferous drug is frequently uſed in immenſe quantities.

The *apoplexia hyſterica*. This has been already treated of in the former part of the work; is chiefly ariſing from wind in the ſtomach, œſophagus, &c. It is likewiſe called *vaporoſa*, *hypochondriaca*, &c. Leguminous food, as peaſe ſoup or pudding, have produced this apoplexy, of which I have known inſtances, though not fatal.

Apoplexia arthritica. This is ſuppoſed to ariſe from a retroceſſion of the gouty matter. The earthy particles, joined with coagulable lymph, which float and predominate in the veſſels, particularly in the venal ſyſtem of arthritic patients, can eaſily be conceived capable of obſtruction in muſcles or membranes, in the ſtomach, diaphragm, pleura, in the meninges of the brain, &c.; from hence what is called the gout in the head, ſtomach, cheſt, &c.

If the brain be overloaded, rupture of veſſels

may happen: if the diaphragm, a ceſſation of breathing: if occaſioning *polypi* in the large veſſels, death may ſuddenly be the conſequence, and conſtitute what is called the gouty apoplexy; which diſeaſe I have ſeen ſeveral times.

In theſe caſes, it muſt be obſerved, that though bleeding may be a prompt remedy during the paroxyſm, yet gouty patients cannot bear large and repeated bleedings.

In the gouty apoplexy, diaphoretics, pediluvia of the muriatic acid, and tepid water, &c., ſhould be preſcribed *.

Apoplexia metaſtatica, owing to ſome introceſſion of ſcorbutic or other eruptions. This ſpecies I never recollect to have ſeen; and having been conſtantly in practice for above thirty years, with as many opportunities of obſervation as moſt others of the profeſſion, I conſider it a very rare caſe; perhaps the effects have not been attributed to juſt and true cauſes.

Apoplexia ſeroſa, or *pituitoſa*. This is the apoplexy which happens to patients of debilitated habits, with pallid countenances, in which ſerum predominates, and it is often ſucceeded by an hemiplegia. This is the ſpecies of

* See Treatiſe called the Gout alleviated by warm Baths of the muriatic Acid and tepid Water, &c.

apoplexy

apoplexy which ſcarcely admits bleeding above once; cupping to the neck might with greater propriety be ſubſtituted.

If the patient ſhould recover the firſt ſhock, and can ſwallow internal remedies; antimonial diaphoretics, pediluvia, bliſters, volatile vapors, are beneficial.

The pallor, debility, weak pulſe, languid circulation, all intimate the probability of a ſtagnation or extravaſation of ſerum in the brain, or lymph in the larger veſſels, &c.; therefore, under ſuch circumſtances of conſtitution, ſtimulants become more neceſſary than in any other ſpecies of apoplexy.

The *apoplexia febricoſa* is that ſpecies of apoplexy which has ſometimes happened in the commencement of intermittent or remittent fevers: the primary cauſe being the force of the febrile powers on the vaſcular ſyſtem, from which death has been the conſequence: bleeding and ſome warm ſtimulant are neceſſary, though the former, perhaps, is contra-indicated by the nature of the intermittent or low remittent fevers, which ſeldom require or ſuffer venæſection, though practiſed, as I have obſerved, at Rome and other parts of Italy in the hoſpitals, by which numbers of the patients are loſt. The exigence of the caſe, in the febrile apoplexy, alone can countenance bleed-

ing either in intermittent or low remitting fevers.

Apoplexia polypoſa. This ariſes from polypi in the veſſels either of the lungs or heart, obſtructing, or totally impeding, the circulation.

It follows palpitation of the heart, faintings, difficult reſpiration, vibration of the veſſels in the neck, intermittent or an irregular pulſe, which ſometimes ſtops for a moment and then beats again. It is moſt common to the corpulent, with a viſcid texture of blood, from the age of forty to ſixty-five; to the ſtudious; to thoſe who live high, and uſe little exerciſe; to ſpirit drinkers; to thoſe who indulge ſleep, in cold climates, after dinner. In hot climates this is neceſſary and uſeful.

Whenever this diſeaſe is ſuſpected, bleeding, if not contra-indicated, ſhould be occaſionally repeated. Internally, camphor, nitre, ſal ſodæ, volatile alkali, lime water, ſaponaceous preparations, neutraliſed ſalts, ſea air, &c., may be preſcribed, according to circumſtances.

Apoplexia ſuſpirioſa. This has been mentioned by *D. Cuſſon*, a diſeaſe obſerved amongſt infants, with a ſuſpirious or ſighing expiration, deep ſleep, the face pallid, the body frigid and turgid.

Bleeding was avoided; emetics, cathartics, bliſters

blisters behind the ears, commonly proved a cure. Emetics are, however, an exceptionable practice in all fulnesses of the vessels in the brain, as there will be a risk of ruptures and extravasation of fluids.

Apoplexia atrabiliaria. This is accompanied commonly with the jaundice; the medullary substance of the brain has been found of a brown or darkish color. As this originates in a diseased liver, and is most commonly the effect of spirit drinking, the primary disease should first be removed. I have cured the jaundice, in numerous instances, by a quarter of a grain of calomel night and morning, joined with three grains of *pilula Rufi*, and about two scruples or a drachm of the *sal diureticus* in infus. amar. and tinctura amara, two hours before dinner and supper, or oftener.

Apoplexia inflammatoria, from inflammation of the membranes of the brain in plethoric, robust habits.

Large bleedings, effectual evacuations by purging, sweating, and a strict antiphlogistic regimen, with nitre, camphor, antimonial solution, so as never to vomit, bid the fairest to relieve or cure this highly dangerous disease.

Blisters, as they stimulate, may be improper; emetics would be highly dangerous. From dissections I have had great reason to conclude,

that emetics have cauſed death in apoplexy, by forcing an increaſe of blood to the head, and checking the return of blood in the veins, from the diſtention and force of the œſophagus, lungs, diaphragm, pectoral, abdominal, and cervical muſcles, &c.

Apoplexia mephitica. This ſpecies ariſes from the fumes of charcoal, vapor of arſenic, mercury, lead, poiſons, &c., mephitic air, &c. The treatment of which muſt depend on the natural or accidental ſtate of the conſtitution of the patient attacked. Indeed all rational practice in medicine ſhould be more applied to individual habits, with all their variety, than is generally practiſed. Pure air, bleeding, long-continued frictions, with warm flannels, &c., as have been recommended in other caſes, may be applied to this ſpecies, of which enough has been already delivered.

Apoplexia verminoſa. Apoplexy has ariſen from worms. Wherever this is ſuſpected, the remedies recommended in worm caſes may be preſcribed. Jalap and ſal ſodæ are proper; the firſt will evacuate, the ſecond diſlodge them, provided there be no contra-indication to the uſe of foſſile alkali, &c., which has ſomething cauſtical and pungent in its nature, and is improper when the ſtomach is not well defended by mucus.

It

It may be remarked, that when the apoplexy invades ſuddenly, and like to a ſtroke of lightning, it is called a ſudden ſtrong fit; when preceded by vertigo, an appearance of flies before the eyes, loſs of memory, gnaſhing of teeth, diminiſhed motion of the tongue, ſtammering, heſitation, or ſlowneſs of ſpeech, an obtuſe pain in the head, tumefaction or inflation of the face, ſleepineſs after food, or forgetfulneſs in converſation, ſpontaneous tears, ſtupor, or numbneſs of the arms or legs, with coldneſs, it is called a ſlow or lighter fit.

The whole treatment, in the different ſpecies of apoplexy, may be reduced to a few general heads, which are:

Bleeding ſhould be performed as ſoon as poſſible; for it is at the beginning of the apoplectic fit that the veſſels of the brain are moſt turgid, the blood ruſhes with the greateſt violence, and the veſſels rupture, pouring out their fluids; ſtupor and inſenſibility are the conſequences.

When ariſing from plethora ſufficient to overcome the circulating powers of the heart and arteries, large bleedings, evacuations by urine, ſweats, purging, and low diet, are neceſſary.

When originating from an abundance of coagulable lymph, or earthy particles, as in the arthritic caſes, in which the powers of the heart

and arteries ſcarcely can puſh on the blood in its channels; bleeding in theſe caſes is the prompteſt remedy during the paroxyſm, though not always ſucceſsful, nor can it be repeated often without greatly debilitating the habit. It ſhould, however, not be omitted, eſpecially during the paroxyſm or commencement of the diſeaſe. I have preſcribed it ſucceſsfully in patients above ſeventy years old. Afterwards, the application of leeches, cupping, cauſtics behind the ears, diaphoretics, bliſters to the head, ſinapiſms, volatiles, &c., are proper.

When the apoplexy happens to perſons where the blood is very ſerous, or its texture broken down, as in the hydropic and very pallid and debilitated. The muſcular powers of the heart and arteries ſeem ſo much debilitated, that although a bleeding may be proper in the paroxyſm to remove, if poſſible, ſpaſm, yet ſuch patients bear leaſt of all a repetition of that operation. Theſe caſes require cupping in the neck, ſtimulants, as bliſters, ſinapiſms, volatiles, cordials, and whatever can raiſe the *vis vitæ*, or give vigor and tone to the circulating powers.

Emetics in all caſes of apoplexy ſhould be avoided, which I find is likewiſe the opinion of that experienced and rational phyſician, the learned Dr. Cullen.

The Prevention of the Return of Apoplexy.

This is to be attended to after the diſorder has been once removed, and ſhould depend on whatever cauſe gave riſe to the apoplexy, and the conſtitution of patients. In all caſes, however, coſtiveneſs ſhould be prevented by eccoprotics; perſpiration ſhould be excited at night. The body, and particularly the feet, ſhould be kept warm. Pediluvia, with warm water and ſpiritus ſalis marini, as recommended in my Treatiſe on the Gout, ſhould be uſed.

Gentle exerciſe may be directed, and all violent paſſions of the mind avoided. The *Jerſey* ſhirt is excellent for keeping the body warm in this changeable climate, particularly from autumn to ſpring, or commencement of ſummer.

As theſe diſorders are moſt common in autumn, winter, and beginning of ſpring, ſo ſhould the afflicted attend to theſe ſeaſons, by gently evacuating whatever is redundant, and avoiding every poſſibility of receiving cold by putting on the winter clothes early.

No ligatures ſhould be tight about the neck, as the ſhirt collar, ſtock, or neck-cloth; nor ſhould the buckle or claſp be uſed in the back part of the neck, as the occipital vein is connected with the internal veſſels of the head,

and

and its compreſſion might obſtruct the return of the blood, which has cauſed apoplexy *.

Formulæ

* *Singular caſe in which ligatures on the neck produced apoplexy.*

Some years ago I attended a gentleman of conſiderable fortune, and well known in the great world, who was ſubject to the ſanguineous apoplexy. I was in or near his houſe at the commencement of four or five different fits. He was ſtruck down ſuddenly, ſnored deeply, became totally inſenſible, and the blood flowed with ſuch rapidity and force through the external and internal carotids, that in the neck, on each ſide, although the patient was corpulent, the pulſations were ſo evident, that the blood ſeemed to be forced up by ſpurts to the head, as if by the force of a pump. The face became firſt very red, then inflated to a great degree, and livid; the lips turgid; the eyes ſtared wildly, with a dilatation of the pupils, and diſtentions of the veſſels of the conjunctiva. No caſe could indicate more decidedly the neceſſity of a prompt and large bleeding; therefore breaking through the medical *etiquette*, which conſiders it mean for a phyſician to operate, although it has been found uſeful on many occaſions. I always, without waiting for a ſurgeon, bled him, and extracted at leaſt two or three pounds of blood. On this copious evacuation he began to ſneeze; afterward he remained quiet for eighteen, twenty-four, or thirty-ſix hours; during which time clyſters, purges, and diaphoretics, were given, and frictions uſed. He then became perfectly ſenſible, but could never recollect any thing of what had paſſed, or the length of time he had been affected.

In ſuch a caſe, the only probable mode of preventing a return of the diſorder was to obſerve a ſtrict regimen, which this patient would never comply with, preferring death to re-

ſtrictions

Formulæ proper for the ſoporiferous Diſeaſes and Apoplexy.

In floridity and plethora, during the commencement, Morgagnus recommends bleeding in the occipital vein; but this is difficult, and often impracticable, though very judicious, if poſſible.

Mittatur ſanguis ad ℥xiv. vel ad ℥xx. e vena jugulari vel e brachio.

No. 102. ℞. Decoct. commun. pro clyſter. ℥x.
Sal. amar. cathart. ℥vj.
Ol. olivar. ℥ij. f. enema ſtatim injiciendum, repetendumque pro re nata.

If

ſtrictions in diet. I contrived to conſtantly evacuate the feces by laxatives, and he lived for years with repeated attacks.

There was a ſingularity in this gentleman's character; for, though above ſixty, he wiſhed to appear young, freſh colored, and uſed ſome improper means for the purpoſe.

I had obſerved, that in the morning he appeared often relaxed, and his countenance was extenuated, and rather pallid or ſallow; but when dreſſed he ſeemed florid, his ſkin became ſmooth, and he appeared much younger and more healthful.

From theſe circumſtances I ſuſpected art was uſed, and my ſuggeſtions were, by ocular demonſtration, verified; for a large thick tape in the back of his wig was drawn very tight, and tied in a knot, by which the ſides of the wig cloſely compreſſed the temples and face, and the tape ligature acted powerfully on the occipital veins, and by the tightneſs of the ſtock the jugulars were alſo impeded; hence the turgency of the blood

If the patient's deglutition is not altogether impeded, to thoroughly evacuate the inteſtines,

No. 103. ℞. Infuſ. ſen. ℥vſs,
Tinct. jalap. ℥ſs.
Pulv. crem. tart. ʒj. ſolve, & f. miſtura, cujus ſumat coch. ij. ſæpe, donec alvus bene reſpondeat.

Or,

No. 104. ℞. Fol. ſen. ʒiij. coque in
Aq. pur. ℥v. ad ℥iv.
Tart. emet. gr. ij.
Sal. Rupell. ℥ſs. ſolve, & f. miſtura, cujus ſumat coch.; quavis horâ donec inteſtina evacuentur.

Afterwards, to promote a diaphoreſis; which

blood veſſels in the face; hence the floridity and youthful appearance. The impreſſion of the tape was ſo deep in the nape of the neck, that a finger might be buried in the furrow. Ligatures were likewiſe drawn very tight about the legs below the knees, in order to ſwell the calves of the legs. What was moſt dangerous, was impeding the return of the blood towards the vena cava. On the diſcovery, I ſeriouſly intimated his dangerous practices, and accounted for his apoplectic fits from theſe evident facts; but the patient was highly diſpleaſed; yet, in a certain degree, he complied with my requeſt, not to repeat the ligatures.

Some time after this he was ſuddenly taken with an apoplectic fit in his carriage ſome diſtance from home. A phyſician was called of very high reputation, but timid in his practice even in deſperate caſes: he neglected bleeding, or ſaw the patient too late, and death was, in a few hours, the conſequence.

ſhould

ſhould be continued during the attempts to cure, without increaſing heat,

No. 105. ℞. Tart. emet. gr. ij. ſolve in
Aq. pur. ℥j. f. ſolutio fortior antimonialis.

No. 106. ℞. Camphor. gr. viij.
Amygdal. decorticar. No. IV.
Sacch. alb. ℈j. tere ſimul.
deinde adde Aq. pur. ℥xiv.
Sp. Minder. ℥iij.
Solutio. antimon. fort. ℥j. f. hauſtus, quarta quaque horâ ſumendus.

The feet and legs are to be kept very warm.

This plan of evacuating by bleeding, purging, and perſpiration, has cured ſeveral apoplectic caſes, under my own immediate direction, where plethora abounded.

If coagulable lymph or ſerum previouſly predominate, and in all caſes of pallor and debility, after the firſt bleeding, ſtimulants, briſk frictions, volatiles, and cordials, are proper.

Applicentur emplaſtra veſicatoria raſo capiti, nuchæ, ſcapulis, brachiis vel femoribus & ſinapiſmi plantis pedum.

No. 107. ℞. Infuſ. ſen. ℥iſs.
Tinct. ſacr. ℥ſs. f. hauſtus ſtatim ſumendus.

No. 108. ℞. Decoct. commun. pro clyſter. ℥viij.
Tinct. ſacr.
Ol. olivar. āā ℥ij. f. enema, pro re nata injiciendum.

Or,

Or,

No. 109. ℞. Decoct. commun. pro clyſter. ℥viij.
Sapon. ʒiſs. ſolve,
dein adde Tinct. ſacr. ℥ij. f. enema.

No. 110. ℞. Julep. e camphor. ℥iſs.
Tinct. ſerpent. virg. ʒiij.
Solution. antimon. fort. ʒj. M. f. hauſtus, quarta vel ſexta quaque horâ ſumendus, poſt evacuationem alvi.

No. 111. ℞. Sal. c. c. ℈j. ſolve in
Julep. e camphor. ℥vij.
dein adde Aq. nucis moſch. ℥j.
Confect. cardiac. ʒiſs. f. miſtura, cujus capiat coch. ij. ad libitum.

Light diet and warm drinks, in ſmall quantities, to prevent accumulation, are proper in all inſtances of apoplexy; but every thing in the leaſt flatulent ſhould be avoided.

After the paroxyſm, alteratives, bark, tonics, ſteel preparations, &c., are frequently uſeful, by invigorating the ſolids, and removing lymphatic obſtruction.

The conſequences of apoplexy, which are often paralytic affections, ſhall next be conſidered.

What has been likewiſe ſaid on ſoporiferous diſorders, dilatations of veſſels of the brain in madneſs, &c., may explain many phenomena obſervable in the apoplexy *; which diſorder,

* See Treatiſe on Madneſs and Suicide.

however,

however, notwithſtanding the utmoſt ſkill of medicine, often proves fatal, or leaves patients in a ſtate of debility, from which they never perfectly recover, or are liable, without great attention, to relapſe and ſudden death.

Paralyſis, or *Palſy*.

The palſy is a great diminution, or total loſs of ſenſe or motion, chiefly affecting muſcular or nervous parts.

When the affection is not violent, it is called *pareſis*.

Aneiſtheſia, is a momentary inſenſibility, or rather numbneſs, with a ſenſe of formication, or a ſleepineſs of membranes and deficiency of ſenſe.

Arthemia, is motion only deficient.

The palſy, from the parts affected, occaſions various defects.

In the eyes, blindneſs, by diſeaſed retina or pupil.

In the ears, deafneſs.

In the uvula, relaxation.

The paralyſis of the throat and œſophagus is called *paralytidos*.

In the tongue, a faultering deprivation or loſs of ſpeech.

In

In the muſcles of the face, diſtortion of the mouth, or difficulty in manducation.

In the lungs, principally ſuffocation.

In the heart, ſudden death.

In the ſtomach, vomiting, or total relaxation, ſo that the food or drink paſs indigeſted.

In the inteſtines and *ſphincter ani*, conſtant fluxes, or *procidentia ani*.

In the urinary bladder, incontinence of urine, or a total ſuppreſſion.

In the ligaments of the uterus, a prolapſus uteri.

In the erectors of the penis, impotency.

In the extremities, either arms or legs, a difficulty in walking, or the entire loſs of their uſe.

When all the parts of the body below the head are affected, the palſy is called *paraplegia*; when one ſide is ſtruck, *hemiplegia*. Theſe laſt commonly ſucceed to an apoplexy. They both depend on a morbid affection of brain and nervous influence; but the partial palſies on the ganglions or branches of nerves more diſtant from the brain or medullary ſpine.

In all caſes the nervous influence is obtunded or obſtructed; for the will can no longer command muſcles deſtined to action when they are under the indiſpoſition of paralytic affections.

The

The *immediate cauſes* are effuſions of blood, ſerum, &c., in the ventricles of the brain; compreſſions of the brain, nerves, or ganglions, by which the free and natural intercourſe of the nervous powers of certain parts are partially or totally interrupted: in the former, loſs of action; in the latter, loſs of ſenſe, and often an atrophy or waſting of the member is perceived *.

The

* DISSECTIONS AFTER DEATH.

Symptomata morborum.	*Extiſpicia cadaverum.*
Paralyſis. Puerum titubantem lingua balbutientem invasit & cui ſe adjungit capitis intumeſcentia.	Hydrocephalus.
Lateris dextri, ſubito exoritur cum balbutie, & ſpirandi difficultate lethali dein ſubſequente.	Ulcus in utroque ventriculo cerebri & abſceſſus pulmonis.
Siniſtri in apoplexiam degenerat.	Ventriculi ſiniſtri cavitas eroſa & infarcta concretionibus polypoſis.
Inferiorum artuum quinto menſe graviditatis mulierem corripit.	Uterus clauſus fœtum mortuum recondit.
Brachii dextri cui ſuccedit dolor capitis.	Aqua in ventriculis cerebri.
Hemiplegia lateris ſiniſtri cum tuſſi & ſpirandi difficultate.	Subſtantia encephali putrida.

The *remoter cauſes* are:

1. A nervous irritable habit of mind or body.

11. Ple-

Symptomata morborum.	*Extiſpicia cadaverum.*
Hemiplegia laborans & cui incaſſum adhibita fuit machina electrica, ſubito enecatur.	Sanguis & aqua in ventriculis cerebri.
Siniſtri lateris & convulſio dextri, febrem exacerbantem & brevi lethalem ſibi adjungunt.	Pia meninx purulenta in parte dextra, & vaſa encephali ſanguine turgida.
Cum lethargo ſeſe adjungit fluxui purulento e naribus.	Per foramen e cerebro fluebat pus.
Hemiplegia ſiniſtri lateris, cum convulſionibus dextri lateris, invadunt ſubito ſeptuagenarium, & brevi enecant.	Sanguis concretus inter dextrum cerebri lobum & duram meningem.
Extremitatum inferiorum ſtupor cum caro & cardialgia, &c.	Hydrops cerebri & medullæ ſpinalis.
Succedanea. Dolori vago pectoris.	Aqua in thorace & cerebrum putridum.
Inſultui apoplectico & ſibi adjungit ſummam ſpirandi difficultatem.	Pulmones tuberculoſi; pericardium aqua turget.
Volvulo.	Hepar ingens, induratum; colluvies virideſcens in ventriculo.
Dolori capitis gravativo circa radicem naſi cum fluxu puris e naribus, & apoplexiam accerſit.	Pus in ventriculis cerebri nares appellebat.

Vulneri

II. Plenitude from too free diet, or Bacchalian exceſſes.

III. The free uſe of narcotics, as opium, &c.

IV. Debility in the moving powers, and viſ-

Symptomata morborum.	*Extiſpicia cadaverum:*
Vulneri exiguo occipiti inflicto.	Pus inter pixidem oſſeam & cerebri involucrum.
Emetico propinato paralyſis artuum ſuperiorum & inferiorum.	Pylorus ſcirrhoſus.
Hemiplegia lateris dextri ſuccedit oculorum convulſioni, dein ſibi convulſionem brachii dextri accerſit.	Aqua & pus in ventriculis ſtagnant.
Apoplexia & interea penis gangræna corripitur.	Pulmo dexter ſcirrhoſus, aqua in latere ſiniſtro pectoris & in cavitate cranii.
Convulſionibus & ſurditati poſt cephalalgiam.	Aqua in cerebri ventriculo ſiniſtro & plexus choroides ſcirrhoſus.
Stranguriæ cum dolore crurum.	Calculus in veſica urinaria; aqua in cerebro & plexus choroides hydatidoſus.
Apoplexiæ.	Aqua in cerebro.
Paralyſis ſiniſtræ partis & convulſio dextri, vertigini & capitis dolori gravativo ſuccedunt.	Sanguinolenta colluvies in ventriculis cerebri.
Dextri lateris & convulſio ſiniſtri cum excretione calculorum per vias urinæ.	Cerebrum putre, renes lapillis infarcti.
Excipit capitis contuſionem.	Abſceſſus cerebri in parte adverſa loco percuſſo.

cidity, or a tendency to viſcidity, in the fluids, which humors coagulating, or accumulating in the minuteſt veſſels accompanying nerves, or their expanſions, in their paſſage from the medullary ſpine, or in any other part, compreſs the medulla of nerves, proceeding to muſcles, &c.: hence numbneſs, or an impaired ſenſibility; hence loſs of ſenſe and motion. Tumors compreſſing nerves will produce the ſame effect.

v. Diſeaſes of the ſtomach and other viſcera have induced apoplexy, palſy, &c. Polypi of veſſels, &c., have produced the ſame diſeaſes.

vi. When coldneſs of the limb is accompanied with loſs of ſenſe and motion, then the artery is either compreſſed, or its fluid otherwiſe impeded: this I have often ſeen in cancerous tumors fixed in the axilla, or in aneuriſms of the ſubclavian artery, &c.

The prevention of palſy ſhould be ſimilar to the modes recommended in the apoplexy.

The *diagnoſtic.* It differs from the chronic rheumatiſm and gout; becauſe rheumatic diſorders are painful, and always in muſcles; the gout in joints; but the palſy is not painful, and the arms or legs hang looſely dangling, as if inanimate, or with dragging and difficulty ſupport the patient.

Prognoſtics.

Prognoſtics. The diſorder in aged perſons is very difficult of cure, and frequently incurable.

In the feet or legs it is oftener cured, than when in the arms.

An atrophy or waſting of the member is no unfrequent conſequence; œdematous ſwellings, &c., if theſe laſt ſuddenly ſubſide, it is ſaid inſtant death follows: this abundance of practice does not juſtify me in acceding to.

The diſorder often remains from one to even thirty years, without proving fatal; ſo that when it ſucceeds an apoplexy, life is ſuppoſed to be preſerved at the expence of the loſs of ſome member, or members. The radical cure is difficult, and frequently impracticable; but ſhould always be attempted.

When the palſy is merely cutaneous, ſome caſes of which I have ſeen, it is then ſeated in the *rete mucoſum*, nervous expanſions, or papillæ of nerves deſtined for the organ of feeling: this is not dangerous, and is frequently cured.

Pain, ſenſation, tremor, heat, &c., are favorable ſymptoms; a total inſenſibility the reverſe.

The *cure* conſiſts in removing the different cauſes.

1. In liberating the brain, nerves, or their ganglions, of the cauſes of compreſſion.

This indication principally includes the remedies of the diaphoretic claſs preſcribed for the apoplexy, bliſters, &c.

11. In reſtoring a vivid circulation where languor and a debility of the ſolids exiſt.

This may be attempted by tonics, alteratives, frictions of a volatile nature; the treatment will be well underſtood by applying the reaſoning and remedies recommended in convulſive diſeaſes and apoplexy.

Stimulants are ſometimes dangerous, eſpecially in diſtentions of the veſſels of the brain, or accumulations in thoſe parts, as a rupture of veſſels might be the conſequence of their application.

A gentle diaphoreſis, without increaſing heat, which antimonials, joined with volatile alkalines neutraliſed, produce, is uſeful.

Volatiles, antimonials, and ſtrong ſolutions of camphor, bliſters, ſinapiſms, and frictions, pediluvia of ſalt and tepid water; or, inſtead of volatile alkalies, the neutraliſed preparations are neceſſary.

It muſt be remarked, when the palſy is the conſequence of the ſanguineous apoplexy; that repeated

repeated bleeding may become neceſſary, with diaphoretics, that neither heat nor ſtimulate; but in the palſy, ſucceeding to great nervous debility, with a ſerous ſtate of the blood, pallor, &c., a warmer regimen and remedies are more likely to be beneficial, or tonics.

If ſteel preparations be uſed, and affect the head, they are improper: bark, vitriolic acid, Hoffman's anodyne liquor, &c., may then be preferable.

The *formulæ* for treating the palſy, in the plethoric and florid, may be ſimilar to the following, whether hemiplegia or paraplegia:

Sanguis mittendus pro re nata.

No. 112. ℞. Infuſ. ſen. ℥ij.
Tart. ſolub. ʒij. f. hauſtus ſtatim ſumendus.
Enema commune injiciendum pro re nata.

No. 113. ℞. Tart. emet. gr. ij.
Aq. pur. ℥j. f. ſolutio antimonialis fortior.

No. 114. ℞. Camphor. gr. viij.
Amygdal. decort. No. IV.
Sacchar. alb. ℈j. tere ſimul
dein adde Aq. pur. ʒx.
Sp. Minder. ʒv.
Solutionis antimonialis fort. ʒj. f. hauſtus quarta vel ſexta quaque horâ ſumendus*.

The

* It may be remarked, that the camphor julep, or what is now called the miſtura camphora, is a very inefficacious prepa-

The feet and legs ſhould be covered with worſted ſtockings, or flannel, and a gentle diaphoreſis, promoted by proper warm drinks, given, in ſmall quantities, at intervals.

Friƈtions ſhould be uſed, and volatile liniments, not on the parts where the paralyſis appears, as injudiciouſly recommended by medical writers, and inconſiderately practiſed, but as near as poſſible to the ſituation from whence the nerve or nerves of the part affeƈted originate; for here remedies are moſt likely to prove beneficial.

We ſhould always direƈt, as much as poſſible, our remedies to the cauſe, not to the effeƈt, of a diſeaſe; anatomy, phyſiology, pathology, reflection, and ſound judgment, will be, for this purpoſe, the ſureſt guides.

Electricity, which has, in many inſtances, aſſiſted the cure of paralytic affeƈtions, ſhould always be applied to the origins of the nerves, which tranſmit their active powers of motion and ſenſibility; not to the parts where ſenſibility is deſtroyed: the ſtream ſhould be drawn through from the original trunk or principal nerve to its moſt diſtant diviſions and ra-

ration of camphor, as the fineſt and moſt volatile parts of the camphor eſcape by the addition of hot water: the water likewiſe takes but a ſmall portion of the camphor, as may be ſeen by what remains in the ſtrainer.

mifications.

mifications. The electrical ſhock is improper; drawing ſparks, or diffuſing the electrical ſtream, are more eligible in the palſy.

The *formulæ* for the debilitated, nervous, and pallid, ſhould conſiſt of more warming and ſtimulating remedies.

Applicentur emplaſtra veſicatoria nuchæ, ſcapulis, pone aures, brachiis, femoribus vel pedibus.

Sinapiſmi plantis pedum admoveantur.

Inſtead of volatile alkalines neutraliſed, ſal ſuccini, volat. ammoniac. ad gr. v. diſſolved in the camphor draughts, are proper; and a mixture with cordial confection, volatile alkalies, &c.

No. 115. ℞. Aq. cinnam. ſimp. ℥vj.
Confect. cardiac. ʒiſs.
Sal. c. c. gr. xv. M. f. miſtura, cujus ſumat coch. ij. ad libitum.

No. 116. ℞. Aq. cinnam. ſimp. ℥iſs.
Tinct. valerian, volat.
Solutionis antimon. fort. āā ʒiſs. ſyr. ſimp. q. ſ. f. hauſtus ſexta quaque horâ ſumendus.

No. 117. ℞. Farin. avenac. ℔ſs.
Sinap. pulv. ℔iſs.
Acet. commun. q. ſ. f. maſſa, applicanda plantis pedum mane ac nocte, renovandaque bis vel ter de die.

In

In cold leucophlegmatic habits, the *oleum aniſi* has proved beneficial.

No. 118. ℞. Ol. aniſi ʒj. ad ʒiſs. vel ʒij.
Mucilag. gumm. arab. ʒj.
Sacchar. alb. ʒſs. M. deinde adde paulatim
Aq. pur. ʒij. f. hauſtus, quarta vel ſexta quaque horâ ſumendus.

If ſtill a more powerful plan may be thought expedient, Dr. James's powder, as a diaphoretic, or the following may be preſcribed:

No. 119. ℞. Pulv. antimon. gr. xvj.
Conſ. roſar. q. ſ. f. pilulæ No. IV. quarum ſumat j. ſextâ quâque horâ ſuperbibendo coch. iij. miſturæ ſequentis.

No. 120. ℞. Aq. menth. vulg. ſimp. ʒvj.
———— ſp. ʒij.
Confect. cardiac. ʒij.
Sal. ammon. volat. ℈j. ſolve & f. miſtura.

Frictions ſhould be directed to be applied all down the vertebræ from the head to the os coccygis, and penetrating volatile liniments may be uſed.

No. 121. ℞. Ol. amygdal. dulc. ʒiv.
—— terebinth. æther. ʒſs.
Aq. pur. ʒj.
Sp. c. c. ʒſs. f. linimentum, parum cujus applicetur ſpinæ colli, dorſi, lumborumque cum aſſidua frictione.

Plaſters of the *emplaſtrum ſimplex cum gummis* may

may be placed on or near the part of the nerve from whence the palſy takes its ſource, which may aſſiſt not only by its warmth, but likewiſe lightly as a ſtimulant: any other warm plaſter may likewiſe be uſed.

The directions for the palſy already given are chiefly intended for that diſeaſe when recent; but it frequently happens that it continues many years, which the following explanation and *rationale* of the cauſes and effects may elucidate:

I. In the *paraplegia*, the origin of all the nerves paſſing through the bony perforations of the vertebræ of the neck, dorſal and lumbar ſpine, are relaxed, or compreſſed lightly, as with a ligature; for if ſtrongly compreſſed, a total numbneſs or inſenſibility would follow.

II. The nervous powers that are deſtined to the vital and natural functions, as the heart and ſtomach, &c., are not much impaired; for the blood circulates, and the ſtomach receives and digeſts, the inteſtines prepare and abſorb chyle, and evacuate the feces. Patients live in bed many years with the loſs of the uſe of all the muſcular parts externally below the head, eat, drink, ſleep, &c., and preſerve their ſenſes entire.

III. In the *hemiplegia*, in which one ſide is only affected, the origin of the nerves in the brain, or trunks paſſing through the bony aper-

tures

tures to the muſcles of that ſide, are compreſſed or relaxed.

IV. When the arm or leg is paralytic, whether from the ſhoulder or thigh, from the elbow or knee, from the wriſts or ancles, to the fingers or toes, it may be rationally concluded that the diſorder is occaſioned by the compreſſion or relaxation of the tunics of nerves, which ſend off branches to thoſe diſtinct parts, and the ſeat of the cauſe of palſy is in the ſuperior parts, *i. e.* in the part of the nerve above the apparently affected part.

V. The cauſes of the palſy are not to be ſought for, therefore, in the part merely paralytic, in which the morbid effects only exiſt, but in the part of the nerve nearer the brain or medullary ſpine, which, in deſcenſion to the diſeaſed part, is interrupted by compreſſion or relaxation of the coats or cellulous intervening ſtructure. It is neceſſary, therefore, to reflect on the principal nerves and ganglions, their diſtribution to muſcular parts, ligaments, &c., in what part the nervous interruption is ſeated, or many remedies will be very improperly applied to paralytic affections: this has always been, and is now a ſtriking defect to intelligent minds in the common treatment of the palſy, and is perhaps a principal cauſe of the ill ſucceſs

which

which medicine experiences in attempting the cure of this diſtreſſing diſorder when recent.

VI. One general rule to aſcertain where the nerve is ſeated, that is interrupted in its office, and which tranſmits its effects to remoter parts, is, to reflect on the diſtribution of the arteries, veins, and lymphatics; for the principal nerves ever accompany the ſanguiferous and lymphatic veſſels.

1. What muſcle or muſcles, tendons, or ligaments, are affected, which occaſion the lameneſs.

2. What nerve or nerves extend their influence to thoſe muſcles, or ligaments, &c., affected with palſy.

3. What is the anatomical direction, whether in the origin, ventricle, or towards the inſertion of muſcles, the arteries, nerves, and lymphatics, penetrate the moving parts; or whether preceding nerves and arteries expend part of their ramifications to the aponeuroſes, tendons, nervous expanſions, ligaments, or *tela celluloſa*, in the interſtices of muſcles, or through all the muſcular fibres. Theſe conſiderations have never yet been accurately attended to, and they require more knowledge in anatomy than any phyſician generally acquires in the common defective modes of education; he ſhould induſtriouſly diſſect, with his own hands, many

ſubjects,

ſubjects, for the arteries, veins, lymphatics, nerves, muſcles, and ligaments; and by this means ſo ſtrongly impreſs on his mind an anatomical knowledge, never to be effaced, but continually apply it to rational practice in the cure of diſeaſes.

The palſy of any member may ariſe from many cauſes.

1. From a relaxation in the cellular ſtructure compoſing the tunics of nerves, or which paſs through all the diviſions and ſub-diviſions of the *faſciculi* or nervous filaments conſtituting the nerve. In this caſe, a laxer coherence of particles, forming the minuteſt fibres and lamina, may be conceived, with a ſerous and leſs coherence in the blood. This may be illuſtrated by the anaſarcous dropſy, where a ſerous ſtate of the blood firſt relaxes the fibres compoſing the cellular ſtructure of human body, next the enlargement of the cells, and reception of ſerum inſtead of adeps, tumor and coldneſs follow in proportion to the abſence or loſs of red particles in the blood.

2. An inſpiſſation or coagulation of the fluids contained in the minuteſt veſſels or cells of the *tela celluloſa*, not only conſtituting the tunics or vagina of nerves, but likewiſe penetrating all through between every moſt minute nervous filament.

3. A

3. A third cauſe may be rationally conceived to exiſt in the coagulation or congeſtion of the oleaginous ſubſtance ſurrounding the vagina of nerves as they paſs through the bony canals from the medullary ſpine.

In laxity, the deficiency of arterial action ſeems to weaken or leſſen the nervous energy or powers: thus the progreſs of the nervous influence, whatever it may be, is prevented, diminiſhed, or obtunded. In the minuteſt cells are depoſited and collected an over-abundance of aërial fluids or vapor; which, inſtead of circulating and continually paſſing from the mouths of the fineſt arteries into the cells, and from the cells into the veins, accumulate in the cells themſelves, as in the anaſarcous dropſy: hence laxity, debility, increaſe of ſerum, coldneſs, weakened action in the arteries, flaccidity, &c.

In inſpiſſation of the finer fluids, it is eaſy to conceive a total obſtruction and reſiſtance to the nervous influence: the effect is then ſimilar to a ligature on a nerve or nerves, which, by compreſſing the medullary ſubſtance, renders all the parts below deſtined to voluntary action no longer able to obey the command of the will. In the diſtorted ſpine, if the medullary ſubſtance be compreſſed, the inferior extremities become paralytic: the ſame happens from

from ſimilar compreſſion of the medullary ſubſtance of nerves, whether artificially, or ariſing from diſeaſe, tumor, ſtricture, &c.

The coagulation or congeſtion of the adeps in the bony channels emerging from the ſpine, may certainly produce ſimilar effects.

Tumors of the lymphatic glands or veſſels may likewiſe compreſs nerves, and occaſion a paralyſis: this happens in the axilla, in the direction of the iliac veſſels within the pelvis, inguen, popliteal veſſels, which diſſections have manifeſted *.

It ſhould be remarked, that in theſe aſſertions, not only what is obvious to the eye, but likewiſe to the magnifying powers of the microſcope, and the chemical changes of the aërial and other human fluids, are received into the *rationale* of paralytic affections.

In any defect of the arterial circulation, ſuch as a dilatation or aneuriſm of the coats of arteries, to which the large arteries, as the aorta, ſubclavian artery, &c., are ſubject; coldneſs and debility, atrophy, and a loſs of action in the muſcles, which receive their branches from either the ſubclavian or axillary artery, are ob-

* See the plate of the lymphatic ſyſtem, with the glands, vaſa inferentia and efferentia of the whole body, in the *Schola Medicinæ univerſalis nova.*

ſerved:

ſerved: transfer theſe effects, by analogical reaſoning, to the minuteſt arteries accompanying the nervous tunics and cellular interſtices and cavities, and then inſenſibility of parts or diminiſhed powers may be eaſily conceived, or obſtructed nervous influence from atonia, &c.

From theſe and ſimilar reaſons and phenomena, the difficulty of curing paralytic diſeaſes will be evident, which ariſes,

1. In the deep ſeat of the diſeaſe, when in the encephalon, or nerves proceeding from the ſpine.

11. The difficulty of applying remedies, although the diſeaſe and its ſeat may be well known, whether it ariſes from laxity in the nerves or tunics, compreſſion from inſpiſſated fluids, lymphatic or other tumors.

111. The impatience common to the afflicted with the palſy, who not knowing the difficulties medicine has to encounter, nor the neceſſity of a long-continued plan of cure, however judiciouſly arranged, patients oftener deliver themſelves to deſpair, than reſolutely perſevere in curative attempts.

After the moſt rational practice in attempting the cure of palſy, the phyſician and patient are not unfrequently diſappointed; yet,

diſcouraging as theſe circumſtances are, the cure is ſometimes effected, and the uſe of paralytic limbs, which had long been rendered uſeleſs, reſtored.

The palſy, which is common to painters in the hands and arms, I have often cured in the following mode:

Plummer's pill has been given from one to two grains three times a day, with the camphorated ſolution, for many months.

The hands and arms have been bathed in a bath compoſed of tepid decoction of horſeradiſh and common ſalt two or three times a day, with friction: the bath covered the elbows, and was continued half an hour or more *bis de die*.

The inteſtines were opened occaſionally by a mild and warm laxative.

In tremors and paralytic affections from the *abuſe* of mercury; lac ſulphur and magneſia firſt, and tonics afterwards, have removed the diſorder.

In paralytic affections ariſing from an obſtructed lymphatic ſyſtem, mineral alteratives are proper, with volatiles, unleſs there be heat or plethora; under which circumſtances neutraliſed ſalts may be proper, with penetrating alteratives, provided they agree with the ſtomach.

In

In caſes where an inſpiſſation of the adeps ſurrounding the nervous tunics or fluids in the *tela celluloſa* is ſuppoſed, warm bathing at Bath is proper, and antimonials, in ſmall doſes, united to cinnabar, long continued, particularly in warm weather.

Four things are neceſſary in producing the deſired effects, when inſpiſſated or condenſed fluids are the cauſes of palſy.

1. A reliquefaction of the inſpiſſated fluids or adeps.

2. An abſorption of the rediſſolved fluids or adeps which had been accumulated.

3. A reſtoration of the relaxed parts, whether muſcles, tendons, or ligaments, after the diſcuſſion of the attenuated fluids.

4. The retranſmiſſion of the nervous influence through the formerly obſtructed parts, whether muſcles, tendons, aponeuroſes, ligaments, &c. and all through to the different nerves, continued in various diſtributions of the paralytic member or members.

It is rational to ſuppoſe, that the nervous influence will again paſs eaſier in muſcles than tendons, in tendons than in ligaments; therefore leſs ſucceſs is to be expected when the ligaments are relaxed, &c.

The abſorption of the fluids can only be ex-

pected when the laminæ forming the very minute cells are not deſtroyed, nor the abſorbing powers, or veſſels obliterated.

The reſtoration of the relaxed parts, and the free acceſs of the nervous influence through the part diſeaſed to all its diſtant nervous filaments, depend on the ſtate of the nerves, and their aptneſs to receive their neceſſary impreſſions, or powers.

If the nervous filaments, and their veſſels, going to muſcles, tendons, and ligaments, be withered, ſhrunk, or obliterated, which moſt probably happens when an atrophy or waſting of the limb is the conſequence of palſy, in which the cells of the cellular ſtructure frequently coaleſce, then no great expectation of ſucceſs can be formed. If, on the contrary, the nerves and their filaments are pervious to their former influence, and circulate arterial or aërial celluloſe fluids, then ſucceſs may crown rational attempts to relieve the palſy.

Internally, for theſe purpoſes, remedies which penetrate, remove obſtruction, and act with vigor on the vaſcular ſyſtem, are proper; ſuch are antimonials, in ſmall doſes, repeated at proper diſtances, joined with light mercurials, as alteratives; volatiles, antiſpaſmodics, and gen-

tle

tle ſtimulants; baths compoſed of decoction of horſe-radiſh and volatile ſalts, frictions with muſtard, and the electric ſtream, may be tried; which, if even unſucceſsful, the patient will not be rendered worſe by ſuch attempts. It ſhould, however, be remarked, that mineral preparations cannot always be adminiſtered to the paralytic, as they occaſion tremors, &c., in which inſtances they are improper.

In the palſy of different parts, the cure, in general, ſhould be ſimilar to the foregoing.

In the muſcles of the face, electricity, volatile liniments, and tonics, have proved ſucceſsful.

In the palſy of the eyelid, cold bathing on the center of the eyebrow, frictions, and volatiles, have cured the diſorder.

In the *gutta ſerena* I have ſucceeded by giving mineral alteratives internally; fumigations of cinnabar have been received up the noſe, or in the *canthus internus* of the eye; a lotion compoſed of one grain of *merc. corroſ. ſub.* to eight ounces of *aq. roſar.* was uſed with gentle friction.

Theſe methods, and a dry diet, have removed impediments, the forerunners of *gutta ſerena*; and

and in ſome few inſtances ſight has been reſtored where patients were afflicted with total blindneſs.

The palſy of the tongue has been removed by chewing ginger, pellitory root, and ſuch like ſtimulants, in conjunction with the general remedies.

In the arms, by the electrical ſtream, by baths of ſalt and tepid water, or volatile ſalts diſſolved in tepid water, bliſters, frictions, liniments; all to be applied above the part apparently diſeaſed, and the frictions ſhould be applied downwards to the extremities of the fingers; recollecting that the principal brachial nerve runs from the axilla on the inner ſide of the arm to the elbow joint, paſſing under the baſilic vein; from thence there are two diviſions, one tending towards the wriſt and thumb, the other towards the little finger. In theſe directions, therefore, the applications ſhould be particularly uſed; but, in order that nothing may be omitted, the whole arm in every part may be rubbed.

In the thighs and legs, the principal veſſels and nerves take a direction from near the middle of the groin on the inſide of the thigh obliquely towards the inner ſide of the knee; there, a little above the ham, they divide, and

run

run deeply under the muſcles, well guarded from external wounds or injuries. In outward applications the ſame modes may be obſerved as in the arms.

If the hand or foot be only paralytic, then the frictions and remedies ſhould be uſed all round, and above the wriſt with *manuluvia*, as recommended to the inferior extremities.

In all caſes of palſy from an *atonia*, or relaxation of the nervous tunics or cellular ſtructure, &c., braçers, bark, ſteel, Hoffman's anodyne liquor, acid, or ſweet elixir of vitriol, chalybeate, Bath waters, cold bath, either univerſal or partial, the ſhower bath, &c., are moſt likely to avail.

In palſies complicated with chronic rheumatiſm, or old venereal complaints, the cure has been produced by James's powder to about four or ſix grains, or lately by the *pulvis antimonialis* of the New London Pharmacopœia, to three or four grains, and a quarter of a grain of calomel, twice or thrice in the day, formed into a pill with any convenient conſerve.

In venereal caſes, a ſmall quantity of mercurial ointment with camphor has been rubbed into the extremities every other night.

Theſe

Theſe methods, and avoiding acids or ſalted foods, &c., have ſucceeded in ſeveral inſtances amongſt the poor who attended on my public mornings. In addition, however, to the modes, I have always recommended baths of warm water and common ſalt to either hands and arms, or legs and feet.

It muſt be confeſſed, from all the obſervations experience has furniſhed me with, that the palſy, when of long duration, is rarely cured.

In the atrophy, or waſting of the limbs, the adeps in the cells of the *tela celluloſa* is conſumed; the cells are obliterated, not only in the interſtices of muſcles, but likewiſe between the fibres of muſcles. The loſs of the adeps is not ſupplied, as in other caſes, by aërial or other fluids, by which the cells preſerve their diſtention, and the arm or leg its ſize, but the whole member waſtes, the arterial ſyſtem diminiſhes in power, the lateral ſurfaces of the minute cells, as well as larger, being no longer filled, they collapſe, and the original form is changed; the nervous influence is impeded, diminiſhed, or loſt, on muſcles, tendons, and ligaments, which are no longer pervious to the force of aërial fluids, arterial action, or nervous influence.

This

This minute inveſtigation of the palſy may, at ſome future period, throw a conſiderable light on the ſubject: it is, in general, the reſult of anatomical inquiries; and though it appears a melancholy deſcription, yet it is juſter than thoſe deluſive doctrines which raiſe great expectations, and end in painful diſappointment.

THE END.

Ipsa Lombardia [illegible]

[illegible]

[illegible] ene sub-vidit nec non vinegia
monas. abdisparia mentes quod
a moribus valde quod dicit
Animal altibus monere dictatu
neoro contradicendo adhuc
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