

History of the Walcheren remittent, commencing with its advanced state, when most dangerous & destructive to the soldiery : and concluding with its very favourable termination ... Also the sequels, anaemia, acholia, Aegyptian ophthalmia &c.; &c.; elucidated by dissections / by Thomas Wright.

Contributors

Wright, Thomas, active 1811.
Physical Society (Guy's Hospital)
King's College London

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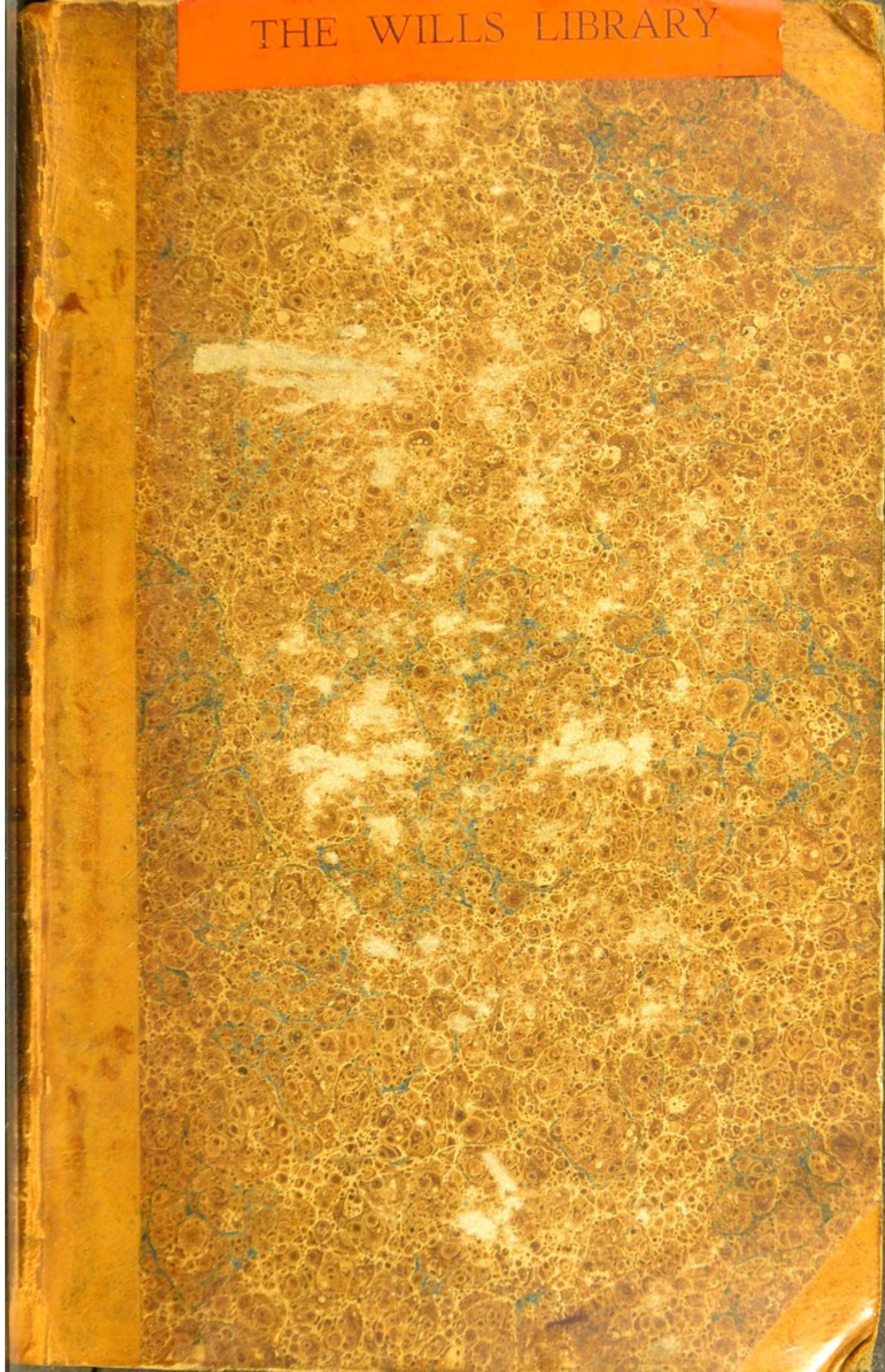
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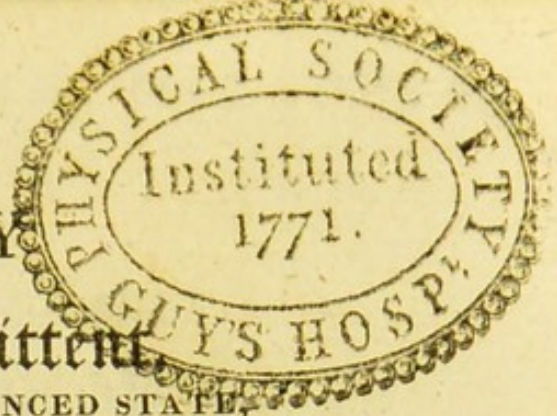
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THE HISTORY OF

HISTORY

OF THE

REPUBLIC OF VENICE



HISTORY
OF THE
Malcheren Remittent
COMMENCING WITH ITS ADVANCED STATE,
WHEN
MOST DANGEROUS & DESTRUCTIVE
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AND CONCLUDING WITH
ITS VERY FAVOURABLE TERMINATION,

EFFECTED BY THOSE MEANS

FIRST PROPOSED

BY THE AUTHOR ONLY

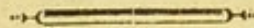
TO THE
Legislature, and to the Late and Present
ARMY MEDICAL BOARD;

WITH THE MORBID APPEARANCES ON DISSECTION.

ALSO

*The Sequels, Anaemia, Acholia, Ægyptian Op-
thalmia &c. &c.*

ELUCIDATED BY DISSECTIONS.



Atque ea vis omnis morborum, pestilisque,
Aut extrinsecus, ut nubes nebulaeque superne
Per cælum veniunt, aut ipsa sæpe coorta
De terra surgunt, ubi putrorem humida nacta'st,
Intempestivis pluviisque, et solibus icta.
Nonne vides etiam cæli novitate et aquarum
Tentari, procul a patria quicunque domoque
Adveniunt? ideo quia longe discrepat aer.
Nam quid Britannum cælum differre putamus,
Et quod in Egypto'st, qua mundi claudicat axis?
Quidve quod in Ponto'st differre a Gadibus, atque
Usque ad nigra virum, percoctaque sæcla calore?
Tum color et facies hominum distare videntur
Largiter, et morbi generatim sæcla tenere.

Lucretii Lib. VI.



BY THOMAS WRIGHT, M.D. & M.R.I.A.
LICENTIATE OF THE KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRE-
LAND. FORMERLY PRESIDENT OF THE MED. SOC. T. C. D. HONORARY
MEMBER OF THE PHYSICAL SOCIETY OF GUY'S. AND LATELY TEMPORARY
PHYSICIAN TO THE FORCES &c.

LONDON:

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the Author; and Sold by Mr. Callow, Bookseller, Crown-court,
Brewer-street, Soho.

1811.



TO
THE RIGHT HONOURABLE,
FRANCIS EARL OF MOIRA,
BARON HUNTINGDON, HASTINGS, BERTREAU, MOLINS,
DE HOMET, RAWDON &c.
PRIVY COUNSELLOR,
ONE OF THE COUNCIL OF HIS ROYAL HIGHNESS
THE PRINCE REGENT,
FORMERLY ADJUTANT GENERAL TO THE
BRITISH ARMY IN AMERICA,
AND
LATELY MASTER GENERAL OF THE ORDNANCE,
CONSTABLE OF THE TOWER,
General in the Army,
M.R.I.A. F.R.S. & A.S.
&c. &c. &c.

MY LORD,

*I offer not these sheets for the honour I
derive from your noble Patronage—so much, as
that the misfortunes of our fellow Soldiers who
maintain our rank among Empires—misfortunes*

which I profess to alleviate, are all known to you; many of them you have personally endured, and safely can you assert, that of the chances of death by war, that in the Field is what the Patriot Soldier feels to be least of all; this you have escaped, and may the Laurel of Peace long flourish on that brow where War has placed it; for those precious tears which early bedewed your manly cheek for your Brother's fall in battle, were a pious tribute paid to Heaven, and which purchased this immunity.*

To men who have not suffered—to men who have not bled—light is the value paid for wealth and station; these men cannot appreciate the worth of practical remarks, drawn from such dangerous sources of experience; but you, my Lord, know how to appreciate them; to you my Dedication is no idle sound, nor the relief of your suffering fellow-creatures an ostentatious effort.

* He was so desperately wounded in Virginia, that his thigh was amputated on board the Hospital Ship, where the Author had the melancholy task of mitigating his almost superfluous sufferings, since thus mutilated, his youthfull career was protracted to a short span.

Still tempered with humanity has the Hero's duty ever been, nor is it less heroic, when God has bestowed the meed of civil and of military policy—To administer justice with mercy : what glory in the thought !

Pillar of the State—where has not your support been felt—since first you wielded the truncheon on that far dissevered Western shore—to uphold the Royal Father's right of inheritance—until you covered his princely Sons with your Ægis ? Fortunate lesson to Statesmen—that you have outstripped præcept in the example you afford, founding on the broad base of popular affection—that Pyramid, on which, with the fire of your patriotic zeal, you have lighted up such sacrifices to friendship and to loyalty.

Long may the King—the Regent—and the Nation prosper by your counsel ; fearless may they brave the World's great foe, confiding in your arms ; and great should be their gratitude : nor will your humanity think less of mine, that I can

barely offer this blighted sprig of Tinus to bedeck
that brow, for which the Virtues had entwined
their civic Garlands.*

THOMAS WRIGHT.

* **Laurus Tinus**—a laurel which flowers in winter.

PREFACE;

Detailing the Situation, and local advantages of

HARWICH,

AS AN

HOSPITAL,

AND

Place of Recovery, &c.

THE promontory of Harwich in Essex forms a bold point which may be called a hill, including between it and the opposite low tongue of land on which Landguard in Sussex stands, a spacious harbour, one of the best in this island, and effectually sheltered from the storms of the South West; an open bay spreads out beyond to the South East, and exposes the

promontory to half the compass, while the land rising into gentle hills crowned with lofty groves, shelter it about from every storm; yet strange to relate, the only artificial advantage bestowed on this delectable place, is the construction of two Lighthouses, to render the entrance of the port practicable by night; though by an expence very trifling compared to the national advantage to be derived, from providing a secure retreat for ships from the North sea, or steering up the Channel, which would be wrecked by attempting to gain Yarmcuth Roads, where even at anchor they are insecure, this Harbour might be cleared of the rocky obstructions which prevent ships of war of the line from attempting it in tempestuous weather: the other great and local advantages are sufficient to render such a rendezvous desirable for ships, troops, &c. as there is a great Fishery; and when Ships are at anchor, even should the gale force those which are ill found from their moorings, which, as the muddy bottom is so tenacious rarely happens, and

they drive ashore; even there they lie in safety—a circumstance which should invite the Underwriters to publish an accurate Chart of this Port through prudent attention to their own interests, were motives of humanity out of the case.

Interior to the Port of Harwich proper, are two other placid and extensive harbours called, the one Stour River, extending to the town of Manningtree, twelve miles West; the other Orwell River as many miles North to Ipswich; to which large and deep vessels are frequently seen steering as it were into the bosom of the country; nor can a more lively landscape be any where presented, than the cultivated fields with their numerous habitations, towns and mills, tastefully dispersed, in picturesque view of promontory beyond promontory to the bound of sight on these beautiful waters, nor contemplated without astonishment at the real insignificance of the ancient Borough of Harwich, amid such natural advantages, calculated to invite trade if none had ever before existed

there; one remarkable instance will sufficiently exemplify either the abandoned torpitude of its inhabitants, or that of the proprietors of this ancient walled town—there is not a *Well* in this Borough, nor any supply of fresh water except from the clouds.

On the chearful hill over Harwich had been constructed a Barrack for Infantry, &c. the soil forming a natural declivity by which the drains of rain water, of damp, and filth is provided for, should the artificial drains and sewers be obstructed; the houses or huts are of wood, and disjunct, with wide intervening ways, every apartment opening to the street without communication with any other, and every room ventilated through the ceiling, so that the light non-respirable airs must be perpetually borne up while the heavier flow off below; at least during summer; so that with due attention to cleanliness and fumigation if contagion could not be obviated, yet the insulated state of each ward would prohibit the progress of it, and if I may judge of the future by the past,

render it impossible; for in the Autumn of 1809, it was the most free from contagion of any Hospital containing so many and such forlorn cases on record in any country; except possibly those of Vienna, constructed on the same plan precisely, by order of the Imperial Joseph, and by the advice of his Board of Health, from which the Engineer or Architect at Harwich took his, no less a proof of his extensive reading than sound judgment; the result has confirmed this opinion of both, for when in 1746 or 7 Sir JOHN PRINGLE, arrived at Harwich with the sick of the whole army, an army of above forty thousand and not unhealthy; therefore the sick bearing a very different relation to the whole, from the selection at Harwich, where the most dangerous cases only were received; We at Harwich only lost one in six of these miserales, while the celebrated Pringle lost *one in five* in his Hospital at Ipswich, a fact I should fear to advance had I not the Return in my possession subscribed by the proper officers.

The ventilation is so very perfect on this exposed promontory, that from the sea every wind from E. S. E. to S. W. brushes away the vapors, and as the prevailing winds are between or from these points, particularly the S. W. varying sometimes to the northward of West, without hedge, tree, or bank, no noxious vapours can rest for a moment except in a calm, at which time only, fogs occur; for the slightest breeze from the land or sea immediately disperses them—nor is a fog ever induced by any wind, though marshes extend inland to a considerable distance on the River Orwell West, and even to windward on the bay between Harwich and the Naze, but as the marsh miasmata fly before every breeze, and the ground is so high that the heavier and more noxious are driven along the surface of the sea as the lowest level, they are quickly dispersed; and as the land winds from the North seldom blow, nonrespirable vapours produced inland rarely prevail long enough to become injurious, and yet these have very insalubrious and permanent influ-

ence within the inclosures of the immediate vicinity, even at the boundary of the very limited district of the Ordnance land on which the Hospital or Barrack stands, for the inhabitants within these limits of not more than 40 or 50 acres, enjoy a salutary exemption from endemial Intermittent, while those under the shade of their own trees a few paces beyond the boundary line are all aguish, as, general all the inhabitants of the alluvial soil are, which forms the great eastern plain of England.

The waters though hard are not brackish, as they rise from a rock, the substratum of the country, which as I conceive is a Trapp very near what Mr. Kirwan has called Kalp, blue and containing a much more considerable proportion of Argill, much less lime, some iron and manganese, it is not calcinable into white lime but a pulverulent grey cinder, which when ground, mixed with the silicious sand of the shore and wetted, sets like Tarras, forming a cement to all appearance much

more firm than the original rock it is prepared from: This rock is stratified and forms the bottom of the sea, breaks irregularly and into parallelpipeds, the strata dip a little inland to the North, and abutt to the sea; the wells therefore so very judiciously sunk into its substance must afford inexhaustible springs, as the infiltration between the strata must be perpetual, of which the engineer who has constructed the defensive works on this coast has availed himself, and thereby supplied perpetual sources of clear water unimpregnated with the animal or vegetable recrements of the soil.

It was in this port, distant about a hundred miles from Flushing, and open to every breeze which enabled a ship to steer for England, the Physician and Surgeon General very wisely chose, and the Government humanely ordered, the Barrack to be converted into an Hospital for the reception of the sick.

Here the Transports on their arrival were immediately visited by the Physicians, and

and the worst cases only selected, who could not but at imminent hazard of life bear further transmission: the remaining people were then divided into two descriptions—one of men able to bear a journey safely being convalescent, were seldom marched, general sent in covered waggons twenty miles off to Colchester; the remaining part incapable of any exertion with safety, being usually ill of intermittent, were conveyed in wherries to Ipswich as the tides and weather permitted; and thus by the successive arrival of thousands, Harwich became the Lazaretto to the army of Walcheren: how accurately this designation suited the reality, may be learned from the Report of the Physician General, who was present at the first landing from the Transports, from which—the instant they cast anchor, twenty bodies were sent ashore for interment, and of the deplorable cases landed, eighteen died in one morning in transitu on the biers, nearly as many expired in the night in the Hospital, and every night after a considerable

number, but perpetually decreasing: the pallid looks of the breathing spectres were so ghastly, they exhibited a type of the resurrection; and their unhappy attendants, too few to administer relief to half the number, through fatigue, were marked with melancholy little calculated to communicate hope or confidence to the sick; and thus tiresome days were succeeded by disturbed nights, banishing from the minds of the Physicians the resources which a memory less incumbered might have supplied; truly the state of the Hospital was so alarming that the people of the vicinity fled, and the backwardness of professional men to attend was such, that the assistants who were with difficulty provided, were worse than negligent—some even refused to do the duty, and if they could not effect their retreat to Flushing, did not scruple to take leave to retire: this accounts for the difficulties and want of support felt but too severely by the Temporary Physicians, in a duty which few would undertake, more avoided, while among the attend-

ants several were to be considered as incumbrances rather than Assistants; those of merit had compassion only to stimulate them to exertion, for so lightly did they hold the pay assigned them, that they appeared desirous of quitting the attendance without it, and I believe few have received it; nor can it ever happen otherwise, unless the Inspectors shall be permitted to return gentlemen for pay in proportion to their merits; for the ardour of humanity is damped in such cases, seeing that the worthless and even criminal are just as well recompensed as the intelligent and deserving.

In these circumstances there were incentives of higher value than mere emolument required, to bear the Physicians through the fatigues of duty; and the Temporary Physicians considering that they were the trustees of a Generous Nation, sent to discharge the debt of gratitude to her brave defenders, *felt* the delicacy of their situation, and faithfully did they perform their task: the weight of this may be judged of from the result.

The buildings occupied by the sick accommodated about four hundred, to which were attached four Physicians; of which number one retired to die, a second took ill during his attendance and I lament to find he has never since been well, a third having a small proportion of patients to which he confined his attention singly got through very well, and notwithstanding there were *four* Physicians, and that I had *one third* of the patients to attend, which amounted sometimes to thirty beyond my proportion, and that even these thirty were as many as any Physician could attend with advantage when so ill, yet I drudged through to the last; a conclusion I had the less cause to hope for, as I had the misfortune to be inoculated with the matter of febrile perspiration, which at the time terminated locally in Antrax like the plague, nor was it until some weeks had elapsed after the healing of it, that the consequences appeared, which have driven me into retirement for a recovery, which after fifteen months is not perfected, and during which I have had ample occasion to draw upon




that fund of self-approbation which provides a reward within, for acts of virtuous patriotism.

How the medical gentlemen of Deal fared I have not learned; those of Flushing suffered by sickness far beyond those of any other description, and more died in proportion; at one time seven had fallen victims, not to their duty but to their over-exertions in the service; and many more have since died unnoticed in their retirements, and on foreign service; to this it is no doubt owing, that an Endemic the most destructive since our armies quitted St. Domingo, has remained so long undescribed by any person who has had real experience of the subject; for I leave those accounts taken from the slighter occurrences, in comparatively strong patients in the convalescent Hospitals, out of the question, however judiciously treated; wherefore I cannot but set a high value on the few facts detailed by Mr. Dawson, as they are taken from life, at that interesting period of the disease at which my observations were made, whence I may fairly pronounce them clinical.

that kind of self-approbation which provides
a reward within the scope of virtuous passions.
How the medical gentlemen of Paris failed
have not learned; those of Flushing suffered
in sickness far beyond those of any other
description, and more died in proportion; at
one time scarce had fallen victims not to their
duty, but to their over-exertions in the service;
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St. Domingo, has remained so long unobserved
by any person who has had real experience of
the subject: for I have those accounts taken
from the slightest occurrences in comparatively
strong patients in the continental hospitals
out of the question, however judiciously
treated; whereas I cannot but set a high
value on the few facts detailed by Mr. Brown
and others are taken from life, at that inter-
esting period of the disease at which many
examples were made, whence I may fairly
conclude their clinical value.

TO THE READER.



THE author feels concern at the method of the following details being less precise, than the time he has taken for the revision of his materials would seem to admit of; his apology is contained in the Text; yet it may be right to premise, that through the whole summer of 1810, his head was so engaged in consequence of the infection he contracted on duty, that he was incapable of resuming his task until winter, and his MSS. has since remained four months with the Printer, in consequence of the Letter-founder's delay in casting the Type; which circumstances will also account for the tenor of several passages written in the spring of 1810 remaining unaltered.

ERRATA.

- Page vii line iv for Sussex read Suffolk.
 xiii line 10, *for general read generally.*
 xviii l. 6, from bottom, *for Antrax read Anthrax.*
 xxxix l. 3, *dele as well*
 9 l. 1, *for quâ read quâ*
 12 l. 14, *after relapse, add into Continent fever.*
 14 l. 1, *for preceeding read preceding.*
 34 l. 3, *for proprinetur read propinetur.*
 39 l. 7 from bottom, *after it, read and were dissected.*
 59 note, l. 5, *for similar read analagous.*
 76 l. 3 from bottom, *read hypochondrium.*
 86, *under Ordo 2, read MARASMUS.*
 88 l. 3 from bottom, *for itno read into.*
 96 l. 2, *after though read florid.*
 103 l. 15, *after absorption read or decomposition.*
 112 l. 5, *after subject read to.*
 145 l. last but one, *for panacca read panacea.*
 152 l. 13, *for text read test.*
 158 l. 12, *for has read have.*
 163 l. 5, *for erysipilas read erysipelas*
 172 l. 3 from bottom, *read Hydrorachitis.*
 176 l. 9 from bottom, *for encrasius read eucrasius*
 180 l. 2 from bottom, *prefix that.*
 181 l. 13, *for teligit read tetigit.*
 191 l. 8, *for dislocation read dislocation.*
 195 l. 3 from bottom, *for so read to.*
 198 l. 6 from bottom, *for there read their.*
 210 l. 7, *after attributed dele to.*
 212 l. 4, *for extravacated read extravasated.*
 213 l. 6, *to indication add s.*
 217 l. 4, *dele and. l. 12, read pertinacity.*
 223 l. 8. *read sanitate*
 250 l. 15, *read Pennsylvania.*
 279 l. 10, *read opportunity.*
 288 l. 8 from bottom, *read treated.*
 297 l. last, *read esse.*
 298 l. 11 and 12, *read recrudescant.*
 305, the distinction of a separate Chapter for Enteritis is a
 mistake, as it forms part of the subject of Dysentery.
 310 l. 2, *after proved that, for this disease read dysentery.*
 In the character of Enteritis Sp. 1, *read circa umbilicum.*
 323 l. 5, *read Chylification.*
 326 l. 3 from bottom, *read malingeringers.*

*ADDRESS to the Members of the Legislature,
who feel a real interest in the welfare of thou-
sands of our brave Soldiers, who have suffered
by sickness at Walcheren, but who have not yet
escaped its fatal influence though considered to
be Convalescents.*

*THIS Address to the Legislature I printed
and distributed at my own expence on my re-
turn in January 1810, from Harwich General
Hospital; it is now republished as a part, and
as circumstances have since turned up, an im-
portant part of the History of the Walcheren
Endemic, since the measures here recommended
were immediately put in practice and have been
attended with success far beyond expectation :
As I have elsewhere stated, that I presented it
to The Late Army Medical Board previous to
their dissolution, it is but justice to explain,*

that they received it with polite attention at least, and could not execute the measure here recommended during their short continuance in office : this task therefore remained for the adoption of the Present Board, and fortunate it is that they did adopt it, as the result will make appear—since no other project has been supplied either before or since, for the recovery of the numerous Convalescents of the Army ; and since—This, maturely proposed—and solely by the Author ; has restored so many thousands of the best soldiers, to health and to the service.

*Sed si tantus amor casus cognoscere nostros,
Et breviter Trojæ supremum audire laborem :
Quamquam Animus meminisse horret, luctuque refugit ;
Incipiam.*

ÆNEID. LIB. 2.

AMONG you Noble and Gentlemen are several who have endured hunger, thirst, disease,

and wounds, in the service of your king and country; nor are those who have not, the less entitled to the gratitude of the nation, since it would have been a relief to their deeper concern, could they have partook of the dangers of the field with our heroic soldiery: but the best interests of society forbade it; thrice happy that society in which persons distinguished by such patriotic feelings preside, and watch over the destiny of their suffering countrymen and warriors. Among such there is but little reason to doubt, that more than a few of every party will be found, to bestow even in this early stage of the pending *Enquiry*, a ready attention, to the procrastinated sorrows of the brave men who are the subjects of it: this will be to prove by acts and not by words, that while the causes of national misfortunes are sought after, they are sought with the benevolent intention of relieving them when they occur, as well as providing against such calamitous occurrences in future: that these are your feelings, and these your notions on this

interesting topic, no man living has any right to doubt; nor, that you will immediately make the case of the thousands who have recovered (as gratuitously presumed) from the Walcheren or marsh autumnal fever, your own. No: these debilitated sufferers in the cause of their king and country, will not be abandoned with broken constitutions to a more wretched, because a more lingering fate, than lately awaited them in the noxious Fens of Zeeland; and if their case has not been first taken into consideration by the wisdom of the nation, it is only because it has not been formally laid before them; but the strength of their claim, is the support your humanity will afford it; no matter therefore how feeble their advocate.

Obtrusive as applications at this juncture must be to members immersed in the momentous concerns of Legislation, I would have preferred the alternative, of stating the claims of the convalescents of the army, *viva voce*, to some of those distinguished characters to whom I

have the honour of being known; but I doubted if the representation of an individual, far from being in an imposing situation in society, could have given that weight to an application, which a subject thus publicly offered to the consideration of a whole nation, in a great measure challenges; it is thus forced into light, and every day receives additional elucidation by reflection from every benevolent commentator.

The writer of this takes leave by way of excuse, least he might be thought officious, to state; that he too has been in the field, and has had more than his share of the labour, the anxiety, and the watching, which sickness and devastation bring down upon an army in an enemy's country, for he too has been a sufferer; as a professional man, reiterated experience has fully satisfied him, that a serious malady in a soldier, unless his climate and constitution be changed, will never be cured: but on the other hand, experience has also

convinced him, that if both be maturely attended to; the pining devotee of his country may yet be restored to defend it with his veteran ability, and this of a certainty; and that he thus becomes incalculably valuable to the nation as a Seasoned Veteran.

There are among you Noble and Gentlemen, many who have gathered their lessons of useful example from the History of the warlike Romans, the best writers among whom were soldiers; by them the name of Veteran is sufficiently appreciated, but never too highly. How will you men of letters be astonished; how much more ought you to be alarmed, to learn, however new and extraordinary to your ears and understanding—that a Veteran is now the least valuable of any soldier in the army. But sad and multitudinous will be the proofs, if not before, *certainly in the next spring*, unless precautionary measures of preservation be adopted immediately. Sad prognostic! but it is now

necessary to speak as a physycian; were it only to avoid the imputation of being silent when such grave national subjects may be safely approached, by men of a profession, the practice of which is humanity.

The Walcheren convalescents who have been afflicted with the marsh autumnal remittent, the nature of which is to hold on for months, and at length *intermit*; have in thousands of living instances had *three, four*, and some even *five* relapses; of whom several, though not many, have died; this disease, therefore, is not mortal *per se*. To qualify the opinion therefore which I have pronounced of the fatal issue to the convalescent Soldiery, it may be excused in me, that I plead my opportunities in support of it; for, that I have returned, thirty odd years after my commencement in the service (a lapse of time not idly or frivolously spent) to take the care of that Lazaretto of the army at Harwich; where with assiduous attention, broken rest, and what ability I possessed, I toiled day and night among the living;

nor rejected for the danger or disgust, the careful inspection of the morbid bodies of the dead; and if these opportunities could prove instructive, I may confidently assert; that the Autumaal Remittent of Walcheren, will pursue the same undeviating course, that all the fevers of this constitution ever have; and consequently that they will relapse in Spring and Autumn; and also, that if occasion be furnished by the wayward fortunes of the life militant, they will relapse every Spring and Autumn untill they terminate with life; unless chance or accident may induce Dysentery, or some other acute Camp-disease which in this debilitated constitution will accelerate the crisis of fate. The inveteracy of this disease may be conceived of, by the knowledge of a fact learned by repeated and careful dissections; that there is not a drop of blood circulating in the veins of these convalescents*—that the whole mass of blood has been decomposed—and

* This disease is by physicians called *anaemia* that is, the *bloodless disease*.

that the fluid which now fills their blood vessels, in as far as it is deficient of the constituents of healthy blood gives rise of necessity to various other diseases: but what is most of all unfortunate in this state is; that it has happened, that one regiment *at least*, had been brought over apparently healthy, after some delay in Walcheren; and the Autumnal Remittent at home, and in the Barracks of Colchester, in some time after, ensued, with all the characteristic symptoms of the Walcheren disease, and went through the whole regiment very nearly, if not absolutely. The consequence evidently is, that this climate, in the ordinary circumstances of a soldier's life, is not restorative in this case, and that to re-establish the convalescents from Zealand, they must be removed to some more open and airy situation, and climate warmer and drier than this of England: for if this be true, as alledged of the *well men* from Zealand, *a fortiori*, the fate of the convalescents is inevitable; but of the truth of the

instance quoted, every man may satisfy himself, by inquiry of the Inspector, now resident in Colchester.* This example is in unison with the well-known fact, that the Irish peasantry a hardy race, are perpetually afflicted with the ague in the close level country of the middle and east of England; just as the English themselves of the midland counties are affected by residence in the fens of Lincolnshire.

The life of a soldier, his duties and habits, and still more the interminable nature of his service when enlisted for life, or for a term exceeding the probable continuance of human life, keep up pertinacious maladies by perpetual excitements; while in his mind he is ever a stranger to the sweet consolations of kindred and home, and thus he is abandoned to a desponding state, when so unfortunate as to become a valetudinarian; so that he gives himself up a prey to despair, and even courts

* Doctor Shapter whose unqualified approbation I have been honoured with in this and other instances of my duty as Temporary Physician to the Forces.

dissolution as his only mean of release from sickness and sorrow. How different would the prospect be, if he could, like the Prussian soldier, take his yearly *Semestier*, or furlough for the summer or harvest; or even eke out a septennial servitude in convalescence to die at home at last; or take a year from it to recover, and serve one in compensation at the conclusion:—Such kind consideration for our brave Veterans, would rivet their affections to the Service, and never fail to induce a re-enlistment; for, what other occupation would afford such advantages! Is it not strange that philosophical men—who are perpetually observant—who see human nature in all its affections perpetually wrought upon in mass, do not perceive that a mixture of rewards and benevolences is absolutely essential to the maintenance of a generous patriotism, in the defenders of the state! how much more extraordinary is it, that they do not feel the urgent necessity of exercising their benevolence, in compassion to their sick and sorrowing soldiery, who have

endured worse than death in bodily sufferings for their country. But I recal this supposition as unfair—for the case is new, and the *decision is yet to prove* my apprehensions groundless. Oh, that you could have accompanied me to the sick bed of the dying veteran—that you could have received the dictation of his pious will—that you could have penned down his manly sorrow for the absence of his far-distant friends—that you could have with me measured the possible duration of life, by his feeble pulse, by the stimulating cordial, by the restoration of vital heat to his limbs; and then seen, as I have, his hopeless existence renewed by the arrival of his unexpected partner, sister, or friend—had you then felt his languid heart beat with unusual joy, and seen all his griefs vanish before the consolations of friendship, you would have converted the Hospital into a Caravansera in requital for such grateful restitutions: however, since you have not seen these consolations—respect them; and be assured the recital wants but names, and that

the names are in my possession to identify the individuals.—To you it belongs to repeat, to multiply, to universalize them, by giving up the convalescents of Walcheren to the tender solitudes of their friends and relations.

I am fully aware, however, that the release of thousands of men who will *possibly* recover without this measure, is at this juncture inexpedient, if not impracticable: I submit, though myself a sufferer, to the state necessity; but there are palliative measures to which no objection can reasonably be offered.—Let these be adopted: let the convalescents universally be shipped for some temperate and steady climate, where the vicissitudes and intemperances of weather are not known or felt, as Malta; but above all Madeira, where fruits and other restoratives abound, and which, while they invite appetite, do not surfeit;—let physicians, instructed by acquaintance with the diseases which are yet to ensue in the convalescent state accompany them;—let them relieve

Soldiers, who, already seasoned, are therefore more fit for foreign and active duty; and this important measure only amounts in fact to a *change* of Quarters; but in reality saves to the state its veteran defenders, by giving a new spring to life—by creating an order of mercy in the Army. If Lisbon be retained by our troops, all the opulent valetudinarians of England will cry out—send them there; and a double advantage would ensue: for if necessary, they might on quitting, hold on their course to Sicily, or Malta.

There are but two descriptions of effectives with whom an Officer of enterprize can operate against an enemy, viz. Natives of every climate, whose constitutions are formed by nature for endurance, which aliens cannot bear; as the Hindoos and Caffres in India, and the Whites in temperate climates: of these there are two other distinctions to be made; seasoned veterans become hard by exercise and habit; and recruits in unabated vigor of life and health. An army newly

formed or recruited, is in its youth, vigorous, enterprizing and rash; though fit for great exertions, these will only debilitate it the sooner, unless tempered by the more cool and determined bravery of the veteran warriors, who repress the intemperate, animate the timid, and in scenes the more formidable, because new and really terrible, inspire confidence where hesitation would prove destructive. The loss of such men is the loss of the martial spirit of the nation, for courage is infectious, and so is cowardice too; we are all formed by example. How truly consolatory is that which You Noble and Gentlemen may give to the Empire—of the veteran renewing his life and his victories, by the grateful providence of his country: and by your wisdom and care such noble examples will never more be wanting. What a happy alternative, from the weakly frame of a youthful valetudinarian, renovating his protracted ague from season to season, and by any casual cold

taken on his nightly duty as Centinel, untill his body prematurely moulders into earth; how happy to see him flourish anew in the genial warmth of a milder climate, and recollect that he owes his redintegrated existence to the parental superintendence of his King and Country.

Assuredly it must happen, and even these pages shew it, that unless the Legislature take up this subject in this point of view, *there will not be a Veteran Battalion in the Army*; for I hope no one in his senses will impose, or suffer such an imposition on the safety of the Empire, as to allow *Battalions of Invalids* to be mistaken (however misnamed) for *Veteran Battalions*.

Optima quæque dies miseris mortalibus ævi
Prima fugit: subeunt morbi, tristisque senectus:
Et labor, et duræ rapit inclementia mortis.
Semper erunt, quorum mutari corpora malis:
Semper enim refice, ac ne post amissa requiras.

The Army Medical Board, consisting of
Gentlemen who had visited every climate and

had experience of the diseases incident to European residents, were well qualified to chuse a destination for convalescents who were perpetually relapsing in this country, and worst of all in Essex where thousands of the soldiery lately returned from Zealand, had been unfortunately stationed, more from necessity or convenience than choice; the causes of such relapses I had calculated upon while resident at Harwich, and even remonstrated with the person whose province it was to judge of the result, and in writing, with the hope of persuading him to retain the convalescents of Harwich Hospital there, where they were rapidly recovering, in circumstances the most favourable and salubrious, but which were not attainable in Colchester or Woodbridge, to which they were in my opinion unnecessarily transmitted: I shewed that Harwich, from localities (detailed in the preface to the History of the Walcheren disease) as a place of recovery, was far preferable to those situations, and that the patients transmitted to them from Harwich,

were sent from better to worse, and their prospect of recovery thereby materially diminished; nor did I venture on this remonstrance, untill the number of sick had been reduced by recovery to a residue of the worst cases, which had resisted the efficacy of regimen and remedies most obstinately, but still held out the best hopes of ultimate convalescence, and which I have had the satisfaction of learning have not been disappointed, where advantages similar to those subsisting at Harwich have conspired to aid the attentions of the Physician.

The measure of EMIGRATION on a great scale being novel; it was judiciously determined to put it in practice so generally, that a *General Conclusion* from experience should be at once deducible from the premises, to remain as a law to guide posterity in all such exigencies; accordingly Troops were embarked for Ireland, Gibraltar, and Malta, in Europe; for Nova Scotia, in America; for Ceuta, and the Cape of Good Hope in Africa; and for Madras in Asia.

The transportation which might have been

presupposed salutary, more especially when the climate was thereby changed for a milder and warmer one, turned out unfortunate as well in this case as well as when the convalescents were sent north-west to Halifax as a cooler climate, yet when landed at Madras, and at Halifax, they recovered almost equally well.

Madras is a dry sandy shore, though so much hotter than Europe, and this than America, the fevers there are typhoid, and hepatitis the endemic, but no prevalent remittent as in the West Indies; the necessaries of life are cheap and diet good, and there the convalescents recovered without relapses and perfectly; thus those men who would certainly have died slowly and miserably in England, have not only recovered, but are now become more serviceable than if they had no previous disease, since they have been seasoned or acclimated in the East Indies &c. one of them being in this result as good as three recruits: and thus a new principle of recruiting the Forces in our Colonies is struck out, since men unserviceable at home

(if not too old) may be renovated by emigration to a milder climate, and a vast saving in pensions ensue, as well as gain in services rendered to the state by its Veterans.

At Halifax in the opposite extreme— an inhospitable climate, the convalescents recovered as well as in any other and without relapses; there the soil is dry, the necessaries of life (particularly fish) abound, incentives to excess are wanting, yet the air is the most foggy in the world, the summer temperate, and the winter severe and long, but dry: arguing from the natural fitness of constitutions to climate, the inhabitants of Scotland and of the north of Ireland should necessarily flourish in Nova Scotia, and probably still more north of it, as in the Islands of the Bay of Fundy, to which the fogs of Newfoundland do not extend; it must be evident however that invalids advanced in life, could not endure the cold of the winter there, that young men only could, and therefore they have recovered so well: during the American War, a parallel instance occurred;

there were five thousand troops stationed in Rhode Island for years, and so healthy were they, that the Hospital was known to have been shut up in the winter, there not being a sick man in the place.

Ireland is still more mild in climate than Rhode Island, there being many seasons there without the cold of winter, and this rather a continuation of spring and autumn with perpetual vegetation of the more hardy plants, which renders vegetable food, milk and butter very cheap, and in the greater ports, as Cork &c. animal food and fish abound; the climate is much more moist than England, the winds more boisterous, the country more open and perfectly ventilated as at Harwich, phthisis rare, intermittents seldom even sporadic, typhus the fever of the country, and remittents seldom seen: the circumstances therefore which promised recovery were all to be found in Ireland without the heat of Madras or cold of Halifax, yet the convalescents recovered not merely as well in both those

situations, but better in Halifax than Ireland, and in Ireland full as well as at Madras.

These results mark the great national importance of this Migratory Experiment, for by trying so many climates, that measure which is salutary may hereafter be combined with that which is expedient, and every point be gained.

If Madras and Halifax be taken as the extremes of situation and climate, it follows that Gibraltar and Malta form the means, where the probability of a still more favourable result might be presumed upon; but experience has determined otherwise, for the convalescents were subject not only to perpetual relapses, but were very obnoxious to the endemic diseases even at Ceuta considered so salubrious by rich valetudinarians.

To Sicily none were sent, therefore, if the hot and confined garrisons of Gibraltar and Malta, be not subject to the diseases of Minorca, of the affirmative of which no evidence has been

hitherto given; to the want of restoratives must be attributed the unfavourable issue: Sicily is not marked by any endemic, and though the commanding officer there found it necessary to restrain inebriation even by disgrace, the troops have nevertheless maintained their health and activity. The RESTORATIVE PLAN therefore which I have insisted on in the treatment of the convalescents from Walcheren, as founded on inductions from symptoms in life, and from morbid appearances in death, stands now happily recommended and by experiments no less decisive than universal, and so immediately as to connect cause with effect, from the outset to the termination of the disease.

Nor can I let this opportunity pass of paying tribute to that experience combined with discrimination, which has thus happily for the nation and the cause of humanity seized with such promptitude, the occasion of restoring so many thousands of our brave soldiery to

health and to their country ; even while I lament the loss of such patronage as that of the physician and surgeon general to that profession, which gave Harvey, Locke, Gregory, Keill, and a long et cetera of practical philosophers to society, men whose profession from the days of Hippocrates, even though his oath (the most noble testimonial of humanity) be no longer administered, has ever been exercised towards the unfortunate with care and compassion, a profession—of which, were the lives of many existing professors to be offered to the public, the philanthropy of a Howard might well be considered to have been dressed in borrowed plumage ; for what day passes that those active duties of humanity so piously performed by him, are not incessantly repeated by the physician, often unattended by that repose necessary to refit the wearied faculties for necessary exertion, and too often beyond the ability of the man to bear up against, but in no situation so unfortunately destructive as in the exigencies of

an army on service, nor ever more sadly exemplified than among the Medical Staff at Walcheren.

In every country in Europe but this, there has been for centuries a Board of Health, a superintendence of science divested of prejudice, and ready to exercise its combined and salutary efficacy, whenever the misfortunes of society or the calls of humanity summon to so sacred a duty; to constitute such a Board it is obvious that a few Physicians of any class, much less those of the Army who have by their duties been long separated from the converse of the scientific improvers of human Institutions, can not exclusively constitute a competent Tribunal, before which copious geographical, geological, meteorological, chemical, medical and other observations are to be laid, maturely considered and conclusions elicited, which shall not be narrow nor ostentatious, nor affecting skill under the mask of oracular obscurity; but comprehensive, intelligible, and instructive to the meanest capacity.

A Society such as is here contemplated, and such as exists in all other Christian countries of Europe, amounts to nothing less than a *Royal Society*; and what more generous or noble task ever occupied that Society, than the investigation of the causes of human misery, with the charitable intention of relieving them? they alone possess all the requisites for the constitution of such a body, and were they to sit in deliberation on the nature and causes of so great a calamity, as that destructive fever which extinguished our armies in St. Domingo, desolated cities in America, and still remains imperfectly described, its causes hidden, and cure empirical; they would be compelled to confess, that a greater mass of evidence than that afforded by the Physicians who have written on the subject, should be adduced to enable them to form any conclusions, which might be general and instructive.

Of such a Board it is obvious that the most learned physicians &c. would form of necessity an essential part, and that the physician and

surgeon general could not be excluded, their general information on the subjects to be inquired into, constituting an eminent body of improved experimental knowledge; while the military Physicians would by local and particular experience, guide their attention, satisfy their inquiries, fill up and supply details, and shew by specific information how their measures might apply or be applied in every country or climate; in short whatever might be their part in the deliberative, these should be the pilots of the active department, nor is it conceivable how they could be dispensed with.

That a single person has been sometimes found to possess most of the requisites to this great task, and to have them by chance combined with opportunity, is certain; as the works of Sir John Pringle evince; but how rare a phænomenon? no rational man can be content therefore that such important and interesting concerns are abandoned to such a chance; the thanks however of society are

justly due to the distinguished characters who lately managed the Army Medical Department, for the judicious accession of such learned and promising Physicians as they added to the Staff, and upon whom it may be fairly supposed, the example of the celebrated Pringle will have due influence; what a happy result for the nation—if the science and patronage of the late had been combined with the experience of the present truly Executive Board; a combination which would form an abridgement of that Board of Health, which the policy of all other civilized nations has found most efficaciously instrumental in assuaging, if not preventing, those very calamities which this country, subsisting as it were by foreign enterprize, is so eminently obnoxious to.

HISTORY
OF THE
Walcheren Remittent Fever,

IN ITS ADVANCED STATE,

When most destructive and dangerous to the

SOLDIERY.

ONE original instance only of this fever appeared at Harwich, during my residence there, from October inclusive to January; and this in one, out of eight of the servants, who had been taken ill of fevers, in consequence of their assiduous attention to the sick under my care—Of these, six had been caused by long watching and considerable fatigue; a seventh by cold; and, notwithstanding my belief that the eighth was the

effect of specific contagion, I am not convinced; as the chief support of this notion is, that the patient (a woman) contracted a fever, precisely similar to the Autumnal Remittent, in the Ward in which she was attending two recent cases, at the instant ill of this disease; for which fever no other sufficient cause could be assigned in her case, none other being then present.

This woman was of middle age, thin habit, and healthy, not much if at all oppressed by her duty, and as little predisposed as any one could be; unless so far as the female is more susceptible of impressions than the male; as was exemplified in these eight, six of whom were females, and far from being on equal terms with the males in fatigue; as the female attendants always had a comparatively trifling task.

She complained little, before the appearance of encreased heat with quick pulse, the former not remarkably greater than natural, but, as always happened when the skin was dry, a stinging heat shot into the finger; thirst,

tongue dry, head somewhat confused and uneasy, but not painful, belly regular, bad rest. 2nd. day, no remission, pulse somewhat accelerated, however a general sweat followed the exhibition of antimonials (Pulv. Jacobi gr. iij. for a dose) without vomiting or purging; an anodyne at night. 3rd. day fever continued, though she was relieved in every particular, the sweat profuse and general, took an aperient in the day, an anodyne at night. 4th day an evident remission, the pulse still quick, sweating very profuse; no medicine. 5th day, profuse sweat, bowels free, with a perfect intermission; but, fearing to disturb the natural formation of intermittent, I gave no bark, though no case could afford a more favourable opportunity. 6th day, pulse rapidly quick and weak, so as to be very alarming. I had to this instant also forbore from the exhibition of wine, to satisfy myself of the necessity or otherwise for it, as there had been indirect hints given, that in the opinion of other Physicians, *not those in attendance*, the quantity of wine administered.

in the relapses, was in many instances too great: I hailed this opportunity for an *experimentum crucis*, and ordered her eight ounces of excellent Port, which, diluted with an equal quantity of water, she drank during the afternoon; when, finding her pulse had abated much of its quickness, I repeated the wine; and on the 7th day she was free from fever, but *remarkably weak*, though she had no fastidious affection of her stomach, lived on the ordinary diet, had not sweated very profusely for so long a time, nor purged beyond what she was considerably able to bear, and necessarily, to obviate costiveness, which would have attended the administration of an opiate; nor were any other evacuations indicated or promoted from the commencement. The febrile state had stolen on her in the outset, and the *debility* also toward the conclusion, which had perpetually been characteristic of this constitution: the intermission also was evolved by nature, unless nine grains of James's powder in three doses, be a sufficient

cause, which cannot be assumed, though it certainly promoted, if not induced, that general and cooling perspiration which attends a natural remission. But the incipient bilious character of Autumnal fever was absent, and so were its exciting causes, for this was an occurrence of winter, but a mild moist season, and rather a prolongation of autumn. I took (or possibly mistook) this for the Walcheren fever, and if it be otherwise determined by more experienced judges, I still know no sufficient cause to assign for it but contagion; and this the more confidently, as two young strong men, one very ill, had but lately been admitted, relapsed, and cured, in her ward: the worse patient had the disease in an exquisite state; in him it was original at the time of admission, and he was barely convalescent when the nurse took ill; supposing, however, (as I did) this to be an instance of contagion, it is not proved; consequently, the conclusion is only in favour of the suspicion, *that contagion did subsist in some circumstances, tho'*

not generally; and, appealing to experience, I know of no reason which can be adduced to combat the assertion, that *any given fever*, (pure Synocha of Stahl excepted), may *be infectious*; but to appeal to popular opinion, even Hectic (phthisical) is believed to be so; but were the question determinable in proof of contagion, I still hold that it would have been equally unknown after some time, in the circumstances and situation of the Hospital at Harwich; and have this strong additional support of my belief, viz. That in a similar situation on *Charlestown Neck*, (at the siege) though in all other circumstances more unfavourable to health, the contagion of the Typhus icterodes was totally suppressed or destroyed, by careful attention to ordinary means.

It must not be omitted that the other Physicians were (if determined on this point) averse from the admission of contagion; but I have on the other hand learned by report, that the Physicians at Deal, a situation by

no means so healthful as Harwich, believed in the existence of contagion; nor can I forbear hazarding a conjecture, that the proof of my opinion may have appeared in some of the convalescent Barracks; all of which were far inferior to that of Harwich, as a place of recovery.

Sir JOHN PRINGLE, has repeatedly stated that the fever of Zealand was contagious, when the Hospital was crowded, and the contagion was imported to Ipswich Hospital, where the mortality was very great in his time: the mildness and moderation, however, of *this Autumnal Camp Fever*, the most general ever known in any army, is, in this particular, perfectly remarkable; since the very existence of contagion among so many thousand fever patients is generally doubted; and in all other particulars I have the assurance of Doctor Faulkner (whose humane attention to the difficulties which have been too long permitted to endanger the lives of our commissioned Officers, has done him such honour, (that the

Fever was really mild, manageable, and easily curable at the commencement, if adequate attendance could have been had; nor did he find any necessity for instructions on this subject, beyond what PRINGLE's Diseases of the Army furnished him with, the utility of which his proper experience attested in every particular, and I have had full confirmation of his accuracy since, if any could be required, in the reports of others.

However, not having within the limits of my practice met any conclusive proofs of the reality of contagion as a cause, or effect of this Fever, I shall omit it in the character, and confine myself strictly to the circumstances which multitudinous observation has furnished me with.

CLASSIS *Pyrexiae*
 ORDO *Febris*
 GENUS (*vel*
 SECTIO) REMITTENS.*

* Jure merito inter Genera vel Sectiones febrium recensetur Remittens, quoniam earundem gravissima & omnium

F. exacerbationibus quâ vehementia quâ diuturnitate insignioribus, imis cum virium tum symptomatum remissionibus, periodicè alternantibus.

Species. Typhus icterodes Auctorum, Tri-tæophyes, Hemitritæa.

F. continua remittens.

F. quotidiana continua.

F. Paludum.

F. remittens biliosa.

Causos (Hippocr.) & Hemitritæus Auctorum.

F. phlegmatica periodica.

Synochus Paludum autumnalis diuturnus, progressu quotidianis sæpissime, tertianis rarius, rarissimeque quartanis paroxysmis exacerbescens: e causa levissima recidivus.

Symptoms. The alternation and occurrence of rigours and heats precede, but not so remarkably as in other fevers, and though they may return on the 2nd or even 3rd day, yet

exquisitissima, nunquam sub forma continuæ continentis, sed eum typo remittente sibi proprio & naturali nunquam non conspicienda.

the heat, thirst, quick pulse, dry skin, white tongue, and heaviness of head continue, and the more certainly if the tongue and skin remain dry, with such mobility of stomach as to be easily affected, though no nausea were present; bowels sometimes confined, much more frequently lax; which symptoms held in general unabated for a few days, forming the *Epacme* of the more mild state of fever; after which, late evening exacerbations followed; but if no sweat or remission ensued in the night, or toward the morning, sleep was banished, the head ached, the tongue became dry at the margin, and loaded in the middle to the base with curdlike white saburra, and in some cases brown, but this only when very acute, in which, after a few days, if the fever still encreased, it changed into a blackish brown crust and chapped, the head-ache keeping pace with these changes, and ending in delirium with partial sweats, as on the forehead, &c. or none at all, while the pulse was continually accelerated, and a stinging heat



pierced the finger in feeling it, the bowels were sometimes, though rarely obstinately costive, but very frequently affected with profuse watry Diarrhæa—the most destructive symptom of this fever, which was often seen to encrease, until the patient, unconscious of it, voided his excrements in bed—the rapidity of the pulse still quickening, if possible, to a velocity almost incredible, while distinct, and only before death became vermicular, but never intermitting, and the delirium continued without abatement until the vital powers failed.

In many, if not most cases with or without evening exacerbation during the *Epacme*, the skin being soft, and the tongue though white; a sweat ensued, seldom naturally, generally by artificial means, profuse and universal; the head-ache ceased at night, sleep ensued, and the early morning brought a remission from all symptoms, but with extreme debility; frequently however the white fur on the tongue though moist, and heaviness of head remained

in a great degree; the night brought on exacerbation, and again the symptoms remitted toward morning; the hot fits thus though severe were successively abridged by the sweat breaking out maturely, and longer remissions ensued until the Quotidian Type or more probably double Tertian, became fully evolved; in this state the fever was known to continue or be kept up by relapses into continued fever, or simple relapse after some cessation for months, and ended in Tertian remittent, which again intermitted at last.

Anticipation and prolongation of paroxysms portended relapse; much more certainly still with watchfulness, foul tongue, and skin dry, and to almost absolute certainty if head-ache were present; beyond all doubt if Diarrhea attended; but in fact no state was secure against relapse.

Head-ache singly, often announced the relapse of fever, if it remitted with the disease there was little to apprehend, if it continued through the remission, delirium was at hand.

The non-appearance of Diaphoresis, Diuresis or Diarrhea, in the decline of paroxysm, portended continued fever.

The quotidian was most precarious even when the paroxysms were perfectly distinct and regular, the quickness of pulse never ceasing, wherefore it was ever prompt to relapse; one of the latest arrivals from Walcheren was a primary quotidian of two months; and even this was very intractable.

Tertian was a late and not very general consequence though frequent, but when the Type appeared distinct, the fever had then attained its most favourable state, and with caution became exquisite; when, if the stomach could bear effectual remedies, a speedy cure followed: primary Tertian was very obstinate.

The most perfect cures followed continued fever, probably in consequence of the constitution being less harrassed—Every approximation to remission was good—Every recession from regularity or typical form was bad, and the greater the deviation the worse—The

slightest rigor preceeding exacerbation was a favourable symptom, unless produced by exposure.

The absence of rigor before exacerbation was bad; the hot fit was salutary but the shorter the better; the sweating stage ever proved lenient, but though it had efficacy disjunctly, yet the regular succession was best, and the interruption of this regularity was generally punished in this fever.

The rigor was trifling, transient, or absent, before the continued fever; considerable or observable in general before Quotidian; very severe before Tertian; and of much the longest continuation before Quartan; the hot fit or exacerbation in continued fever was perpetual during the Epacme, of considerable length if not perpetual in the Quotidian remittent; detetermined in a shorter time and precisely in Tertian; and so trifling in the few instances of Quartan which occurred, that the rigor alone marked them for Quartan Type.

The Immunity of the nervous system, the

exility and distinctness with the velocity of pulse unattended with imminent danger, the promptitude to relapse, the inveterate diarrhæa, the inflammatory diathesis, and the decomposition of the blood, sufficiently distinguished the advanced state of the Walcheren Synochus as it appeared at Harwich, from every other; to which possibly may be added the absence of contagion; as to its Type, the manifestly prevailing one was Quotidian—with strong even violent evening exacerbations—the earlier the more distinct and febrile; in some the quickness of pulse continued for six or seven weeks; and though intermittents were quite common, yet the prevalence of the remittent character could not escape the most inattentive observer, when exacerbations as distinct as in intermittents harrassed hundreds of patients at the same instant, and this consecutively from October inclusively to January; the whole Hospital being in a state of exacerbation every evening.

Notwithstanding the very easy transition of

Types, the three fundamental fevers were very easily distinguished, and yet there was cause to regret that this was not sufficiently attended to in several instances, for by treating it too early as Intermittent many relapses were produced, the danger of this result however abated every day as the season became cooler.

The Physician had little necessity to exercise, his discernment therefore, in forming a Diagnosis in this fever, though it utterly belied Cullen's definition of Synochus (*sed tanto plus oneris, quanto veniæ minus*); for it was not Synocha—it was not Typhus, it never began as Synocha, nor ever ended as Typhus; nor did one case of Typhus, as I firmly believe, occur in the Hospital from the opening of it to this hour—whatever the Returns may have set forth; but those Returns were seldom drawn up by the Physicians, who were overpowered with other business, and obliged to commit minor concerns to their Assistants. In this opinion of the total absence of Typhus,

I am not singular; for my ingenious and indefatigable colleague, DR. LAFFAN, is as fully convinced of this truth; yet we are both prepared to meet contradiction; for we have known the fevers we were decidedly convinced were not Typhus, to have been called, and returned as such; nor did any symptom common to Typhus and this appear, except and *in a very few instances* brown or black tongue, and that the brown slime which loaded it, being easily separated, covered the front teeth.

So remarkably prone to continue is this disease, and a febrile constitution is so firmly established by it, no patient once afflicted by it can be considered safe from relapse, to a certainty for five months, (that being the term of my acquaintance with it) possibly for more; and obeying still the natural tendency of all autumnal remittents, and even intermittents in all the latitudes of variable climates, there can be no doubt entertained, that the ensuing Spring and Autumn will reproduce it in the

intermittent form ; if it cease there, the event will be unexpectedly fortunate for the recurrence of such diseases every Spring and Autumn is so universal, that in North America the natives look on it in many situations as unavoidable ; and so do the poorer descriptions of inhabitants in all such situations—as for example, in Walcheren.*

Unfortunately this prognostic has been but too well verified already for the future welfare of our Army ; and farther, that the climate of England has not a salutary influence ; at

* This subject I endeavoured to impress on the minds of the Officers I had the honor of communicating with at Harwich, and who either from humanity or personal sufferings felt themselves concerned for the fate of their men, and to learn what means could be adopted for their recovery : to answer their enquiries, and acquit myself of a duty I was bound to by compassion, I addressed a Memorial to both Houses of Parliament, in January 1810, and presented to the late and present ARMY MEDICAL BOARD ; to the last, with the agreeable consideration, that the same conclusions from the same experience, occupied the minds of this board, and ensured me the approbation of men whom duty and humanity equally actuate in their arduous office.

least not sufficiently alterative to counteract and obliterate this morbid constitution; for healthy regiments, (as I have it from Doctor PATRICK, an authority I must ever respect) brought over without sickness from Walcheren and quartered in Colchester, were universally seized with the continued remittent of Walcheren in its characteristic form, and the sequel was the same as at Walcheren and Harwich; so that no proof was wanting to ascertain the identity.

In addition to the permanency of this Febrile Diathesis, the universality and the uniformity of effect establishes the uniformity of the cause or causes, as I may in conformity to custom designate those conditions of natural things called *Nonnaturals*, with regard to the human body.

As to diet considered as a material cause of disease, the soldiery at Walcheren lived not very differently from what they did at home, for their means of procuring food necessarily limited their provision, and induced great

sameness either in eatables or drinkables when plunder was impracticable: Diet therefore as a cause, or prædisponent, can no more be admitted at Walcheren, than a few leagues from thence as on the East of England; for the comparatively few instances of sickness the result of excess, are as nothing.

Over-exertions in military operations, want of natural rest after them, want of defensive covering while asleep on the wet earth and in air supersaturated with vapor, constant inspiration of this air, and depression of the mind from whatever cause; or from all together, but very probably this last had the least effect of any: these were the material causes of the continued Remittent Fever of Walcheren.

As to over-exertions they are unavoidable, and cannot be provided against; the *consequences* are what require attention; for if the Soldier be not as far as practicable maintained in full vigour during his labour, which at a siege is incredibly great, since his existence depends on the rapidity of his defensive con-

structions, he must return to his camp fatigued to the utmost, where, if as happened in Zealand, he then lies on the wet soil in an atmosphere of watry vapor, with insufficient covering and no dry medium to defend him from the damp ground, nor any invigorating cordial or diet after, to restore his exhausted strength; *he sleeps, by which* the natural temperature of his body as in all cases is lowered some degrees below the standard 97° , and with it the *vis vitæ*; then the atmosphere being surcharged with vapor, which increases the proportion of non-respirable air—which amounts to the same thing as diminishing the proportion of oxygen, this source of vital heat is not only deteriorated, but less oxygen is inhaled at every inspiration, and thus the conjunct influence of fatigue, of sleep, of damp air in itself a good conductor of heat—and of damp earth still a better (both applied in sleep), with the subtraction of the oxygen air—operate so powerfully to reduce the vital heat, and vital powers; that on waking—every object around

will be found to bear a *relative noxious influence** to the animal œconomy; in consequence of which all those ordinary objects, salutary or innocuous in health, hold the relative force and influence of Exciting Causes; and the lower the *vis vitæ* the nearer to extinction, should any extraordinary excitement take

* Thus it is that a healthy person bears the ordinary temperature of his chamber without injury, while awake, and even any change would prove unpleasant, yet if he happen to fall asleep in it without additional clothing, he immediately catches cold (i. e. fevers) and this from the cause here assigned; for in sleep it is certain that the temperature of the body is reduced below the standard, so that from the waking (or watching) stimulus some degrees of heat are subtracted by sleep; very few are required above or below the standard to produce injury; for 4° or 5° of increase constitute fever, so that if the temperature fall 4° or 5° below the standard of health by sleep, by damp, and by fatigue combined to lower the *vis vitæ*, all exterior objects thenceforth are in the predicament of exciting causes (*Potentie nocentes*) not only rousing, but urging on fever by an excess of stimulus equal to the excess which is sufficient to produce fever in a healthy state: How much more powerfully therefore in a body weakened by such debilitating causes—and causes which remain perpetually operative? An example probably will set this matter in a more striking point of view than any reasoning. When Doctor SOLANDER, Captain COOK, and some more of those enterprizing circumnavigators were on

place in this predicament ; or (what is equivalent to it) if any *ordinary exertion* be required, such being beyond what a languid body can bear ; more certainly still if frequently repeated in this dejected state ; as unfortunately happened too often at Flushing, where the same corps unrelieved, performed the entire operations of a siege.

shore at Terra del Fuego, in the southern hemisphere, they were overtaken by a snow storm ; the Doctor, aware of the danger in that most inhospitable of all climates, explained the fact of the body giving out its heat, and being colder during sleep than while awake, and enjoined them not to give way to drowsiness, for if they should fall asleep they would inevitably die ; however some did sleep, as the intense cold had the effect of making them drowsy, and they died ; one only excepted, who fortunately was awakened in a very short time, much injured in strength and health, while those who kept on the alert were safe. It is precisely in point also to notice the effect of the Cold Bath—if used as a bath, that is while its tonic effect continues, it invigorates, but if prolonged until it proves sedative, then it sickens ; or more accurately, it lowers the *vis vitæ*, until the external causes induce fever, by their relative excess of stimulus : thus the poison of a viper will kill a small animal, a dog for instance, but not a man or an ox : precisely so will ordinary objects stimulate a *well man's* nerves, muscles, &c. to healthy action, but his *debilitated nerves and muscles* to feverish action.

The combined influence of surrounding irritants actuating the body all day, produced a maximum of irritation toward night, or exacerbation; and again the cessation of their influence (partial) by night, permitted a remission toward the morning: a course so obsequious to the controul of external causes, cannot fail to prove how much the body had bent beneath their accumulated influences; and therefore how little, that from within, or *vis medicatrix* governed the stages of this disease; in which animal life seems to have been reduced to the state of vegetable life—the altered being contracting its petals as it were, and shutting in its flowers during the quiet of night; and expanding them only when actuated by the stimulation of external causes, during the day: and thus it was, that under the unabating influence of exciting causes, this fever loitered on from week to week, and when at length the constitution incapacitated by debility, ceased to afford a febrile reaction, a temporary convalescence

ensued; and when strength permitted, the heart and arteries again obeyed the causes, and renewed the fever—which proceeded as before, but seldom long in the continent state before the Quotidian type was resumed to hold a more tedious course: this inveteracy constituted at length a *Febrile Diathesis*, by which, or in consequence of which, the operations of the animal œconomy became less perfect, digestion slow, assimilation imperfect; therefore as the healthy fluids became effete—crude fluids succeeded, for the constituents of blood were not found in the heart and great vessels in dissection; the mass of blood being crude, the secreted fluids would necessarily be so; and all the vessels universally stimulated by new and unappropriated fluids, by which an unhealthy action was necessarily kept up, and perseveringly maintained—until blood were reproduced; or the solids became dull or habituated to their *new* occupant: and this was amply verified, both by observation on the living and dead, at every period from one to five months, of the continuance or recurrence of this fever.

Whether the foregoing Aitiology be received, or rejected, the fact is—and one well known to all Physicians and Surgeons of the Army who served in America, and have since survived; that the inhabitants of the Southern states of North America are universally afflicted with Intermittents resulting from Bilious Remittent and generally recurring in Spring, but more certainly in Autumn, frequently for life, so that the inhabitants of South Carolina, Georgia, and the Florida's are so sickly and so habituated to this dismal malady, they go to their daily employments, work in the field until the accession of Intermittent, and then hasten home as they familiarly say—to *have their fit*; this sickly state is still more inveterate proceeding southward, as in the Bahama's, Trinidad, Demarara and Essequibo, and worst at Surinam; at Cayenne, in the Brazils, and all to the southward, the inhabitants are healthy; but universally, the Spanish and French settlers in America are much more healthy than the English and Dutch.

The proof of an *Inveterascent Febrile Diathesis* even lies at our door, for the natives of Walcheren were known by those of our Army who spoke their language, to be as much and continually afflicted with bilious remittent and intermittent as those of America; and in our convalescents the pulse was ever præternaturally quick, frequently above 100, and not uncommonly 110, with warm sweats every night, and relapses continually.

To support this Diathesis, it was found that with the absence of blood, the viscera abdominal and thoracic, and the brain, were universally sound, the peritonæal and pleuritic coverings were every where white, the liver smaller than natural and discoloured, the spleen enlarged passively without any the slightest appearance of inflammation, and so distended with black blood as to form an enormous Hæmatocele* ; I have since learned, and from no mean

* No better opportunity ever offered than an injection of the spleen in this enlarged state, to exhibit the interior structure of it with advantage.

authority, that other gentlemen mistaking the consistence of the great mass of Crassamentum which distended the spleen, for the Parenchyma of the spleen itself, concluded that some disease of *organic dissolution with tumor* had existed in the spleen, which they were pleased to denominate *Visceral obstruction*, but what this *solvent obstructing matter* may be, remains to be ascertained: in Splenitis, two instances of which occurred at Harwich, in Hepatitis one, and in Peripneumonia, of which we had none that proved mortal, these Viscera were truly obstructed, and *indurated* by the adhæsive inflammation (so called;) but there was no such phenomenon in any one of those distended spleens; beside, the Viscera *universally* were sound, though others were passively distended also; the gall bladder milk white, not containing bile in any case which was recent, but an albuminous transparent yellow fluid with a brown-black sediment, the intestinal canal white and distended with flatus, frequently tympanatic, omentum void of fat; the urinary

bladder seldom without a considerable quantity of urine; the pleura, pericardium and heart, white; yet the heart and great vessels replete with black blood, though the muscles of voluntary motion were of a deep brown-red, except the tongue which was enlarged and white, the prolabium white, and the whole surface more pallid than that of chlorotic women: But the fundamental defect, for it was universal, was the removal, or decomposition of the red blood, and of the gluten, and the buff or fibrin, none of which were to be found, and the proportion of albumen was very small, and continued so for some time after the sick had been plentifully supplied with milk, eggs, and even many with fowls of good quality, such kinds of food not admitting of such imposition as contractors are ever ready to practise on the sick and helpless, nor should the influence of the best wine be omitted, which the patients were provided with by the Surgeon General's personal attention: yet all these operated so slowly in the renovation of

the blood, that in four or five months, and after good *Butcher's meat* had been furnished by the sole attention of the Inspector, Gluten could not be detected in the serum by any test, and when the Albumen was coagulated by heat it gave most part water, but as to Buff or Fibrin it was unseen so far as could be perceived in any case but one.

Thus have I shewn, for that which was the concurrent opinion and conclusion of all who beheld these appearances, as my colleagues Drs. Laffan and Hay—Messrs. Beatty and Gibbon and others of as much discrimination as any set of men, must be true; the only morbid alteration was within the blood-vessels, and therefore to look for another proximate cause if this be sufficient, would be unphilosophical: the test of this would have been the inspection of the bodies of those who died at Colchester of this fever, after they had returned healthy from Zealand* if there were any.

* As by this it might have been learned whether this want of red blood subsisted previous to the appearance of fever, or

Two very important questions arise from the preceding facts and reasonings.

1st. If the absence of blood (properly so called) or Dyscrasy be the predisposing cause: how long a time will the constitution require to recover its sanguineopoietic faculty? and if this time be very long,

2nd. By what means can this restoration of blood be facilitated?

The former has been fully considered and leaves little doubt of the fact, that so long, or so often as the body may be exposed to the same seasons and concomitants as exciting causes, so often and so long will the disease be renewed: but more of this hereafter.

The 2nd. Question may be referred to the method of cure.

A proximate cause is frequently a compound one made up of several remote causes, to not; that is whether it was produced by the remote causes solely, independant of fever; for if so produced then the decomposition of the blood was the proximate cause of this fever, and the noxious applications and abuse of the non-naturals the predisposing causes.

understand *that*, it is therefore necessary to consider *these* distinctly; but that their effect may be the better understood, it may be proper to take a view of the disease which results from this combination and I shall accordingly quote from the journal of one of my Assistants the most *simple* case I have met and a most exquisite instance of this fever.

Case of RICHARD HUNTER, 76th.

Fever of relapse, 19 days continuance, nearly three months since the first attack. Pulse 140 and weak, skin dry, costiveness, troublesome cough, tongue whitish moist and nearly natural. Enema purgans statim injiciatur, et soluta alvo—Haust: anod: capiat.*

20th. reported asleep in the morning (by another Assistant) at visiting time. Evening; found him *in articulo mortis*, yet the pulse could be counted to 158 as well as I could ascertain, being obliged to cease all inquiry until I should

* Træ. Opii

Sp. æth. vitr. comp. sing. Unc. j.

Misturæ camphoratæ unc. xxx. M. dos. unc. ij.

try to restore his strength, by cordials, epithegms, hot bricks to his feet &c. &c. Vinum rubrum lusitanicum propinetur ad libitum cautè inhibito somno donec ad gradum naturalem calor corporis resuscitatus fuerit et ultra.

21st Day, skin natural and tongue, bowels free naturally pulse 108, vinum lb $1\frac{1}{2}$ *—Evening not having any Assistant could take no note. 22nd. day, pulse 96, bowels open, ut heri pergat, et H. anod. h. f. f. 23rd, pulse 110, tongue moist and slightly white, no stool, perspired after the draught. Enema purgans statim subministretur; vinum ut olim. Evening, cough more frequent and distressing with expectoration of blood. Pil. Opii. camphorati h. f. f. perstet usu vini.† 24th, believes he coughed up a pint of blood in the night, no pain in his breast, respiration quite free, skin of natural warmth, tongue moist and clear,

* This wine was so excellent in quality there was not a Soldier in the Hospital who would take spirits of any kind in preference to it.

† Opii gr. j. Camphoræ gr. ij. ft. pil.

2 stools at night, pulse 140, but quite distinct.
 R. Acidi muriatici dr. ij. Aq. puræ lb. fs,
 Sacchari q. s. M. in potu usitato proprinetur
 ad gratiam. 25 and 26 improving continually.
 27th, apparently convalescent, took a very
 gentle purgative next day; cough and sweats
 ensued. 30th, pulse above 100 and weak, had
 been more so; cough troublesome after the
 effect of the H. anod. had ceased; no hæmop-
 toe.* Empl. rubefaciens pectori. modo solito
 detur vinum.—He continued feverish and
 costive to the 33rd day, when his pulse was
 120, cough moderate, continually taking wine,
 glysters and anodynes; at 2 p. m. pulse 100,
 his fever remitted or ceased, and bowels became
 free.

35th day relapsed, pulse 124, skin hot, tongue
 clean and moist, belly regular, H. anod. ad
 duplicem qtm. h. f. f.

37th, free from fever, belly regular.

38th, Pulv. Rhæi. Scr. fs. P. Magnesiae gr. v.

* The case was one of *Diapedesis*, though in conformity to
 our adopted Nosology it is here taken for Hæmoptoe.

M. et adde Olei M. pip. gtts. ij. statim capiat.
 Evening, fever relapsed, pulse 132, watry diarrhæa, R. Tr. Opii gtts L. Sp. Ammoniaë c. dr. j.
 Aq. Menthæ p. unc. ijfs. Sacch. q.s. ft. H. statim sumendus, perstet usu vini.

39th, relieved in every particular ; Rt. wine.
 Evening, pulse 120, skin hot and moist, H. anod. h. f.—Fever again ceased, and he continued improving, but still in so delicate a state that his stomach could admit no medicine that did not contain an anodyne, or Sp. æth. v. c. or wine. After a few days he bore the Decoctum Angusturæ ; his bowels continued regular. 41st day, Cholera ensued with fever, which turned out to be the effect of the Decoct. Angusturæ ill prepared by the Dispensor. On the 51st day pulse 100, though continually recovering. 54th day, got up and walked about a little, by which he was much fatigued, but had no relapse ; this was in January.

By the inconsiderate haste of the Assistant, who took it for granted that the patient slept,

when in fact he lay senseless, and at the verge of dissolution, for I had too much to attend to elsewhere, I found him on my return incapable of swallowing, and so near being irrecoverable that the action of deglutition had ceased, and the first drops of the wine flowed into the glottis and well nigh suffocated him; I then applied a weak Sinapism wetted with Sp. Ammoniaë comp. to the præcordia (for I had no flexible tube or apparatus for administering cordials as in case of Asphyxia, which no Hospital should be without) hot bricks, frictions, Aq. Ammoniaë, &c. until by warming and otherwise stimulating, I with much difficulty succeeded in getting him to swallow wine warmed, sweetened, and animated with Tinct. Cardamomi, then allowing him a respite from our operations; the cordials within and the warmth without enabled him gradually to take a little more at a time, until he was able to drink; and at length when general warmth had been restored, I left him to sleep, which he did profoundly though not long; and had

he slept longer than an hour, my directions were to rouse him and give him wine: by watching the servants at night, they paid him sufficient attention to restore his strength and reduce his fever so much, his heat became natural, and pulse from 140 down to 108 by morning: I am not so sanguine notwithstanding this success, as to attribute it wholly to the wine and cordials, &c. I had given, for the natural remission at least aided my efforts. This case was one of debility in extreme, not to be supported without wine, pure, mixed in drink, and in gruel of sago or some other; how near dissolution he was, the effect of purgatives evince; the first purge he took if I remember right was a teaspoonful of Cream of Tartar, the next a little Rhubarb, yet of these he had nearly expired; and when the influence of the purge ceased, his symptomatic fever ceased also: as to the Hæmoptoe it was passive, and though apparently formidable in quantity, it very little influenced his pulse, so that I considered it to

be chiefly bloody serum, though it jellied in the pot, which proved that gluten had been restored to the blood; yet this was a very loose cruor, or what might be considered a very *weak size*: the escape therefore from colliquative diarrhæa was his greatest escape, for in many of the patients it defied all our remedies, and continued unabated until death: this man was recovering well as I thought—when I ventured to purge him, and had I been as little aware of his danger as on the morning I trusted him to the assistant, he had certainly died, as the increased quickness of pulse to 132 fully testified.

One more remark on this case requires attention; it is the truly extraordinary and entire *exemption* of the *nervous system* from any share in the disease, though in the 4th month of its progress, with a pulse at 158 as I counted, but below the mark, and yet regular; there was no delirium mite, no tremor, no subsultus, nor singultus, no picking at the bed cloaths, no tremor of the tongue nor brown nor black

secretion or saburra or crust on it, no anxiety, sighing, or depression, no heat of the palms, no petechiæ, no efflorescence, no irregularity of pulse, no not *in extremis*, consequently the nervous system was not, but the arterial system was in all cases, and only the arterial affected, or disordered, without exception; and so far in general was delirium from partaking of the nature of delirium mite, that it invariably tended to the phrenitic kind, and was in some instances so violent as to require coercion.

Of Delirium.

Delirium in the ordinary course of this fever commenced with drowsiness, or heaviness increasing to pain, and ultimately to delirium, yet in many cases it appeared suddenly; of the few who died of it, effusion in the ventricles was the cause; which therefore was presumed in all, especially as the pupils were dilated and dimness often attended; the rapid event and acute fever with pain supported the belief of this being inflammatory effusion, yet in the few cases examined, the characteristic appear-

ance of inflammatory crust or fibrin* deposited on the inflamed surface, was wanting; the fever however rose with the delirium, and declined with it, and this attended relapses more certainly than original fever as I believe; and as headache was common among the convalescents, so I had good cause to suspect the flannel caps they were provided with indiscriminately as an hospital dress, for contributing to, if not causing it frequently, and generally found the dismissal of them to relieve headache; of hæmicrania I had one instance; in another case of severe headache the patient complained of the sensation of a ligature round the brain; in others the pain was high up in the forehead, the concomitant delirium perpetual; and in two young men held unabated to the last, one of which only could be considered legitimately febrile, the other having arisen from unnecessary exposure to cold, by the

* It was also wanting in the blood or fluid which supplied the place of blood, and wanting when inflammation was known to have caused death.

officiousness of one of the ward sergeants, to encrease the number of convalescents prematurely; in neither of these was the patient sufficiently rational at any time to complain of pain, they talked incessantly and incoherently, and these are the only instances I have to adduce of the inefficacy of blisters with a suspicion of injury from them in topical affections of the brain; nor were the delirious in the other cases so utterly deranged, for in general the imagination only wandered upon unusual subjects, but was still (though wildly) expressive. Very few of the delirious cases proved mortal, most of them recovered rapidly, and several shewed a strong and long continued propensity to relapse; nor was there a more dangerous supervening symptom than drowsy deep seated headache, pupils somewhat dilated, the patient intractable and sullenly covering himself up though far from being irrational, lying quiet as if asleep, negligent of food or drink, and appearing to feel uneasiness if disturbed, pulse below the natural standard, and skin not hot,

answering morosely and always expressing severity of pain in the head; this however was a rare occurrence yet happened twice in the relapses of one patient, and was cured by stimulation of every sort.

Delirium in very acute fever was less to be apprehended in the commencement; when it supervened at a late period of the fever it was highly dangerous, but in every instance unless speedily relieved, the worst result might be expected.

I never observed in any instance of delirium late or early, that pulsation of the carotids either preceded or accompanied it.

This absence of pulsation of the carotids &c. is convincing of its being truly local, and not owing to any determination to the brain; yet in a few instances this did not make in favor of the patient, though in the many it certainly admitted of more ready and certain relief if mature, than any other delirious affection I had ever seen.

Delirium sometimes ensued in fever without

headache; in one case of relapse, on the 3rd. day, and proved fatal on the 5th.

The sudden appearance of headache in convalescence was a very dangerous symptom, but of another disease to be hereafter treated.

Upon the whole, delirium when severe was a most formidable symptom and in the instances of its severity it was the measure of danger, and was then attended with brown slime on the tongue, and lastly the tongue crusted parched and cleft, so that the hope of recovery rose and fell with delirium.

Two cases of headache occurred of such violence, the patients cried out like maniacs, and appeared really insane, except that their cries were complaints of their excruciating pain; but when spoken to they were found perfectly reasonable, and anxious for relief by any remedy; one had a cough which encreased the pain so much he groaned deeply when urged by it; the other though almost ferocious held his head steadily for embrocations and leeches, and expressed great pleasure on feeling they relieved him.

Delirium intermitting with the paroxysms was neither severe nor frequent; but headache commonly pursued this course, and not without danger of augmentation to delirium.

That species of delirium which though neither ferox nor mild was incessant, proved most insidiously dangerous, especially if attended with foul tongue.

A semidelirious negligence of circumstances as of symptoms and of external matters and attentions &c. sometimes even aversion from them, were as distressing to the attendants, as fatal to the patient.

The frequent and insidious appearance of diseases the sequel of fevers, and in this remittent beyond all others, has fully convinced me that delirium is often more dangerous by the symptoms it conceals, than by those it permits the Physician to detect; of this, Peritonitis is a most striking example, and Enteritis, which frequently were never perceived until dissection gave them to view; to add one other observation to those already adduced, I shall state

that a skilful and learned Physician of my acquaintance, called on me to inspect the body of a patient who had died of Typhus gravior, and of so malignant a cast, that there was sufficient reason to conclude it an importation from the West Indies; we examined the other cavities before inspecting the abdomen, induced thereto by our judgement; when to our no small surprise, we found a considerable serous effusion with many detached coagula, and a firm extensive adhesion of the pritonæal coats of the intestines to the abdominal lining, within which adhesion was a very considerable abscess; nothing of this could have been detected by any symptom, so incessant had been the delirium: I forbear quoting my conjunct authority from motives of friendship, though I have had frequent and abundant cause to believe, the same has happened much oftener to Physicians of greater nominal importance than him. Two of the three Physicians who attend the great Fever Hospital of Dublin, built and endowed by Quakers, have been long of this opinion, which

at least I was instrumental in their adopting, and am happy to find one of them has publicly maintained, in a practical Essay published about 3 years ago, and this by his proper experience.

It would therefore appear to be consonant to reason and experience to admit, that as the vital organs and intestines are actuated unconsciously by the sensorium, so it may be mutually excited to delirium by deranged actions in them. Or, that the Sensorium being in a relatively morbid state of debility, the vital functions by their ordinary actions stimulate it.

Vertigo of some days continuance was observed to precede Phrenitis, and without headache, unless the patient coughed or sneezed.

Watchfulness, if pertinacious, and for which no cause could be discovered, was a bad symptom, delirium being at no great distance.

External or material causes of headache though not perfectly belonging to this subject,

as they marked the extreme susceptibility of the constitution, may be thought worth attention; a patient who complained of tenesmus and was costive, took an ounce of *Oleum Ricini*, by which he was much purged; the symptom ceased on the third day, when headache supervened with dimness and dilated pupil; other mild aperients produced the same effect in other cases.

No case of Coma occurred from October inclusive to January.

Delirium has been shewn to be the symptom next in danger to *Diarrhæa*, in fact it was more so, if the numbers of each were compared; but from the combination, it is a question if any escaped.

The organ of hearing was remarkably exempt from any morbid affection, deafness neither preceded nor followed delirium, nor rustling nor noise in the ears, nor tinnitus aurium, nor intolerance of sound; while the organ of sight was very obnoxious to diseased influences, this I have accounted for in the

proper place; but as to the exemption of the organ of hearing, I have not been able to offer any reasoning, not having any fact to recite whereon to found a conjecture.

The rigor in quotidian was frequently very severe; I had a patient in my care whose fever remitted perfectly, but whose stomach would not bear tonics and died in the rigor of the 2nd paroxysm, after his fever had remitted; from Doctor Patrick I learned that an instance occurred at Colchester to which place none but strong men were transmitted; the former was kept alive by cordials for a whole interval, and would have expired in the first rigor, if I had not administered, though with great difficulty for want of a proper apparatus, such cordials as he could be got to swallow, and applied such warm matters and friction as opportunity permitted: a third patient I rescued from death in the same predicament, by stimulating the throat with æther held on a flannel close to the part, by hot bricks to the hands and feet, and epithegms to the scrobi-

culus cordis, and on his revival, deglutition being perfectly restored, he lived on wine, aromatics, and Angustura, until the next period of exacerbation, when finding the remedies had succeeded, I gave him gravy for food, and he recovered immediately.

The worst propensity attending the quotidian exacerbation, was its promptitude to relapse into continent fever; to this alone must be attributed the obstinacy of the remittent, which was in this form so very unmanageable as to run on for months, ceasing and again relapsing, yet ever holding out hopes of a favorable termination, if the remissions continued to be followed regularly by sweats.

The Tertian form appearing, promised a favourable issue to quotidian, but it did not supervene until the disease had relapsed often, or continued long: when once formed and regular, the difficulty was at an end, for Bark or other tonics produced an easy cure; yet not safe from relapse.

Quartans occurred so seldom and so late in



the season that as the paroxysms did not recur frequently, the rigors in the very few instances noted, might have been the effect of the cold of the weather, and I do not recollect more than a third quartan exacerbation happened in any case.

As to any other periods of fever I am not able to decide, my journals having been always, except in one instance, very imperfect; and at the most interesting opportunity none could be kept, beyond noting the medicine to be continued, for that of immediate necessity was administered while I ordered it, both morning and evening; for which purpose a portable medicine chest and measures, graduated, and others, were provided for each Assistant.

Pringle's period of 9 days may therefore be that of the continued fever at the commencement, but this I am certain of, that the primary fevers brought to Harwich, most frequently exceeded nine, but I cannot aver that they naturally affected a certain period of days.

I consider the majority of these fevers, primary and relapses, to be short while continued, and long when remittent; and again easily curable when intermittent, if the stomach could bear remedies.

The case of the nurse at the commencement, was of seven days continuance, but it was interfered with so as to become an imperfect instance.

Of fourteen cases of continued fever taken indiscriminately, but only on report; the duration and termination were,

2 of Two Weeks,

5 of Three ditto

2 of Four ditto

2 of Five ditto

2 of Seven ditto

1 of Eight ditto.

Of pure Tertian and primary, few instances arrived at Harwich: one of ten weeks had terminated in Zealand.

One of eight.

Some few of seven and under; of short

Tertians there were several instances, but relapsing into Quotidian: the long cases were very obstinate both in their nature, and in their duration, by which the constitution was often broke down, so as to render efficacious remedies hazardous.

Of Quotidian, if a remittent can be accurately so called, the ultimate periods are to me utterly unknown, for they never failed to recur on the slightest provocation, or to run into continent fever.

As to crises they were not even looked for, so unsteady did this fever appear, or so imperfect and unconnected were our opportunities of observing them; few, indeed I believe none of the patients having continued under the care of one and the same Physician through the whole of his disease; as to myself, I was removed at the instant to me most interesting, and when I was near concluding the observations I had been able to make, on above one hundred of the most deplorable cases, which the opportunity had furnished to me: there-

fore I may safely declare that were my services taken for nothing, I would have gladly attended at my own expence to the end, had I known that the saving or withholding of the pay of a Physician, who had freely given up his proper pursuits, to attend to the necessities of the State, was a consideration of œconomy.

But to return to the subject of Crises, I do not so much as recollect the application of the term, except in a few cases of very acute fever, in which the headache and delirium had been very severe, terminating in Apostem of the ear or parotid; it is to be farther observed of the particular cases, that even this salutary result did not prove directly curative, and in one case a relapse was imminent for above a week.

The tongue was less altered in this fever than in any other I had ever seen; I have known it continue clean and moist in many relapses, not observably varying even in the exacerbations; but generally it was white in the middle, and when loaded the saburra was not to be known from curd in appearance, but by its

adhesion ; when the surface was hot and dry the tongue was arid ; in the worst state of fever it became brown in many, but not all ; and sometimes black, loaded with such abundance of dark brown or blackish saburra or slime, that it covered the front teeth, and stuck to the cup or spoon : in this state the tongue was still moist, and was only chapped when deep brown, dry and crusted. Tremor of the tongue never occurred even in the worst cases. A bad taste was so late an occurrence in the season, that the febrile constitution might be said to be terminated for the period.

Bile was rarely produced as a recrement, either by vomit or purge, untill some months of gradual amelioration had passed over, and even the winter solstice ; so that the necessity for vomiting was rare : from Dr. Morewood I learned, that in Zealand, the patients at the periods when vomits were indicated, bore them so badly, as to render the exhibition of them dangerous : but in the advanced state of their recovery at Harwich, when symptoms of sick

stomach appeared, though vomits were found usefull and safe, it happened that no remedy in the *Materia Medica* had been so seldom administered—not from prejudice, for the fact quoted from Dr. Morewood was known to me too late to apply it to practice; so that this abstinence did not arise from the fear of disordering the stomach, by the application of a disproportionate stimulus to a relatively debilitated organ, so often, as from the absence of symptoms requiring emetics.

Idiopathic cholera did not appear at Harwich at any time very distressing; bilious vomitings, and obstinate, happened in very few cases; in many more the vomitings were unaccompanied with bile; the appearance of bile in the stomach did not ensue untill late in December (a very mild winter month) and were sometimes productive of relief, in a few terminated fever, though no considerable quantity was evacuated; but as there was excessive mobility of the intestinal canal *ab initio*, so the presence of a small quantity of bile in the

stomach or intestines was capable of disordering them; the tendency to nausea frequently remained after vomiting, and was very distressing, rendering digestion impossible, as the food was frequently rejected almost immediately; I therefore concluded that the late sickness of the stomach was to be considered as Dyspepsia, and accordingly I treated it with success.

Vomiting in some few late cases attended the paroxysms of remittent, when thus produced by bile, a vomit cured both.

The state of the bowels in the patients of the first landing from Walcheren in September, was very different from that which ensued immediately in October; a change of which I am wholly ignorant except as to the authority on which I give the fact, and which is not to be doubted; at the former time so torpid was the whole system, and the intestines especialy, that purgatives of the most drastic kinds only could move them, and even extraordinary doses: I have had some elucidation of this sub-

ject from dissection; and analogy also leads me to infer, that as in the bilious remittents of America, the absorption of bile induces torpor almost to coma, so the hebetude of this season (September) arose from this cause; this slowness of the bowels, to a certain degree a symptom of fever (though afterwards and commonly remission was attended with diarrhœa, or at least a stool) was so far and unexpectedly overcome by the beginning of October, that several untoward results were required, to correct the previous impression on the minds of the attendants, before conviction was produced, of the danger of inducing fever and hypercatharsis by ordinary purges; Colliquative Diarrhœa became thenceforward the most refractory symptom of fever, and not unfrequently put an end to convalescence; a greater number died of it than of any other symptom or disease, notwithstanding the careful exhibition and varied succession of astringents, anodynes, aromatics, mercurials, &c. &c. in every form the limits of our pharmaceutic provision permitted, and even beyond those limits.

The lax state of the bowels was not so general as to preclude instances of costiveness, which were obstinate, and more dangerous because of the accompanying debility, at this period of the disease; in both which states it was observable, that the stools were commonly liquid, white, frothy and free from bile; yet all were not so, but on the contrary, very dark watry stools were not unusual, though not of a bilious or natural colour.

Diarrhœa frequently commenced, continued and ended without griping, held this course obstinately, and even terminated in *Lientery*, never almost without fever preceding and accompanying it to the last.

The termination in *Dysentery* was very rare, more so than the accession of *Enteritis*, which was perceptible by a dull pain at the umbilical region, rendered evident by the soreness on pressure, and by a diffused uneasiness all over the abdomen; this state of the disease it is to be lamented (as the diarrhœa never abated) was seldom to be discovered but by dissection, when

there were sometimes so many as four Intussusceptions found in the small intestines of one subject, and possibly more, as the handling pulled out the prolapsed folds easily, there being little or no inflammatory adhæSION in this dyscrasy of the blood, to retain them; nor do I believe this symptom ever occurs where there is; for I have dissected a multitude of enteritics of the phlogistic Diathesis, without having seen it in one of them; while in this, the lax state of the intestine and mesentery, yielding to the impulse given by the heavy contents,

Note on Intussusception.

It is an internal Hernia; inflammation first occurs in the semi-tympanitic intestine, by which the mesentery and intestinal tunics are thickened, and the capacity of the intestine much diminished by the formation of an inflamed ring, this is similar to the abdominal ring; now as hernia can not take place outward, unless by a prædisposing laxity of the mesentery, which permits the intestine to drop out, when impelled by accidental or other causes; so the inflamed ring of Enteritis forms the internal aperture, through which the lax intestine with its weighty contents is either dropped or forced, by the diaphragm and abdominal muscles, as in vomiting; when prolapsed, a slight adhesion takes place, but the gentlest pull draws it out, and spoils the appearance.

part was forced into the inferior portion of the cavity with those contents, and from debility it was not able to retreat and recover, but remained hanging in: no fact was more observable than this lax or atonic state of the intestinal canal, which was open and distended as if by a blowpipe from the Cardia to the rectum; and often tympanitic; whereas in phlegmonic inflammation the very surfaces of the intestines are conglutinated, and the cavity closed by bridges shot out from the mesentery, and of great thickness; the appearance of inflammation on the contrary was in this case a rusty iron color, all round an intermediate spot of deep purple in the parts principally affected, which was strikingly remarkable, as contrasted with the white state of the peritonæum every where else, a fact as curious as extraordinary, since there is nothing of the kind in *Morgagni*, in *Lieutaud*, or in *Baily*.

Dysentery was so seldom the conclusion of this Diarrhœa, that in 300 patients at one time, there were but three or four dysenteries, and

rarely more; the experience of all inquirers who have radically examined the *Subject*, was fully confirmed here; for the disease was found to be *Enteritis of the Rectum*; and the Colon never affected in any instance I had seen dissected; Scybalæ rarely appeared in the stools, blood not often, fever the most acute with anguish of countenance, and above all *Tenesmus* with slimy dejections, and sometimes bloody were the symptoms—unless when it pleased the overnice Nosologists, to call the febrile *Diarrhœa* by the name of *Dysenteria alba*; the substance of the rectum was found on dissection to be bloody, deeply purple where highly inflamed, and where gangrenous nearly black, not universal but in a spot; there were no other diseased appearances in the substance, or on the surface; but the cavity was sometimes much constricted, and for some length, in one instance half a foot, extending to the colon, though this shewed no mark of inflammation; and, which was truly remarkable in many cases, the *Valvulæ conni-*

ventes had been obliterated, and the intestine become as smooth as the Jejunum within, but this not in Dysentery particularly.

Strangury was a consequence and sometimes a concomitant of Diarrhœa if profuse and watry; there were few who escaped it, yet though sometimes urgent, no bad effect was ever known to attend it, beyond the painful sensation in rendering the urine and frequently preceding, as well as following, when the disease was the concomitant of other febrile symptoms. In Phrenitis, Cantharides externally applied induced exquisite Cystitis, not more than once.

Ephidrosis was so general that no person escaped it, and fevers very seldom terminated without inducing it, nor was it uncommon to have every patient in a ward bathed in sweat at one time, and my opinion and that of all others I had conversed with was for a long time, that these sweats were colliquative and should be checked; accordingly I had a Potus acidus and P. acidulus ready sweetened to mix

with their wine, and every day for months continued distributing it to the patients; as all the convalescents sweated and all night long, they had an allowance daily, thus I rendered my remedy as universal as the disease within my wards; but found though it checked the sweats in many, it did not in all, and the sweating men recovered as well if not better than those who had ceased to sweat; I thenceforth became indifferent about my remedy, and apprehended the symptom not to be colliquative, and the more so as the sweats were neither cool nor clammy, but in the great majority perfectly natural—as to warmth, though inordinately profuse: I therefore put the matter to the test of experiment. First, I allowed a strong young man, long ill of a very dangerous continued fever to sweat uninterruptedly, only observing to keep his bowels regular, and give him rest, wine, and restorative diet; he sweated on for a fortnight, quite warm, bathed from top to toe, the bed cloaths steaming like a smoke over him, and from his head which

had been kept uncovered to relieve hemicrania, a perfect fog arose; yet he recovered as perfectly as any other patient in the Hospital, and never felt chilly or weak, nor did he lose his flesh, nor relapse, nor fall into Quotidian or Tertian, nor Diarrhœa, but had Strangury alone of all the train of consequent maladies, and this but lightly, so as to be easily relieved: henceforward I no longer feared Ephidrosis.

I next observed that the dropsical patients universally had dry, and some arid skin, and rough, and were cold to the feel—compared to the sweating man; I had tried all the Diuretics on them which the Hospital afforded, yet of those who had been long dropsical, though some were young men, a great proportion died, and without visceral obstruction; so that I felt the more concern, as dissection convinced me their cases were not in their own nature mortal: accordingly in the next untoward case, I put the patient on gravy soup for diet, gave him wine, and sometimes gin diluted, Scr. ij. of Pulv. Ipecac. comp. every

night, in two portions, and a diuretic mixture by day, and though so bad that he was in the utmost danger of suffocation while lying, and even had distressing dyspnœa while sitting; he recovered speedily, but not perfectly so as to become convalescent, before I was reluctantly obliged to resign him: in this man's case I had reason to believe, that the Diuretic became diaphoretic under the influence of the Pulv. Ip. c. for so profuse a sweat I had never before witnessed in a cold climate and season.

I had before in two desperate cases tried this remedy, but the novelty of the experiment though concluded upon by way of induction from facts, deterred me, least it might prove unfortunate, and probably I lost them through my consideration, for I contented myself with exhibiting the sudorific when the dyspnœa was at the worst, therefore I did not reap much instruction, or my patients advantage from my practice.

These were the symptoms of the disease called Ephidrosis, without making any dis-

tion in the multitude of instances which occurred.

That a cold clammy sweat breaking out on every exertion, sudden start, at exercise, and during sleep, differs from the disease described above, there is clear and intuitive evidence; that it is passive and the other active is equally evident; that one is salutary—the other debilitating—also evident; therefore they can not be the same disease, for that which concludes and succeeds fever, is truly febrile, and what has been long known to Physicians as *Apocrisis*, being really a salutary secretion; while the passive disease is *Ephidrosis*, as it is commonly denominated and correctly.

Strangury, was also the symptom of this symptom, attending apocrisis as a shadow its substance, even in fever the remissions brought on by sweating induced strangury, but it was seldom more than a troublesome disease.

Strangury has also accompanied thirst when it has been urgent.

This symptom in none of those cases led to any worse affections of the bladder; it was far otherwise in a very acute phrenitis, when produced by a blister, it brought on strangury immediately, and *Cystitis* of the most obstinate nature and difficult to cure ensued, in which Camphor, Opium, Hyosciamus, topical and general warm bath, and spirit of nitrous Æther were administered largely, nor was great relief obtained by them, nor did dysuria subside for some time after the cure, nor soreness of the hypogastrium on pressure.

Having had for some years an unlimited acquaintance with bilious remittent and intermittent fevers, their symptoms and progress, I was the more surprised to find that indolent enlargement of the spleen, known by the name of *Ague-Cake*, and which has never been observed as the sequel of any but very long intermittent fevers, to attend the Remittent of Walcheren from an early period, how early I have not been able to learn, and to remain after it had ceased, though not so obstinately as

in those of America, or even as in the instances occurring in these Islands; this tumour, was seldom perceived until its enlargement rendered it evident, and with the farther increase it produced uneasiness and anxiety, so fretful, as to banish sleep so entirely as to cause reasonable apprehensions of Mania, yet not amounting to pain; when the magnitude became considerable, it was still imperceptible *without*, and then first gave great disquietude by turning on the right side; and was frequently in this advanced state attended with pain in the left shoulder, perfectly analogous to that symptom in the right, produced by an affection of the phrenic nerve in Hepatitis and Angina Pectoris; in this case it arose solely from pressure on the diaphragm, for the slightest inflammatory symptom did not accompany it; this circumstance is the more notable, as some of the writers on the Institutes have described this state of the spleen as splenitis: the further and enormous enlargement of this viscus produced such mechanical

pressure upon the cartilages of the ribs, and on the diaphragm, as to induce pleuritis, which in one case was so severe at the ensiform cartilage, and in the mediastinum, that the patient bent into a bow; a fever the most acute attended, and Empyema with inflammatory appearances of the heart as well as pericardium; the countenance was remarkably florid, a circumstance very unusual among the Walcheren sick; in this case the rapidity of the pulse was extreme, even beyond 160 at the last, yet still regular; the patient lay quiet with his eyes closed, but neither drowsy, nor stupid, for when spoken to, he always answered rationally, but still complaining exquisitely of pain: the mechanical pressure of the spleen frequently produced pleurisy also, in its ordinary state, which was seldom refractory: As to the enormous enlargement, being indolent, habit reconciled the patients and convalescents to this state of it, and probably the great uneasiness and anxiety proceeded from distension alone, no other pre-

ternatural appearance being discoverable: certain it is, no consequent disease was in nature attached to it; nor did this organ ever become scirrhus, nor dropsy ensue from this local affection of the spleen, as happens in scirrhus or obstructed Liver; nor did it perceptibly increase in size after the arrival at Harwich, in the multitude affected with it; but on the contrary, in every instance where unaccompanied by some mortal disease, it continually though very slowly resolved, and within a quarter of a year many had totally got rid of it, both with and without remedies: still it was a teasing symptom, adding torment to torment wherever it acquired considerable enlargement, even abating the hopes of recovery in those who had escaped the tedious progress of the original disease; I am far therefore from adopting Sydenham's opinion of its salutary nature, on which he even founded a favourable prognosis.

Splenitis though so uncommon, occurred in some few instances, and one terminated in

suppuration and death; no case could have proved more instructive, the body was opened by Dr. Laffan, and on the first view of the spleen the disease was apparent; the spleen compared to the preceding tumefaction (which might be called Splenæmatocele) was of moderate size, forming an inflammatory tumor, the surface very different from that of mere hæmatocele, was whitish with inflammatory crust or adhæ-sive inflammation; the whole viscus indurated by the same, and the posterior part firmly grown to the peritonæum, in tearing it from which the abscess was broke open, leaving the agglutinated portion still adhering to the side: here was inflammation, here was obstruction, even to *consolidation* of a cellular, cavernous, yielding substance, into a fleshy uniform lump, every cell obliterated, every vessel, we firmly believe that a lymphatic—much less a blood vessel, did not remain pervious to an injection; nor did a drop of the black blood of the spleen remain within, so perfectly was every cavity closed.

This case clearly marked the diagnosis of splenitis and splenæmatocele, clearly shewed that obstruction really subsisting in one, differed in every particular from beginning to end from the other; and no less in the application of remedies; and accordingly we formed our indications of cure, diametrically the opposite of those previously acted upon.

That the notion of obstruction in hæmatocele of the spleen should lead us astray, (or me, to speak for myself,) was little to be wondered at, for it was in the mouth of every one; and as for me I was compelled to suffer myself to glide with the stream, finding no fact or reasoning sufficient to combat prejudice, and a prejudice too which was founded in analogy, which speciously concluded; that *because enlarged liver was obstructed—enlarged spleen (by a parity of reasoning), must be so too.*

The facts are now before competent judges, I only request that before they condemn, they will view the same appearances in the same

predicaments, and declare their opinions of things actually seen and experienced, as I have done.

This subject can not be well dismissed without noticing the definition of splenitis given by the sagacious Cullen, one so undeserving of a place in his accurate Nosology, that so far from explaining *what the disease is*, it explains *what it is not*, “absque signis nephritidis;” while that part of the Cullenian character which applies, viz. “Pyrexia, hypochondrii sinistri tensio, calor, tumor, et dolor pressu auctus,” is perfectly oracular, not inapplicable certainly, and yet it dont describe the disease; the character here offered is at least free from this defect, therefore others may be excused.

Splenitis.

Hypochondrii sinistri dolor pleuriticus, si non tactui, nihilominus sensui pulsatilis, cum decubitu in eundem latus difficili, humerique cum dolore.

I can not venture to add what fever attends,

since I have seen the disease only in patients who were then ill of remittent, or who lately had been, and two or three cases are too few to decide upon; therefore *this is their character*; very different truly from the Cullenian definition, but not from that of Sagar, who certainly saw what he described; I might, with reason on these grounds, add “comitante Remittente vel Intermittente,” were I not influenced by respect for authority; but whatever form the fever may be of, I am fully persuaded, what I have given will stand the test of experience, though short: and as to tension, heat, and tumor of the Hypochondrium, there were no such symptoms in any of the cases, it cannot therefore be considered as any lapse in the attendant, that the first instance of this disease was not distinguished—since Cullen was in fault.

The diagnosis between splenitis and nephritis, can never be difficult on a simple comparison of both definitions, for the pleuritic pain, or that of the shoulder, or both, mark the dis-

tion perfectly, particularly the second, but as this again depends on the sympathy of the diaphragm, which is not always affected by inflammation of the spleen, so this is not a perpetual symptom, nor has it a place in any definition or history of this disease I have read ; nor had I ever observed it in splenæmatocele untill this opportunity.

Fourteen hundred instances of disease, and these in the very worst state capable of transportation, across the narrow sea between Zealand and Harwich, are not too many to support the authenticity of a revolution, in the history of a morbid constitution, so extraordinary as that which has been observed, in the Bilious Remittent of Zealand ; which commencing as all autumnal Remittents do, with symptoms of encreased action of the liver, and consequent encreased secretion of bile, arrived in two months, or less, at a collapsed state of that organ, from and after which, it remained inert or passive for two or three months more ; while the original disease was in progres,

though that original was supposed in this, in Pringle's, and at all times to have proceeded from a morbid state of the liver; yet true it is that this revolution did take place, and that the Hospital at Harwich, notwithstanding the popular notion of obstructed viscera, furnished but one, and that a symptomatic case of hepatitis; this patient when admitted, still complained of dull pain in his head, though trifling in comparison to the torturing headache, he had been relieved from by blisters, the erythema from which was quite fresh; and by mercury, the influence of which remained as evident by the swelling of his tongue and soreness of gums; he had quotidian remittent previously, which intermitted and assumed the tertian type to the 5th time, when it became remittent again, the hot fit continuing to the next exacerbation, and without a rigor, pulse quick, tongue moist and clean, acute pain was first perceived in the right hypocondrium, in the great lobe of the liver, without evident swelling, but catching the breath, and ac-

accompanied with pain at the clavicle, and sometimes at the shoulder; he took 3 pills of calomel and was blistered over the pain: second day, remittent having exacerbated last night, he took as yesterday 3 pills of calomel 5 grs. each, the pain attended with considerable fullness and hardness, was exquisite on pressure, P. 108, skin hot and moist, tongue as yesterday, blister left on and produced strangury, no stool; He took a strong camphorated mixture every hour, and had his pills repeated; third day, P. 128. skin and tongue moist, no exacerbation yesterday evening, no thirst, bowels free, took 3 pills, pain in the hypochondrium much abated; evening, P. 108, belly regular, skin moist and tongue, all symptoms of Hepatitis had subsided, and the mercury was discontinued, as he had been lately saturated with it; the remittent returned, again intermitted, and was stopped by the bark thirteen days after, with great difficulty; no case can be more insidious than Hepatitis in every climate, and though symptomatic, or

more properly secondary, stole on the patient as usual when the head is engaged, so imperceptibly, it was fully established before it was discovered; the result would probably not have been so favourable, if mercury had not been given before the disease had formed, that there was no deception in it is most certain, the extraordinary nature of the disease having produced the attention of four physicians who attended, and fully convinced themselves of its reality; in injuries of the brain from violence, it has often happened that this disease has been for the first time detected after death, and only by dissection; which circumstance, with this additional one in proof, furnish good reason for suspecting, that hepatitis has often escaped notice in phrenitis; for untill this, I never suspected it in spontaneous phrenitis, believed it to be confined to cases of external violence, and am fully satisfied most Physicians were so persuaded; for opportunities to form any precise opinion on this subject fall to the lot of few.

Of *Erysipelas*, two exquisite cases occurred, delirium attended one and not incoherent though the voice was loud and vehement, for on the assurance of relief, the patient was easily induced to submit to the application of leeches, and such other remedies as were found necessary, and he recovered speedily.

The other appeared in a patient extenuated by the endemic remittent, and by hectic, which attended ulcers believed to be scrophulous, which covered his feet on the upper part, and extended some way up his legs; his fever, according to the popular notion, was set down for Typhus, I saw the man in this state but once, and my surprise was only produced by his being kept alive, his legs were covered with a deep coloured erythema, not the marbled efflorescence of typhus, but an erysipilatus inflammation, the forerunner of gangrene, his understanding still perfect.*

Of *Peritoneal Inflammation*, which I know

* See a Case perfectly similar in every circumstance, quoted from Dr. Mead, under the head of Scurvy.

from repeated experience to be the primary disease, in many fevers supposed idiopathic ; I saw but one case, it was evident (though it produced dropsy by effusion) only on dissection ; the adhesive inflammation had glued the intestines to the peritonæal lining of the abdominal muscles at the navel, many convolutions being agglutinated, yet no retention of fæces ensued ; the case was a full formed ascites on admission, and were a perfect diagnosis possible, which is not certain, the Physician who ultimately had the patient in his care, could not have availed himself of this possibility, for he never had the opportunity, as the effusion had cured the inflammation long before his attendance ensued ; but of this case more hereafter.

Dropsy of the Pericardium, was a very common concluding symptom in remittent become inveterate ; but as it supervened, and in the convalescent state, so it may be more aptly considered a sequel.

Though the stomach was so easily disturbed

by ingesta of every sort, yet *nausea* and *vomiting* were not usual, they happened oftener at the accession of paroxysm than at any other period, whether rigor were present or not; one very obstinate instance, I fear incurable, I attributed to the administration of arseniate of potash.

Phthisis and *Syphilis* were almost unknown, of the former I had one case, which terminated in Empyema, and was relieved by puncturing a tumor below the scapula, from which an enormous quantity of pus flowed, the puncture was after turned into an issue; it was attended with remittent.

A second case and as I suppose tubercular, had commenced just as I was about to resign my charge in January, dyspnœa and dry teizing cough with quick pulse, and hot skin, portended a bad result in an emaciated constitution; I attributed this disease to the evolution of scrophula by mercury, which had been administered in the convalescent wards to cure *obstructions*, a cause, which I fear there is too

much reason to apprehend has been generally productive of similar results.

Scurvy, in a few instances lurked unseen for some time, but when manifest, had all the characteristics of sea scurvy ; chronic debility, incapacity of every kind amounting to indolence in appearance, cold surface, yet perspiring and moist, subject to sudden sweats on exertion, gums sore, and ulcerated—sometimes deeply ; epistaxis with bullocks liver, ulcers on other parts not usually affected so—as on the outside of the leg, with bloody mucous discharge, and subject to bleed, after which the blood jellied in a thin sily layer over it, the same jelly as formed in the nostrils ; the gum and cheek in one instance mortified, and the patient lived untill the eschar separated ; even this disease bore the remittent character ; of four scorbutics, three recovered, one imperfectly before my departure, but they required no restorative or remedy beyond the Hospital diet, when the quality of the esculents was good ; nor have I ever found them

recover so well on any, as on strong broth with a little good wine, or good porter; to the former of which they possibly in this place owed their lives.

Mortification and *Escars*, produced by long lying, were frequent but not general; in my Wards none were so affected, which I can only attribute to their having a better allowance of wine, and possibly more nutritive diet than the generality, as they were always extenuated cases of protracted fevers and relapses: the good bedding and mattrasses supplied after the visitation of the Physician and Surgeon General, contributed much to the preservation of the patients, from dangerous and sometimes destructive mortifications.

General Dropsy was a common and dangerous sequel of this fever, and incident to another disease, *Anæmia febrisequa*, which is yet to be described, to which the reader is referred.

Singultus, was a sequel attributable to the

same predisposing cause, and to be hereafter noted.

Cynanche stridula, or more properly orthopnoea stridula, one instance only appeared, and I believe was symptomatic of hydrops pericardii.

CLASSIS III.

Cachexiæ.

Fluidorum vel solidorum Corporis viventis Constitutio
morbida.

Ordo 1. Dyscrasia.

Sanguinis decompositio ex toto vel parte.

Genus, 69.

ANAEMIA

Superficieï sed insigniter prolabii pallor exsanguis,
cum lingua tumidiuscula sensim albescente.

Species 1. Febrisequa, a remittente vel intermit-
tente diuturna

2. Exanthematica, a scarlatina.

3. Hydrargyrica, a nimio hydrargyro in-
gurgitato.

4. Cancrosa, ab ulcere cavo exeso pruri-
ente, sparsim filamentis albidis ob-
ducto; vel ab ichore fusco acri; do-
lente; marasmo comitante.

5. Haemorrhagica; in hydropem festi-
nans.

6. Amenorrhœica, in puellis puberibus
chloroticis.

7. Scorbutica, cum pigritia et debilitate
 anhelosa, gingivarum exulceratione
 utet narium haemorrhagia; spiritu
 foedo; maculis cutaneis ad lævissi-
 mas læsiones livescentibus, attamen
 indolentibus, in gangrænam procli-
 vibus.

Ordo 2.

Solidorum decompositio ex toto vel parte, phlo-
 gosi ulcerosa comitante.

Genus, 70.	Rachitis.	Genus, 74. Frambæsia.
G. 71.	Syphilis.	G. 75. Herpes
G. 72.	Scrophula.	G. 76. Cancer.
G. 73.	Lepra.	

Order, Dyscrasia ; Genus, Anæmia.

After a continuation of some weeks, how many I could not ascertain, at the time and in the circumstances in which I first saw the Remittent of Walcheren, the symptoms still persevering by continuity or by relapse; the tongue became moist, whitish, and imperceptibly enlarged, perfectly flexible, and even flaccid, without any impediment to its functions; in some farther time the loss of color became more evident, still perfectly clean, moist, and free from furr, untill it gradually assumed a whiteness so permanent, that months of convalescence and probably much more, did not restore its natural red; this phaenomenon was also observed, and the observation confirmed by daily experience, to be a pathognomonic symptom, and even a criterion of a change in the constitution to a very permanent dyscrasy, if not morbid, certainly very different from health, though in-

cident to the convalescent state, not partaking in any circumstance of the nature of the original from which it had sprung: fortunately it was not new to me, for I had seen it follow hæmorrhage, I had known it to be produced by phlebotomy when administered as a remedy in fever of hot climates, I had known it to be induced by open cancer of long duration, and I had repeatedly observed it to be the result of a mercurial course, and to these causes had obtained a knowledge of this additional one, viz. Remittent of long duration; from all which, I was enabled to ascertain this Dyscrasy to be, what Cullen has recited among the species of Anasarca, as a *Tenuitas sanguinis*, and again elsewhere, as a variety of *scorbutus pallidus*, and probably also his *atrophia inanitorum*: considering myself fortunate in the opportunity of collecting information on a subject thus involved, and of which so little is known, I proceeded to rigid and reiterated examination and inquiries, into the nature and appearances of this Dyscrasy in life and death, of which I now detail the result.

The Valetudinarians, in this dyscrasy, are uniformly dull, languid, and in a state of apathy, though far short of that insensibility which disregards the ordinary concerns of life; shew little mental energy on any occasion, and seem content with a sombre stillness, approaching to imbecility; when a number of these ghastly looking mutes sat together in a ward, and stood up to receive any visitors, they produced surprise at least, that men in the very complexion of death should be equal to such an exertion; and when they lay in bed, the stillness and appearance gave the exact representation of the anatomical dissecting room, and to a stranger who might have come in at the instant one of these convalescents arose, it caused alarm as if a dead man had come to life; this state, certainly, might notwithstanding, be called convalescent with some propriety, as the vital and animal functions were performed uninterruptedly, however languid; nor did any danger arise at the time from the altered state of the fluids, considered

simply; but from the prædisposition only; for languid as the action of the solids was, the diseases incident to this prædisposition, were not at all of the passive or low kinds, relapses into continued fever, were among the most frequent, which again declined into remittent &c. in which, and even independent of which, innumerable instances occurred of the most dangerous topical determinations, as primary; with symptomatic fever as ardent, though not so violent as synocha of Stahl or Cullen.

The paleness which might be said to characterise this dyscrasy, was so deadly, that in visiting the patients, I have been frequently impelled through apprehension, to rouse them, if asleep or their eyes closed, to convince myself they were not dead; the prolabium was remarkably white, much paler than the face, nor could any description of countenance be more strangely grotesque, than those of an olive face with a milk-white rim to the mouth; not a coloured subcateneous vein was to be seen all over the surface of the body, nor on

the conjunctiva; which paleness, with white tongue, furnished symptoms truly diagnostic of the dyscrasy called Anaemia, with this additional advantage, that from its appearance, the state of the viscera may with certainty be pronounced to be precisely similar.

On opening the abdomen, the chylopoietic viscera, were observed to be of a delicately soft velvet-like white all over, wherever the peritonæum covered or lined the parts; the spleen though much enlarged, yet perfectly sound and uninjured in its organization, and replete with the black cruor of the blood, so observable in this state, in which it presents itself as a large placenta, or hæmatocele, formed by congestion; for when found inflamed, as described elsewhere, it was substantial and contained little or no blood, while the strong adhesions and solidified tunica, perfectly characterised the inflammatory state.

The fat of the omentum was wholly absorbed, so as to reduce it to a film.

The liver was smaller, in some cases remarkably less than natural, had lost its liver color, and had assumed the bluish and sometimes the dark iron-blue, peculiar to the spleen; in other instances still darker, nearly approaching to the black of the hæmatocele of the spleen: the gall-bladder was milk-white, seldom without a quantity of fluid contents, sometimes nearly full, but the ductus communis always open, and giving free passage to the bilious fluid on pressure; yet in none of the more early cases did it contain bile, nor even in many instances of improvement in constitution, was bile the secretion of the liver, but an albuminous transparent gold coloured fluid, with a dark sediment of a deep brown, not concrete however in any instance, but like a pulverulent præcipitate.

The fundus of the bladder was white, and it always contained a considerable quantity of urine, sometimes full, but never distended.

The stomach and intestines, though free from any organic injury, were as observed

above, of the universal white, but inflated with gas very generally, and not unfrequently to a semi-tympanitic state; it was remarkable that they were often void, the chyme when present, being in the lower part of the intestines, that is of the great intestines, the small forming one great Jejunum, but in the majority of instances, the intestinal canal was not more distended than they might be in death by the blowpipe: the mesentery was always free from glandular or other disease.

In the thorax, the pleura and pericardium presented the same superficial whiteness as the peritonæum, the contents equally free from disease, the heart of a variegated or marbled whiteness, the auricles and ventricles much distended, thin, and flabby; in one case where the spleen was enormous, the heart also was dilated to a prodigious size, and in all cases filled far beyond its natural dimensions, with the fluid of the circulation. The pericardium often distended with serous fluid, which had

very exactly the appearance of clear chicken broth, with globules of oil scattered on the surface, and was found by Tests to be albuminous.

The lungs except when anasarcaous, were universally sound, but often milk white through the whole substance.

The great veins, or venous reservoirs, were all replete, if not distended, with a watery black blood, uniform, not separated into serum and crassamentum, but of an inky color, and of the consistence and appearance of fluid black paint; but in the heart there was in the ventricles, in particular, a separation into serum and coagulum, the latter of the appearance of jelly, somewhat consistent, but transparent, and so flaccid, that by squeezing it, the serum poured out as water from a sponge, by which the coagulum was reduced to a mere thread, the proportion of serum to the gelatine was so great; in other instances, some of the black cruor or globules were entangled in it, for there never were

any red, and the serum yielded little albumen by coagulation with heat, or with oxymuriat of mercury; gluten could not be detected by the mimosa catechu; gelatine was only found in the heart as observed above; and as to the cruor or black part of the circulating fluid, when separated by subsiding, it had very much the appearance of the præcipitate from sulphate of iron by Muriat of potassa, called carbonate of iron; so that considering the certainty of the globules (so called), being a compound of Iron, &c. I am induced by the farther analogy of perfect similitude, to consider this altered state of the ferruginous component of blood, to be a reduction from red-oxyd, or peroxyd, or oxyphosphate of iron, to black oxyd or oxydule, i. e. from feroxyphate to feroxydule: as this black blood never reaches the surface, it might be speciously conceived, that the languid heart and arteries were not able to propell it; in reply to which, it is to be observed, that when inflammation takes place in this dyscrasy, the

serum is plentifully and rapidly effused, and though blood was expectorated in one instance, (as commonly said by anastomosis), from the exhalant arteries of the lungs, and in a case of paraphrenitis, connected with inflammation of the pericardium and slightly of the heart, the countenance was permanently florid; yet two instances among hundreds, are but exceptions which dont make against the general rule, that black cruor, is not circulated beyond the large blood vessels of the interior, in anaemia; but how vehemently the serum is determined to any inflamed cavity, is well known by its dangerous effect; the want of gluten as a medium to suspend the ponderous cruor in serum, might also be assigned as a cause of the separation of the latter, but when the blood had recovered albumen and gelatine in abundance, the paleness still continued; hence there must have been, as appearances bespoke, (and these combined and concurrent appearances) a chemical change or decomposition, which by re-



duction, might encrease the metalliety and cohesion of aggregation of the metallic particles of the cruor, possibly this was operated by the restoration of magnetism, which would cause the globules to obey the attraction of cohesion, and form aggregates too large to enter the capillaries, or much wider vessels; wherefore they should accumulate, as in fact they do, in the great internal reservoirs, and never reach the surface either external or internal, unless by vehement or inflammatory actions; this chemical change which from appearance is real, would amount to this only—that the feroxyphat would be deoxygenated, or more strictly, partialy deoxygenated, and reduced to black oxyd or oxydule of iron, a substance which if not magnetic, is capable of being so, a change more probable, as the red oxyd is decomposable by hydrogen—the black not; and as this obeys the magnet in a ratio inversely as to the quantity of oxygen the iron retains, the less compatible with fluidity does its reduced state become, and

e converso the more oxygen the more fit for circulation.

The quantity of circulating fluid in anaemia, was found as stated to be very great, and in the few instances of haemorrhage which took place, as well as in the topical bleedings, the evacuations were very well borne; in one case, beyond what an ordinary constitution could bear in health, and though the case was scurvy incident to anaemia, it was not productive of anasarca.

Red blood was never seen by me in this dyscrasy, but in those two cases mentioned above, nor a florid complexion among 1400, except *one*, p. 69, and this from disease.

This dissolved crisis of the blood (formerly so denominated), as before stated, may be effected by other means than febrile action: Hæmorrhage is a common cause of it, of which Tacitus has recorded one most remarkable case, that of the faithful Paulina—a sad example, as she loitered out several years in a semianimated state, to her death.

Doctor Lower has related a very curious case of a boy, who bled untill the broth he drank flowed by epistaxis from his nose; but probably he erred in asserting, that he bled more than untill all the red cruor was evacuated.

A lady ill of uterine hæmorrhage from polypus, bled so frequently, that happening by the shutting of a door, to have the top of her finger caught and torn off nearly, in the form of a flap, on replacing this it healed by the first intention, or agglutination, without having wept so much as the fraction of a drop of blood, but ouzed out yellow albuminous serum plentifully, and certainly buff to consolidate and cicatrize the wound; here was anaemia hæmorrhagica evidently, while all the functions were performed as in health, and the patient recovered on removing the material cause.

The same consequences attend the process of vealing, in which while the cruor is abstracted, the subjects being well fed, all the other constituents of blood are abundantly

supplied ; and care being taken that no excitement to disease shall be offered, they die before morbid effects can ensue, or as soon as apprehended ; I am aware that many instructive facts may be learned on this subject, by inquiry from Farmers, which curious persons may easily avail themselves of.

The case of the Lady, throws a very important light on the Pathology of Fevers, for on the 3d or 4th day of inflammatory symptomatic fever, pulse about 90, she became generally suffused with yellow, as in the Remittent of the West Indies, and truly was so apprehended to be ill by one Physician in attendance, yet the immediate as well as continual decline of fever, while this icteritia deepened, proved his apprehensions to be ill founded ; the discolouration first appeared at the acme of inflammation, and continued long after all the effects ceased, and even caused a belief of its perpetuity ; but she ultimately recovered her natural complexion ; and yet in two or three years after, which is ana-

logous to the prædisposition of anaemia, she was affected with intermittent, but not obstinate.

In a patient of Sir John Pringle, who had been bled untill the buff ceased to appear in the blood, icteritia followed immediately; ex necessitate, therefore it could be attributed to no other cause than the preceding, viz. to the extravasation of serum, since the crassamentum had been subtracted before.

It may be right to observe, that the serum being naturally yellow, there is no necessity for the presence of bile to produce this symptom, but to avoid all misconception on the subject, the lady had no symptom of jaundice: Hillary, long ago observed, that serum and not bile, gave the yellow tinge to the skin, and though I was satisfied he stated the fact, yet I never could find a case to verify it untill this occurrence: if this reasoning be right, what a revolution would the proof of prædisposition in the fluids make, in the pathology of the schools? we should thence be

obliged to attribute all Remittents to prædisposition, all Continent fevers to inflammation; one genus of fevers phlogistic or asthenic, affecting the solids; one remittent or intermittent—the fluids.

Of the efficacy of the cancerous virus, in producing anaemia I have no doubt, being convinced by many facts, and by some so impressive, as to leave regret not to be obliterated but with life; the late Professor DEASE of Dublin, among the many and curious observations with which he enriched and instructed the profession, convinced me both by his teaching and practice, that he could distinguish cancer uteri, and other large open cancers, by the anguish of countenance, dirty bloodless green of the face, and pale lips: I am not convinced that one state invariably precedes and the other follows, for if I mistake not, they mutually cause or promote, one the progress of the other, and I have seen both anaemia and cancer uteri induced by mercury, given to a great amount by a surgeon, to cure ca-

taract, because he could not depress or extract it: on the other hand, the cancerous virus is not only capable of absorption, but the hectic thereby produced, is characterised by symptoms common to it and anaemia; paleness for instance, with this difference, that in cancerous hectic it is a sordid yellow or green, as observed above, dissolved crasis of the blood appearing in œdema; this virus is certainly the strongest solvent of all secreted fluids in the human being, dissolves many metals, dissolves the woody fibre in linen, dissolves the fleshy fibre, and if not a solvent of bone, it, by exciting the absorbents, causes absorption of phosphate of lime, which leaves the bone in the vicinity of the ulcer so soft and cartilaginous, as to be easily cut through with a dissecting knife: if any other disease offered as bad results from combining mercury in producing such effects, the panacea would have been long since discarded; but the instances in Ireland are so few, that the paucity may have concealed the bad success from the

public ; when scirrhus precedes cancer and is yet benign, it is difficult to conceive what better remedy than mercury can be found, in a good constitution ; but having effected, or failed to effect this purpose, anaemia is thereby added to cancer, which if not foreseen, ensures destruction ; but where no scirrhus or indolent obstruction preceded, the administration of mercury (laying aside theory) has been found so generally injurious, the wonder is how any rational being can give into it, since the plain indication is, when pallid countenance and emaciation have ensued—
To employ Restoratives ; this is so obvious a course, few it might be supposed have been found erring against it of late years ; yet dreadful to relate, one of the greatest ornaments of society (the late Dr. Young, Bishop of Clonfert), lost his life by a small indolent ulcer on his tongue, produced by a local irritation, for which (cancer or not at the commencement), so much mercury had been given him by his first attendant, as to induce

anaemia and emaciation, so that he died in the hands of a more rational practitioner of mere debility, and after one of the reputed heads of the profession, grown as fat in brain as body, and by poaching on the ingenuity of others, one capable of reading as a trustee in the R. I. A. the paper of another and privately advising the dismissal of it, retailed the discovery as his own; after this brazen colossus had reduced this good and great man to a skeleton, he abandoned him to his fate: It is some consolation however, and even compensation to society for passed misfortunes, that a more ingenuous and benevolent spirit has since sprung up under the eye of such churlish astutia, for a Mr. Carmichael has practically instituted a remedy, probably one of the best art can supply of the restorative kind, to answer the Rational Indication in cancerous hectic, of furnishing to the blood, one of the principles of which it has been deprived by disease.

Mercurials never fail when largely admini-

stered and for a long time, particularly with spare diet, to reduce the red blood to a state nearly approaching to black, or deepening the colour exceedingly, and on bleeding, the crassamentum is found to be of the most tender consistence and very slightly gelatinous; no case could be more impressively demonstrated than this, among the tumid spleens and bloodless paleness of the Walcheren sick and convalescents, to whom such quantities of mercury had been administered, that ptyalism broke out afresh in some few patients in six weeks, and two months after they had ceased to take this remedy, and in one instance continued to the end of the fifth month, during which it destroyed most of his teeth and half the alveolar process of the lower jaw.

Mercurials, with bleeding as administered in St. Domingo, on the authority of the celebrated Rush, during the destructive mortality of our troops there some years back, produced the worst degree of anaemia I have ever

seen, of those who survived (as I have it from Mr. Purdon, staff surgeon then present) a languid spiritless state of debility, utterly incurable by any expedient then adopted, terminated in about a month by death; in two who survived to arrive in Europe in this miserable state, and **who** in consequence lived or crawled on the earth for two years, on dissection I found the quantity of serous circulating fluid was very great, out of all proportion to the healthy state, the heart enormously distended beyond any example furnished at Harwich, the ventricles extenuated, replete with albuminous transparent serum, in which I did not perceive any cruor untill I stirred up the fluid from the bottom, when a dusky black powder precisely like coffee grounds, was mixed through the fluid, not at all diluting in it, but subsiding again like a metallic præcipitate, which possessed no affinity whatsoever to the fluid it was mixed with. It is here to be observed, that all the characteristics of anæmia were present in these cases during life,

In horses, I have had many opportunities of observing the effect of mercury in the extreme on the blood, from the great and repeated doses of calomel commonly administered to them, and in most diseases by farriers; I have had them bled, after a sufficient continuation of the process to admit of the full efficacy of the remedy, and invariably found the blood though drawn in ever so full a stream, refuse to coagulate into buffy crassamentum, but uniform and gelatinous; inspection of the bodies gave a far better elucidation, for the heart and great veins were full of a homogeneous claret coloured fluid nowhere coagulating, and in consistence similar to thin paint.

Few further remarks are now necessary I apprehend, on the tendency of profuse doses of mercurials, or of small doses long continued when given to cure imaginary obstructions of the viscera, &c. since by the foregoing but much more by inspection and observation, those discriminating gentlemen, my colleagues before mentioned,

were so fully convinced that no such obstructions subsisted in these cases, of which they satisfied themselves by so many and repeated dissections in similar circumstances, that every gentleman of the profession then present, who chose to pay any attention, saw, understood, and was convinced, that watry blood without red crassamentum—but with black sediment in place of it, was found in every protracted case of the Walcheren Remittent, which terminated fatally at Harwich General Hospital; in fact so fully were these gentlemen satisfied on this subject, that they at length forbore to inspect any more morbid bodies of this constitution, knowing well how certainly the same appearances would be found on dissection.

I hope I have placed this subject in such a light for the discovery of truth, if not demonstration of it, that the inferences with regard to the exhibition and effects of mercury are obvious; however as I am far from considering myself infallible, I sincerely hope this subject will be taken up by some more able inquirer, with

as little confidence in my reports as may be, to the end that he may without prejudice, repeat the inquiries and experiments herein detailed; but if among my readers, as there will be some, who have sufficient facts from their own observation to reason from, there may be those who may be convinced by the view here given of the subject; my anxious wish is, that they may not fall into an error I may have fallen into, and would not venture to assert I have escaped; that is, of running into the opposite extreme; for I have learned from experience, that there may be diseases incident to Anaemia, in which mercury is indicated, and that I once thought otherwise is equally certain.*

* When I describe morbid appearances in dead bodies, I conceive it necessary to remark, what few have had opportunities to be convinced of, viz. that it is by far the most difficult part of Anatomy, and what, without meaning to give offence, it may be asserted, few either do—or would run the risque of understanding, not even excluding those to whose learning and science I most respectfully defer: Anatomy, as taught in the schools, only affords the student an

The extremely rare occurrence of opportunities, I lament has left me in the dark as to the efficacy of that substitute for mercury, nitric acid; so that I can not decide what advantage, even in prospect, should be expected from the substitution in this dyscrasy. Of muriatic and sulphuric I have made abundant

accidental opportunity of observing morbid appearances in death, and prejudice unfortunately for the interest of society denies him the most instructive: however, it must be confessed, that researches of this kind are avoided and even dreaded by many, and possibly not without reason; the reports therefore, of morbid appearances commonly given in books, are absolutely nugatory; it is therefore with the highest respect I mention Dr. Baily, as the only competent Anatomist and Pathologist, who has written with advantage on this subject since Lieutaud, and that he may find leisure and opportunity to enquire into this matter, I sincerely desire, much more for the benefit which may accrue to the public, than for any credit which might result to myself; though I am fully convinced it is only by those who have so laboured, and at such risques, to procure the information necessary to form a judgment on this topic, that the value of my Notes can be appreciated; nor do I conceive it possible, any one can envy the acquisition of such dear bought experience in this department of Pathology, considering the time, the labor, the danger, and expence, it must have cost the possessor.

use, sometimes with evident advantage as a febrifuge only; farther I am not prepared to assert.

After the statement of so many facts; on a subject which I have bestowed some attention and reflection, I may venture to excuse the opinions which have resulted, with the more confidence, as so little can be found in authors to throw light on the subject; In the Edinburgh Medical Journal may be found three cases which were treated hypothetically with chalybeates, and not very successfully, a result which does not surprise me, as I hold a different opinion on the cause, founded not so much on a different hypothesis, as in experience of the minor efficacy of his method of treatment compared with mine; He formed his indication of cure on the supposition, that the iron of the blood was wanting—mine is, that it is *reduced* from the state of red hyper-oxygenation, to protoxyd or oxydule; being in the former state soluble, analagous to oxy-muriate of mercury; in the latter insoluble in

the serum, analogous to the protoxyd or muriate of mercury, in those solvents which readily dissolve oxymuriate: in the soluble state it consequently imparts to the serum and secreted fluids a briskness capable of exciting healthy action in the vessels; in the insoluble, when by partial *reduction* it has become effete, it does not excite healthy action of the blood vessels, nor flow through them to the secretories, and even when by extraordinary excitement or other causes, they happen to be driven to their ultimate destination, still they cannot produce healthy derivative fluids, from a primary fluid which is crude.

Long before I had read the French Authors Meth. Med. I had verified the insufficiency of it, ever finding myself disappointed when I employed strong chalybeates,* yet I

* It is but justice to the learned Dr. Perceval, Professor of Chemistry in the University of Dublin, to state that I owe the rationale of this Practice to his liberality and discernment; his opinion being, that iron only in the most dilute state of solution, as in the natural Chalybeate waters, are quickly absorbed and prove more readily efficacious, as they are more dilute.

perpetually witnessed the efficacy of rustication and milk diet in the cure of mercurial anaemia, and still more so of rustication and chalybeate waters: sometimes there were cases which required migration to more genial air and steady climate; but the general inference is, that rustication with milk diet or without, with chalybeates or without, cons. cons. will cure anaemia; and what is rustication but incessant oxygenation of the blood and secretions, by respiration of a pure atmosphere? for iron wont supply more than one principle that is deficient, it wont supply gluten, milk will supply but little, vegetables less, and yet good air with this spare diet, if good in kind, will most certainly cure anaemia hydrargyrica;* so that albuminous food in this

* In graminivorous animals, the fluids are as exquisitely animalized and more quickly than in the human being, and by a much more slender diet in open air; therefore conceiving of diet as the means of preserving health and strength but not of disease, as obesity, of which the pampered brute would soon die if not maturely slaughtered, a pure atmosphere is the *sine qua non* of nutrition.

dyscrasy, wherein defect of fibrin and gluten or gelatine, constitute part of the disease, will still supply these defects if the other requisite (good air) be present; how much sooner therefore if glutinous diet be administered, is at once evident, and has been proved by Dr. Lind in numberless instances, as he found no remedy for scurvy more efficacious than strong broths, and some cordial as wine or porter; which I have verified so often by my own experience, that I know no truth more fixed in dietetics: this being the case, it is necessary to observe, that if the same result could not be boasted of in general, it was not to be attributed to the parsimony of any party, much less to that of the heads of the department, whose views were founded in humanity, and exercised with feelings of national gratitude towards the brave defenders of their King and Country—the difficulty arose from circumstances they could not controul, from causes they never witnessed, and consequently could not estimate, untill the effects had

sufficiently manifested themselves; and afterwards when the patients were received into the Hospitals, as at Harwich, their superintendence being a tutelage not to be partially dealt out, but impartially and benevolently to all equally, the recovery of the patients in every Hospital, should necessarily devolve to the local attendants, whose task in the actual circumstances was truly oppressive; nor could any thing less than the residence of an Inspector surmount the difficulties, which the attending Physicians in a conscientious discharge of their duty had to encounter at Harwich, where quantity alone made up for defect in quality of food, and where untill the Inspector became resident, and personally superintended the provisioning of the Hospital; the animal food was so miserably bad, good soup or rich broth could not be made of it; but after he had perfected his arrangements, and placed the diet where it ever should be, under the controul of the Hospital Physician, the returns if consulted before and after that

period, will afford a striking example, in the immediate cessation of the usual mortality, of the necessity first, and of the importance of the measure after it had been put in full activity ; and this though the patients every day were reducing to a smaller number, but of a description perpetually worse.

Of SCURVY occurring in

Dyscrasia Anaemia;

Of the far greater accuracy of Sydenham's description of the Autumnal Remittent, when compared to that of Walcheren, than that of Pringle's, all my observations fully convinced me; however he omitted some consequences which I have little doubt existed in his time, and which have been noticed by Boerhaave; Ephidrosis and Scurvy; of the former sufficient notice has been taken in the preceding sheets, as conceived, since both in a historical and practical light it has been considered; as to Scurvy it might not have occurred to him in private practice, since he had little intercourse with the discription of persons mostly, if not solely obnoxious to it, viz. the ill fed, ill clad, and hard wrought labourers

of the marine and military, sometimes of the civil commonality, yet to Dr. Mead such an instance did offer, and one strikingly similar in every circumstance to the scorbutics at Harwich, “ Rusticus, (says he) malo corporis habitu (I will venture to assert *Anæmia*) cum febre intermittente abnormi laborabat; accedebant crurum ulcera mala, in utraque nimirum tibia: ab assumptis medicamentis quæ scorbutico conveniunt—convalescere videbatur,—dum insanescerebat ex improviso tenuit gangraena et æger subito mortuus est: Dissecto abdomine, *mox oculos rapuit ingens moles lienis, forma naturali, sola magnitudine aucta, neque color mutatus erat, nec molli- tiem tumor aut scirrhus vitiat; pendebat autem quinque libras cum quarta libræ parte, cum hepar quatuor tantum libras totidemque uncias pondere æquaret: substantia denique quæ visceris hujus natura est, laxis fibris suffusum nigrum cruorem visui obtulit.*”

It was difficult to distinguish in those cases

between the effects of mercury and of scurvy, on the gums; I conceive they combined to produce this effect in the Walcheren sick: while on this subject it is curious and instructive to observe, how perfectly characterised the Walcheren disease is in the instance adduced by Dr. Mead, which took place in similar circumstances in the Isle of Sheppy, and which is truly in all and every prædicament coincident with the cases at Harwich; the cachexy or rather dyscrasy, being really defined as stated, “*est profecto in hisce casibus summa*” “*humorum omnium corruptio—sanguinis mis-*” “*tura eo usque vitata, ut quacunque parte*” “*emissus nihil purpurei coloris habeat, sed*” “*atram et coenosam colluviem* (is not this “*Anaemia?*) referat.

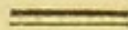
If these circumstances so similar if not identical, do not mark the dyscrasy of Zealand and Sheppy, as one and the same in cause and effect, and scurvy the sequel; let the symptoms of the latter as detailed by that most ingenious Editor of Anson's voyage

(Robins) be considered ; the antient cicatrices of wounds opened, the callus of antient fractures were dissolved, and the broken bones reduced to their original disjoined state ; and was not this from the dissolution or decomposition of the fibrin, gluten, and gelatine, as well as of the cruor ? that such would have been the result in Zealand I little doubt, had the convalescents only remained long enough to induce it ; as Boerhaave who lived in that country observed it, and other writers who have treated of this malady and its frequent occurrence, in cold marshy countries of the North of Europe, as in the Baltic ; Mead reasoning on this subject has not failed to attribute these changes to adequate causes, and in particular his remark on air (*“ at causam magis universalem adhuc non videntur attigisse ; Illa autem, aer est, usibus vitæ minus idoneus, qui in pulmones receptus plurimum noxæ adfert,”*) is so apt, that, as on all other subjects he has treated, he has given cause of regret, his avocations, like those of

his modern successors in the great field he figured on, are of necessity so trite; yet this stamps them with the greater value, and adds the authority of person to place in confirmation of the observations and reasonings it has fallen to my lot to offer on the same subject.

OF SPLENÆMATOCELE,

Or, Congestion of Blood in the Spleen.



DEFINITION.

Tumor Hypochondrii sinistri indolens, circumscriptus, sensim cum molestia augescens, decubitu in latus dextrum parum facili, et aliquando cum dolore humeri sinistri pungente.

This disease so often subsisted unsuspected, that accident or emaciation frequently discovered it, increase of size in the spleen being the first characteristic appearance, which never gave disquietude untill the magnitude became so considerable, as to induce perpetual local uneasiness, a sensation of distension nearly amounting to dull pain, with excessive anxiety which prevented repose,

banished sleep and sometimes gave cause to apprehend mania, yet did not always induce fever, untill the false ribs and cartilago ensiformis were pushed out by the tumor, and pleuritis produced ; a fastidious state of the stomach, and sometimes constant nausea as in gestation attended, with pain occasionally in the left shoulder, and very troublesome sensations in turning and lying on the opposite side ; never known to terminate by inflammation, or by scirrhus, but frequently by discussion.

From all the information I have been able to collect on this subject, I must conclude, that the frequency of this disease or symptom, among the sick of Walchern, was *unique* in the History of Remittents and Intermittents, hundreds of instances having occurred at Harwich and elsewhere ; nor could I learn from persons who had conversed with the Dutch, that any remarkable affection of the spleen appeared among them, nor was it observed among the prisoners at Flushing, nor have I been able by inquiry or research to discover the frequency

of its occurrence in Lincolnshire, nor in North America among our soldiery or inhabitants, more than *sparsim*, and *that* after intermittents of extraordinary prolongation ; though in one summer when it was observed, that the quantity of electricity in the air was much less than in other years, and when our troops were as sickly as in Walcheren, and with the same disease, splenæmatocele did not follow : nor did one instance, for hundreds among the Walcheren sick, follow the Epidemic Intermittents or Remittents of North America, even the most protracted, nor in a much longer time in any case ; so that the proximate cause of this later occurrence, must of necessity be local, and even peculiar to our soldiery, and the circumstances they were in at the time ; nor can I forbear attributing it to the same causes as anæmia.

The magnitude which the spleen attained in a short time, comparatively, with respect to the progress of this disease in other countries, was prodigious ; if I recollect accurately,

Dr. Hay, or Mr. Gibbon, gave me an instance of nine pounds weight ; in such the cells were so distended, that the membranous partitions were extenuated to the tenuity of a cobweb, and the peritoneal coat not firmer or thicker in some instances than goldbeater's leaf (in others it preserved its membranous tenacity) distended with black blood, and of so little consistence, the fingers in handling frequently pierced the integument, and could be pushed through with as much ease as through a pudding ; the blood varying in sizyness, in some loose, and so void of gluten as to be semifluid, never more substantial than jelly, and always far short of the consistence of crassamentum, and very similar to the concretion resulting from stirring and taking out the fibrin of the blood while cooling ; so that if the quantity of the congestion be subducted from that of the mass of blood, the paleness of surface is accounted for, by the retreat and stagnation of the cruor in the spleen, in so much, that it is only surprising more cruor should be still

found in the veins, for the spleen in many cases must have retained a quantity greater than the whole mass of healthy blood (and as already attempted to be demonstrated) by some inherent chemical principle of aggregation: nor is this state at all analogous to that of the liver and spleen in the fœtus, for there the veins are emptied directly into the cava: this analogy however subsists between splenic patients and the fœtus in utero, that they are *neither* more than semianimated, the blood in both being divested of the aerterial principle; hence they are both apparently melancholy as in anæmia, though to state the case fully these diseases splenæmatocele and anaemia, perpetually occurred together, as far as I could perceive,

Purpureos Animæ crudeliter inficit amnes,
 Deque venenato flumine Vitæ bibit;
 Et summa immundi depascunt corpora morbi,
 Et facies Lethi concolor omnem habet.
 Non male Trajanus Fisco assimilare Lienem
 Consuevit; Corpus, cum tumet Ille, macrum est.
 Couleii Asplenium.

so that the Physician-Poet marked the affinity

of these diseases, if there be no identity, and for ought I am able to assert to the contrary, either may be a symptom of the other; there is not however a certainty of splenæmatocele subsisting in every case of anæmia, yet the spleen might have been so little enlarged as not to have attracted attention, so not having been sufficiently aware of this predicament while my opportunity lasted, it must remain undetermined by me.

There is another point of view, in which the congestion of nearly all the cruor in the spleen and great veins (while the surface and tongue were deserted by it) may be seen in viz. the cold stage of remittent and intermittent, which always produced a state perfectly similar to anæmia, the surface being deserted by the blood; might it not be in the interim congested in the spleen? and might not repeated horrors confirm this congestion? were this the case a new function would be discovered in the spleen viz. that of being a General Reservoir or Receptaculum Sanguinis,

into which the blood might retreat, when the surface became impervious to it, and thus the rupture of the great vessels be provided against; this is merely offered as a conjecture, but is full as rational as that of obstruction in the spleen; to persons however, who may not confide in the reports here detailed, from appearances in dissection, one more argument remains to be urged, and though negative will weigh more with them, than a thousand of these facts, it is this; Hemorrhoids never occurred in any case of splenæmatocele at Harwich, (nor, it is believed, elsewhere if recent,) where then is the proof of obstruction?

In many instances of congestion even when the spleen had attained considerable size, the tension, anxiety, and even dull pain was subject to sudden exacerbation; I did not perceive that this happened periodically, in one case of fever I observed that splenæmatocele became for the first time distressing, on a quartan period, when pleuritic pain between

the cartilages of the false ribs and acute fever ensued; the cure of pleuritis relieved this patient, so that he slept well the third night after the attack, which was the last time of my visiting the hospital: whether the recurrence of fever tends to discuss this congestion, I know not but from reading, it may be so, but when the patients suffered no relapse of fever they recovered better from every sequel of remittent: Stahl considered infarction of the spleen to be connected with quartan, and his report can not be called in question, I have only to declare my want of experience in such instances, and *pace tanti viri* to state, that to a certainty, the cases of ague cake so called in North America, do not exacerbate periodically: Sydenham considered splenæmatocele (of which he must have had little experience) as a good symptom in the intermittent of infancy, as he did œdema in adults; prognostics of this kind may be allowed to sleep; yet though these apply no longer, they afford additional and important evidence, of the indolent

nature, and favourable event of this apparently formidable ailment when left to nature, as it was by him.

In many cases where fever, dropsy, diarrhæa, delirium, splenæmatocele, occurred together, no discrimination could be formed, of the particular influence of this symptom over the fate of the patient; conjoined as it frequently was with œdema (not of leucophlegmatia) but of general dropsy, œdema gradually ascending, filling the cavities, and at length ending in univeral anasarca; it might have contributed to hasten the progress of the disease by its proper effects: but œdema never appeared in the left leg singly as if the Iliac vein and lymphatics were compressed at that side, as described by authors who have treated of scirrhus of the spleen.

Beside pleuritis often, paraphrenitis, pericarditis, and empyema were once produced by the pressure of the spleen.

Splenitis was once I believe caused by

splenæmatocele as this preceded, the termination of this I did not see: but in the case examined after death, splenæmatocele could have had no share, as the spleen was simply tumified by inflammation.

When the great importance of so valuable a work as the Nosology of Cullen is duly considered, with the national credit which results to our Schools from it, and when to acknowledge the truth we have no other Institutional Book, the perfectioning of it becomes a great desideratum; the definitions which the Professor's clinical experience has left us, are so many and so accurate, he can not be censured for the omission of some few diseases, for he has admitted the fact, "*Omissiones agnosco et quidem doleo;*" and it was not without cogent reasons; for his rule, by which he constructed his definitions, necessarily excluded the diseases he had not sufficient experience of to describe, "*Prima et*
"*præcipua cura fuit, ut morborum SPECIES in*
"*ipsis aegris præsentibus detegerentur et dig-*

“noscentur,” a rule so very strict, and so very perfect, that by this text, Cullen could not have given to splenitis (a very rare disease) the symptoms as they occur in nature; he therefore copied the errors of another author, and has even left in this definition a declaration of symptoms, which he therein states *not to belong to it*; an anomaly so repugnant to his excellent rule as to prove, he never saw this disease, which it must be confessed few have seen, unless symptomatic of wounds; hence an absolute necessity remains for a definition of the disease in its genuine form; let this suffice as an apology, if the annexed be found imperfect.

Splenitis.

Hypochondrii sinistri dolor sub inspiratione pungens, si non tactui nihilominus pulsatilis, cum decubitu in eundem latus difficili, humerique cum dolore.

As one principal motive with me for giving this character of splenitis, is the formation of a diagnosis between it and splenæmatocele, so

I conceive I may take my leave of the subject in Cullen's words, "aliis sapientioribus qui posthac huic operi se immiscere velint, re-
linquens, discrimen magis certum statuere."

*Of Acholia,**Or Defect of BILE.*

Though the state of the abdominal viscera in the Walcheren Endemic, has been described as they appeared on dissection; here it is necessary to recapitulate the circumstances immediately connected with the present subject. The liver was collapsed, had lost its natural color and approached that of the spleen, there was no bile in the gall bladder; the spleen distended with black sily blood (not in fact so consistent as size), the small intestines inflated and empty, the chyme watry and whitish or pale yellow, or sometimes like washings of flesh, confined to the colon, and sometimes in the rectum, never in the small intestines. In life the antecedent state was *lentos alvi*, or costiveness, even to

obstinacy; from Dr. M'Dugale and Mr. Gibbon, I learned that in September, the worst patients landed at Harwich required Cathartics of the most drastic kind, to produce moderate evacuation, and in enormous doses; the latter gentleman continued to attend the same patients, and as I was much indebted to his assistance on many occasions, so in this I was repeatedly assured by him, that those identical cases, in which lenitives induced hypercatharsis in October, had required drastics in September, and might have then terminated in death if these had been omitted, or even sparingly administered; this gentleman also with me repeatedly examined the stools of these patients, when afflicted with diarrhæa in fever, and observed the fæces to be watry, frothy, and whitish, precisely like yeast, and the discharge of flatulence uncommonly great; the bowels though ever uneasy in this state, were not for some time griped, that is, not sooner than bile appeared in the stools; but the borborygmi, or rumblings, were to be

heard perpetually : this disease whether a cause of mortality primarily, or only in a secondary way by preventing assimilation or chyli-fication, was (except possibly delirium) the concomitant of the greatest mortality in this fever ; but when they were present together, the case was deplorable ; the feel of the abdomen in this disease was a good collateral symptom, being generally distended, very tense, and never relieved by the stools.

This state of the disease is not to be mistaken for that *Lentor Alvi* with curdy, or with clayey stools, which follows violent vomiting ; though after seasickness it gives rise to long continued costiveness, which in healthy constitutions is seldom productive of any other injury, than laying the foundation for *Hæmorrhoids* : but in old *Hernia*, the costiveness and flatulency thus induced, sometimes cause strangulation, from the distention of the prolapsed portion of intestine, probably the very case of the Chinese Emperor, in which his Physicians recommended acupuncture

with success, and which Mr. Hume of Dublin had practised long before he knew of that case, as I have been informed: vomiting if violent is apt to produce this disease in infancy, with very troublesome and even dangerous flatulency and costiveness: but in a mere essay it is not possible to give more instances than may suffice to exemplify the subject—Physicians of experience will weigh the importance of it, and supply from their stock defects which present privations make it impossible for the writer to do.

In the history of Anæmia it has been shewn, that a decomposition of the mass of blood attended the advanced state of fever which forms the subject of these essays; and the black blood never circulated to the surface, but was accumulated in the great veins; analogy of the most direct and applicable kind, supported by intuition, therefore, renders it more than probable that the cruor in the liver never circulated in the capillaries of it, for the surface, besides being discoloured, analagous to the

paleness of the skin, was shriveled, and the whole viscus collapsed; hence, the Capillaries being (in glands, and out of glands) the secretory organs; when the blood did not reach them they did not secrete; and when blood or cruor of a bad or imperfect quality entered them, they secreted imperfect or crude bile: the liver therefore was, or inactive—or languid in secretion, or secreting a crude bile: the chyme and liquid ingesta passed into the small intestine as into a hydraulic tube, and flowed through it unmixed with bitter saponaceous bile; the fermentation of the chyme was not checked as in ordinary cases by the admixture of bitter (*Picrine**) ; nor the consequent acescency by soda; the carbonic gas evolved, distended the intestines; little absorption, and none of genuine chyle took place; and the open intestine and fluid ingesta suffered a free and rapid expulsion of the latter, in its fermenting state

* *Picrine*, in opposition to *Glucine* or the principle of sweetness, for otherwise there will be no term for the principle of bitterness.

as described above, the flatulence ever operating as an exciting cause to the intestines.

During the collapse of the liver, more especially when there was no secretion of bile, the spleen no longer useful as a reservoir to be emptied by pressure of the full stomach, when bile became necessary to perfect the second digestion in the small intestine; it (the spleen) remained uncompressed, and unemptied; it is even probable, that the collapse of the capillaries of the liver, operated in a secondary way like obstruction, to hinder the flow of the venous blood; and florid or arterial blood not existing in the vessels, this most essential component of bile was wanting; arterial blood i. e. florid, being the nutriment of the liver, the vessels were not as in health stimulated to activity by it and therefore remained inert, and possibly the liver became emaciated; the truth of the former is rendered evident in the *Lusus Naturæ* quoted by Dr. Saunders, who has shewn; that in a case, in which the liver did not receive the *Vena Portæ*, pure bile was secreted



from arterial blood only, and the subject attained maturity without any consequent prejudice to health; the same might be inferred from the antient experiment of excision of the spleen, without any the smallest observable injury to the animal œconomy; it follows of course that when arterial florid blood is wanting, the most essential material of bile is wanting; for if it be present, genuine bile is present; if absent genuine bile is absent: so that considering of the spleen in an ancillary capacity as to the liver, or a *hepar succenturiatum*; it follows, that when the function of the liver abates, that of the spleen must also abate, being the effect; the former the cause: which by the way, accounts for the *splenæmatocele* which attended the protracted fever, and from facts; whereas by the invention of a cause, or putting obstruction for a cause, this mysterious term is to stand in the place of experience, reason, and rational induction.

Under the head of *Anaemia*, decomposition of blood has been demonstrated; and in this

treatise, the consequent effect on the bile in protracted fever of the remittent kind : that of mercury on the blood has been also treated of, and proved to produce the same result : Chemists have determined that the metallic oxyds and mineral acids, particularly the oxmuriatic decompose bile ; of this effect of acids I have had too many and convincing proofs to entertain any doubt, and the North Americans employ them universally in cholera ; the effect of calomel is not so generally confessed as a decomponent of bile, yet the instances are more numerous in proof of it, for if a European in the West or East Indies have foul tongue, giddines, dimness, and bad appetite, by which he is convinced that there is bile in his stomach, he takes ten grains or more of mild calomel at night, purges it off in the morning, and is perfectly well in consequence ; the delay of a day in the use of this remedy would induce cholera, diarrhæa, or bilious remittent, possibly dysentery : knowing that metallic oxyd decomposes bile out of the body, how can a

doubt be entertained, that it will have this effect within? when cholera is prevented, diarrhæa and dysentery cured, and bilious remittent abated by a large dose of calomel; but to pursue this inference still farther, what could have relieved, if not cured the case of symptomatic hepatitis, at Harwich, but the abatement of the stimulation of bile by decomposition, and this effected by a few doses of calomel not equal to two scruples? for the symptoms had all disappeared by the third day, the mercury had perceptibly abated them the second, and could this arise from absorption? certainly not, the time was too short for this process, and no other but a chemical change could have taken place; the cure of hepatitis (idiopathic) depends also on the speedy saturation with mercury, which must not be evacuated, or used so as to induce evacuation, before the marks of saturation appear; and what can the primary effects of mercury be, but chemical? assuredly the cure of inflammation with its symptoms and causes, and in

a very indolent part, can not be brought about by the absorption and antiphlogistic efficacy (if any such exist) of mercury, on the living solids generally and directly, and on the liver particularly and indirectly: and if nitric acid cure hepatitis, it is obvious that all these reasonings apply equally to it.

Laying aside Theory, the examples among the patients (particularly of the first arrival at Harwich) of the excessive use or rather abuse of mercury, were truly dismal; of three scorbutic lads who had remittent and anaemia on them, one died of mortification which I had every reason to ascribe to the mercury he had taken, in such quantity, or in such circumstances, as to cause inflammation of his gums, which with salivation continued untill gangræne terminated his sufferings: the 2nd. who had remittent and anæmia, with mortification on his leg, did not take so much, or was better able to bear it, and with great attention recovered in four months: the 3rd. had profuse hæmorrhage recurring still at the end of four months, and

bullock's liver (so called) hanging out of his nostrils every morning: a fourth patient who recovered, salivated for a quater of a year, and lost his teeth gum and alveoli of one side of his lower jaw: these instances were a few of the examples of that Methodus Heroica which like Marlboro's sword, was loaded with quicksilver to give impetus to the blow.

Apprehensive that the practice which my opinions gave rise to, might be attributed to me as prejudice, more especialy as a very judicious practitioner of great experience, who had been appointed senior Physician to the Hospital, asserted that the Dropsical cases which followed remittent and intermittent, were cases of obstruction, and were perpetually cured at Colchester on his suggestion, by the combination of pil. Hydrarg: and oxyd of iron; I made over several cases of the so called obstruction, to a gentleman nominally my Assistant, and who had as much faith in mercury as a panacca, as any man, little doubting that he had been familiar with all its best

qualities; and I found at the end of my attendance, that a case of Splenæmatocele which had been carefully treated with mercurials, was the worst in the whole Hospital; and that no worse instance of anaemia (without fever) had occurred even at three months earlier date in it; in truth the scorbutics were able to walk abroad at every interval of fair weather, while the splenitic, who had been two months before a convalescent, was then at the end of four months—bed-ridden: but to do justice to this practitioner, he cured one of the worst cases of dysentery (and there was none more dangerous) by his mercurial process: a case of tubercular phthisis occurred among his patients, and was a solitary instance, there being no other at that time in the Hospital, nor I believe at any other; so that it might have been advisable of practitioners to have attended to the operation of mercury as a cause of Phthisis, since it is known to be a very common exciting one.

There were other instances more in point of

the treatment of dropsy of obstruction so called, but made by persons of that skill and judgement, and with that perfect acquaintance with the possible injury which might arise from mercury, that I dont hold it allowable to forestall their experience: one farther authority I cannot forbear availing myself of, since it is, that of the learned Dr. Faulkner, who favoured me with his opinion in conversation more than once, on the abuse of mercury in the Remittent of Walcheren; I have every cause therefore (independent of his approbation of my experience and conclusions, though in a desultory manner) to hope, the chasm which my history of the disease leaves to be filled up, may be perfected by him; he saw the disease from its origin, and through ill health induced by excessive exertion, was obliged to retire at the time, or nearly so, of my commencement; but on this subject he has not left me to chance, for he assured me he found Sir J. Pringle's treatment apply perfectly, and his descriptions accurate, so far as they went.

To return to the subject of Acholia—whether it be considered of as primary, or derivative, it certainly exists so often independant of its antecedent, that it cannot be held in the light of a symptom only; therefore that the subject may be presented in as concise a form as the opportunity permits, for the recollection of the practitioner; I subjoin a definition.

Acholia.

Post hyperemesim, lentor alvi, flatus, fæces alvinæ albidæ vel luteolæ; in corpore alioquin sano;

In febre citantibus vero, post constipationem flatulentem, cum diarrhæâ albâ aquosâ spumosâ,

*History of Dropsies,**Consequent upon Synochus Remittens.*

The tenor of the remarks here so frequently occurring on the Cullenian Doctrines, it is hoped, will sufficiently prove the object to be, that of promoting by actual observation the aim of that celebrated professor, in rendering his Nosology more accurate; in his arrangement of dropsical diseases, he has given species from experience no doubt, yet in this (though unintentionally) defective; that though distinguishable by some attending circumstances, still in each and every one of them, except possibly the second, there may be so perfect an identity in more essential particulars; that one of the species not only may but frequently does exist, under all the varieties he has given: and again, he has left

out the natural or really distinctive signs in all; for instance, he has no primary phlogistic genus, and those of this genus recited after, are dissevered from his first, or primary one, by which he has rendered his method discrete and more redundant than in nature; nor has he given any fundamental principle of arrangement in what he has done; to supply this principle is the object of the following observations.

Among the merits of Cullen, his creation of a pathology founded on the affections of the solids, was one of his greatest services to society, and quite sufficient to excuse his running into excess, in pursuit of the truths of nature, in a direction which led to such high reputation; it is now full time for Physicians possessing such a fund of chemical analyses of the fluids of animals, to commence the renovation of a more rational humoral pathology, than had been in use previous to Dr. Cullen's demolition of it; modern experience should now be tolerably competent to check the vagaries of

the stereopathology, which it is to be apprehended, some of the beautiful romances of theoretical system-makers have too far indulged in; there can be no other means of accomplishing this wholesome restriction, than observation founded on experiments, and to these I appeal in the present instance.

*Of DYSCRASIA, or the morbid decomposition of
Blood, as a cause of DROPSY.*

The genus anaemia has been elsewhere treated and analytically proved to be a decomposition of the cruor; and again it has been synthetically proved, that by restoring the buff, gluten, and albumen to a degree in the blood; but not the cruor, anæmia still subsisted.

The presence of fibrin which is so entirely dissolved in gluten, albumen, and serum, as not to admit of any distinct demonstration, but by the *methodus crassa* of absolute mechanical separation, as from the blood of an

healthy animal by manipulation, and by washing; is presented in a distinct form by disease, organized, and identically the same of that vital solid known by the term buff of the blood, which in inflammation is found to be the mean of adhesion; all which circumstances are proofs of the presence and utility of this principle in the blood; and farther, the liquid of inflammatory effusion will, by the existence of this principle, be more or less consistent, as the mass from which it has been secreted, has been more or less impregnated with it, which consistence constitutes a test of its presence, and of its proportion, and which can be reduced to weight and measure by chemically precipitating the gluten and separating it; the consistence of blood also in case of haemorrhage, affords a very sufficient opportunity for judging of the impregnation of gluten, as the crassamentum will be more or less firm according to the proportion of fibrin contained; so that following the ratio of the fibrin to the mass of blood, the crasis

will be in all the degrees from a healthy consistence down to that albuminous or serous and watry state called anasarca ; in the serous dyscrasy, a firm crassamentum will not be formed, nor adhesions, nor the waste of the solids be renewed, nor nutrition take place, nor obstructions ; so that from the want of consistence and buff of the blood of V S it can be ascertained *when*—neither obstruction, nor adhesion can take place ; and the same can be ascertained also by the presence of anæmia, which is a state of the fluids absolutely incompatible with obstruction ; so that if it (obstruction) be present, it must have preceded by a long time.

Hence it follows, that as adhæSIONS take place only in inflammation, all those dropsies attended with adhæSIONS, are in this particular productive of new solids, and were they to be characterized by the nature and properties of the matter effused, should be called hydrops sarcoticus (as Cullen has—*ansarca serosa*) because of the production of flesh, which

operation though truly inflammatory, can not take place in consequence of local increased action of the vessels, however violent, unless the blood contain fibrin; so that this essential character of phlogistic diseases depends on the fluids, and their *local* character is the immediate effect; for by the effusion and deposition of fibrin, in all the cells around the focus of effusion, they are obstructed or hermetically sealed up, and the disease circumscribed; thus hydrocephalus, hydrophthalmia, hydrocardia, (often ascites) and hydrocele are always topical i. e. circumscribed, and never capable of diffusion, which constitutes a diagnosis, *while they continue so*, of phlogistic dropsy; full as distinct as the different constitution in which this disease occurs, that is phlogistic diathesis, is from asthenia; nor can these general characteristics of being circumscribed, or topical, and in phlogistic diathesis, be denied to the genus in a practical definition.

It was sufficiently ascertained by the means

above related, and by tests, that if fibrin existed in the blood of the patients who had endured long or repeated fevers, or in convalescence after them, that it was in a quantity imperceptible; and therefore that it had been either decomposed or evacuated by the fevers; and by mercury also, as became evident in anaemia, which solvent quality is the cause of mercury resolving obstructions which are not to be overcome by phlebotomy; and equally of mercury proving deleterious in dropsy *not phlogistic*, by dissolving fibrin, and rendering the blood watry and incoercible by circumscription or incrassation.

As gluten is a solution of fibrin in gelatine and albumen &c. if indeed fibrin be not a concentrated or a different state of aggregation of the others only; so the causes which chemically decompose or dissolve the one, equally liquidate the other, but frequently not so entirely as that there shall be no vestiges of gelatine in the dropsical liquid; hence also the blood even in scurvy when anaemia was

present, formed a sizo crassamentum; and inflammation of the intestines was often attended with intussusceptio, but never with adhæSIONS unless they had previously existed, nor with obstructions; and hence there is a gradation of dyscrasia in the blood, which may be in some intermediate state between glutinous and serous, and which might be characterized by the term or addition in dropsical cases, of gelatino-albuminosa, deteriorating to albumino-serosa, and ultimately watry and diffusible; nice distinctions not being so necessary, as a knowledge of the fact, that the mass is thus degraded from consistent blood (glutinous) in a phlogistic habit, to a gelatinous blood in an asthenic habit, and then into an albuminous, serous and lastly aqueous if it be consistent with life, which I by no means think. In anæmia it was frequently ascertained that blood contained gelatine, though no fibrin, and formed a loose coagulum of sizo consistence, though none could be detected in the liquid of dropsy; which last however was frequently

found replete with albumen; nor am I certain watry serum occurred sole in any case, for if it did, it must have transuded universally, there being no incrassant medium to impede it for a moment.

Dropsy therefore, is no other than an increased secretion or forcible expulsion of the less consistent parts of the blood, which if it take place on an open surface is called coryza, catarrh, diarrhæa, &c. if into a cavity—dropsy, as hydrothorax, hydrocele, &c. but between dropsies it is now hoped a very obvious diagnosis may be established, since one genus is as evidently of glutinous or gelatinous blood, which cannot be evacuated but by a very forcible action of the exhalant arteries; as the other is albuminous, admitting of effusion by very moderate increased action; and a third *possibly*, allowing of transudation without any force.

Probably there is not a third kind of dropsy, therefore the albuminous serum forms the matter of effusion in the decline of the pre-

ceding kind ; as, if the disease be local and inflammatory, commencing during delirium, nothing can be known of the symptoms untill the delirium decline ; then intumescence discovers it, if in the abdomen for instance, and if cured, neither œdema nor any symptom of diffusion follows ; for the gluten may be restored by the restorative of general health, and the water and albumen of effusion absorbed : It is otherwise when repeated relapses, mercury, or other solvents of the gluten, has rendered the fluid of effusion diffusible ; in this state the cellular membrane is universal, and even rapidly deluged with serum, and the vital functions impeded ; but taking this to be at all times—as certainly it is sometimes, the sequel of gelatinous dropsy ; the colliquative discharges prove the change of dyscrasy which has gradually taken place, effectuated as often by mercury as by fever ; that is, by the ulterior exhibition of mercury after the obstructions have been resolved ; the examples of this third dropsical state or albuminous

dyscrasy if real, are cold catarrh, as in anasarca of the lungs, cold ephidrosis, lientery, or colliquative diarrhæa, &c. but when the secretions are collected and detained for some time, leucoplegmatia ensues; which may be very properly (as the term imports) taken to express the albuminous state of dropsy, attended by œdema; and anasarca may express the last hopeless state of extreme poverty in the blood, when reduced to pure serum universally diffusible.

This Theory which is wrought out of facts in great number, may be aptly elucidated by chemical analogy in the formation of mixtures: thus the oxyd of Iron in minute chemical division and saline combination, is diffused, if not dissolved in the mass of fibrin which retains it suspended; while this is in turn dissolved in gelatine albumen and serous fluid, by means of heat in close vessels; so long as the gross medium of suspension subsists in due proportion, the homogeneity of the mixture is preserved cons. cons. but when the mixture loses part

of its incrassant fluid, or becomes more dilute or watry, a separation or decomposition ensues, by the ponderous part subsiding in the aqueous, which by loss of consistence will strain through a filter it previously could not pass; and thus the dropsy of transudation differs from that of effusion; the capillaries in this case—actively forcing the thick fluids out, in the other—passively allowing their escape.

Though in the gelatinous state of the blood, while there is one hundredth of this substance in solution, the effused liquid will concrete, yet a fluid even of this tender consistence is never found to be effused but by inflammation; hence vesications from cantharis, from burns, scalds, and erysipelas, are frequently filled with this gelatinous matter: and sometimes dropsies in larger cavities though rarely; an instance occurred at Harwich of ascites after enteritis, the patient died under the ferro-mercurial regime, inflammatory effusion of fibrin had glued the intestines superficially to the peritoneal lining at the umbilical region for about a hand's breadth,

and without mesenteric bridles, so that the peristaltic motion was not interrupted, the abdomen was as much distended as in ordinary cases, and the whole liquid effused was found concreted in death, though fluctuation could be distinguished in life as I was informed; the gelatinous matter was much less consistent than painters' size, yellowish, transparent, and in grain like jelly that had been broken by agitation; yet the probability is, that in life the heat of the body was sufficient to preserve fluidity, so that it would not have been too thick to flow through the large troicart which is used to draw off gross fluids; there were no visceral obstructions, the case was anaemia produced by fever of protracted relapses, and by mercury, during which local inflammation (if not primary) accidentally occurred; to this complication, debility was superadded, and much promoted by so large a secretion of nutritive fluid; the antecedent symptoms of enteritis had either been concealed by delirium, or were so low and indolent as never to have

given sensible uneasiness, or to have proceeded beyond effusion, by which probably it was cured ; but the confirmation of the reasonings which precede, is fully evinced in the phenomena of this case, since it was gelatinous dropsy, inflammatory, local, and never became diffused to any extent ; this dropsy could not rationally be considered for a long time as ascites, since its origin was inflammation, a circumstance so truly fundamental should surely be nominally expressed ; hence with strict propriety it may have been considered hydroperitonitis in the commencement, and untill the fluids lost their gluten by decomposition ; from thence and so soon as anaemia ensued, the disease became Hydraskites, or simply Ascites ; and had the patient lived some time longer, it would have been reduced by decomposition of gelatine, to a mere albuminous effusion, in which state it would have certainly been diffused with more or less rapidity, as the serum might contain more or less albumen dissolved in it.

When peritonæal inflammation proves tedious, it is to be considered of as erysipelas, since it is frequently diffused all over the viscera and peritonæal lining of the abdomen, and very probably is often erysipilas vesiculosum, in which, effusion of serum is very profuse; in this case though very acute fever attends, the delirium conceals the local symptoms, and the first intimation I have had of the effusion, in very acute fever supposed Typhus, was the filling of the scrotum through the peritonæal processes, with water of dropsy, and this though the abdomen was not perceptibly distended.

Hydrothorax so often follows peripneumony, that I once thought half the mortal cases proved destructive by this symptom concealed; but I am now certain some fatal terminations are to be attributed to anasarca of the lungs brought on by bleeding, or by anaemia as a predisposing cause, and when peripneumony is incident to anaemia the patient generally expires of anasarca of the lungs, suffocated

by watry frothy expectoration, of which many cases occurred at Harwich, and many elsewhere as supposed instances of phthisis evolved by mercury: from the outer surface of the lungs it is, that the effusion takes place in Hydrothorax so called and improperly, since it is really acute peripneumony, often empyema, and except in anasarca never genuine dropsy, but Hydropneumonia.

In Hydrocephalus so called a frequent occurrence, that is its incipient state, the headache, dimness, and dilated pupils at once determined the disease to be Hydrocephalitis; it was therefore early understood, and unless delirium ensued it was quickly relieved; but when too rapidly violent to admit of relief, the functions of the brain were so soon extinguished, as not to allow of any remarkable change in the structure or appearances in death.

Hydrophthalmitis a name of as much meaning as *Ægyptian Ophthalmia*, made its appearance in only three cases, not very remarkable for their acute symptoms, but very much

so for their obstinacy; the first notice of this disease was an indolent congestion in the vessels within the orbit, evident if early attended to, as the parts around the eye were discoloured and inflated without pain; and so continued, for a few days before the conjunctiva was suffused, or intolerance of light ensued; in this state they remained, little relieved by any remedy, and rather stationary for some time, when one in about three weeks shewed evident symptoms of amendment; if this disease does not come within the limits of dropsy consequent on the prædisposition above marked in the fluids, it must still remain as it has, an anomaly in medicine: yet where can there be a more striking proof offered in any case, than the occurrence of this supplies of its being dropsical? viz. in convalescents and others lately returned from hot climates and severe exertions &c. capable of operating so as to decompose the crasis of the blood, and induce anaemia: of this (founding my opinion on the experience of Doctor Patrick, Inspector

of Hospitals which is very great) I am as fully convinced, as if I had been present to witness what he saw; among a considerable number whom he had secluded when taken ill, was a Serjeant who at the instant of the Doctor's visiting his Hospital, came up to him to ask relief of the insupportable pain he then laboured under, and described as if his eyeball would burst, while as the unfortunate man yet stood expressing his agony of torture, the eye did actually burst, and the whole contents of the globe fell down on his breast, which the unconscious sufferer not perceiving, raised his hands and cried—God be praised—I have got relief—and so he had obtained dear-bought relief from pain by blindness: it must be observed, that this happened in the Fens of Lincolnshire among militia soldiers, and therefore the disease is not Ægyptian, nor of Zealand, but incident to a dropsical dyscracy or to anaemia wherever produced: and here two states of the disease may be observed as in other cases, this—the present subject, is Hydrophthalmitis; the

variety commonly described and which has vulgarly been put for this, is Hydrophthalmia; and if either has occurred less frequently here than in Ægypt, the circumstances of climate, insolation, air chemically dry and loaded with dust, which are powerful exciting causes, rarely present themselves together in this country so as to render the effect endemic.

Hydrocarditis was much more frequent than our means of detecting it could ascertain, the symptoms of the inflammatory state were never that I know of perceived, and probably were over in most, if not in all the cases, or had been concealed by delirium untill those of hydrocardia supervened, for these were the first to attract notice; and even these were very little notable, since they were divested of all circumstances commonly considered diagnostic of the disease: in one patient who was strong and robust compared to the generality, but really appeared *en bon point*, and in whom no other morbid appearance was then present (except paleness which marked the

dyscrasy of the blood) perpetual singultus made all the difference between convalescence and disease, the pulse being no quicker than suited such state, about 90, but as the symptom persevered, the pulse slowly quickened to the last, and on the eighth day he expired without relief from any remedy, and rather of debility than disease; the pericardium alone afforded any morbid appearance, being replete with water; but if adhæSIONS had preceded I know not, as the ignorant person who performed the dissection in my absence, and without my knowledge, was not capable of making a report; yet all circumstances considered, I can not doubt of the antecedent inflammation, and probable concealment of symptoms in fever; this patient lay in every position with equal ease: In another, after fever had ceased, and delirium, which had been incessant and produced by regret at removal from the care of a very attentive nurse, he lay perfectly motionless without assigning any cause for it; his head raised a little and some-

what reclined to one side, his neck a little bent; he was affected with dyspnœa only, pulse quicker than in health, but not more so than in convalescence, the strength sensibly declining to the third day when he died; there were no evident marks of inflammation beyond the circumscribed nature of the disease, and the certainty that in anaemia, inflammation perpetually takes place without adhæSION; the fluid with which the pericardium was distended was albuminous, as in the preceding: a third had symptoms which might be considered evident, viz. dyspnœa, with dry spasmodic cough occasionally, but whenever this person turned on his back it became distressing and attended with increased dyspnœa, he lay in any other position indifferently, and his head no higher than ordinary, at his heart he always felt oppression or rather pressure, and as he expressed himself, as if his heart were squeezed between cold hands; in others this pressure without sense of coldness was observed, but in none

did syncope, apnoea, or irregularity of pulse occur, nor palpitation, nor that remarkable symptom (mis-called palpitation but) which is the impulse of the water impelled by the diastole against the ribs, and may be evidently felt between the 5th and 6th or 6th and 7th true ribs, similar to that which is felt by striking on the abdomen in ascites at one side, while the impulse of the fluctuating water is received on the opposite; which I had felt in other cases of pericardiac dropsy, particularly in a woman who believed she had a living creature jumping within her breast: from the generality of cases, therefore, which were similar to this, it may be inferred, that sudden or spasmodic dyspnœa with fits of coughing, and without expectoration, and these occurring in the prædisposed, particularly if there be sense of compression of the heart, are the only symptoms which render the presence of this disease probable; and that the palpitation of fluctuation be it ever so truly symptomatic, is not to be expected in these prædisposed habits; a

pathognomonic symptom therefore is still a desideratum. As to diagnostic symptoms in case of hydrothorax being combined, I know of none; but between hydrothorax and hydrocardia when uncombined there are some; the dyspnœa in the former is perpetual, is always on the increase; in hydrocardia it is transient, and occasional; in hydrothorax it is quite oppressive and the patient can only breath with his breast raised, in the other he lies down without impediment and his dyspnœa and cough are truly spasmodic and fugacious, scarcely appearing unless excited *by some accident; in hydrothorax there is cough and expectoration generally.*

Anasarca of the lungs is distinguished by the perpetual cough, by the deluge of frothy watry expectoration and still greater dyspnœa, however it must be confessed that the want of pathagnomonic symptoms in hydrocardia were little to be regretted, since so few cases admitted of any treatment founded on distinct indications of cure; of three here recorded

that of singultus alone could it have been detected, being in a good constitution, would have admitted of puncture if allowable in any case of this disease, which is not intended to make as an objection to the operation, but as to the uncertainty of the disease really existing to warrant it; a consideration which must make also against any attempt to form a definition of the disease fit for an elementary work.

There are no fewer than seven genera of dropsies in our Nosology, some formed on a presumption that this disease within the pleura, is not the same in kind as this disease within the peritonæum; but what marks these distinctions with absurdity is, that dropsy within the peritonæum of the abdomen, is set apart as a different kind from dropsy within the peritonæum *produced* as a vaginal process to the testicle; so much for dropsies properly so called. Hydrorachites is miscalled dropsy, because a small quantity of fluid the healthy secretion of the parts, distends the duramatral

coat of the spinal marrow or cauda equina; whereas the disease is truly Hernia of the D. mater, and the cause is, defect of bone or bony matter leaving an aperture in the posterior part of the sacrum, through which the sac protudes; the same happens less frequently in the bones of the head, but has met no such notice: Hydrometra is also adduced as a genus, though there is no such dropsy, for the disease, if it be one, is a redundant quantity of a healthy secretion—the liquor amnii, which ceases naturally in parturition: nor do either of these symptoms ever attend dropsy, nor admit of any application found to be palliative or curative in dropsy: and thus the Nosology is not only redundant, in the multiplication of distinctions where there exists no generic difference, but in the enumeration of diseases for dropsy, which are not so, and which have no real affinity thereto, nor any other except the loose rhetorical analogy of similitude in external form.

Subtracting the foreign diseases from among

the genera of dropsies; since the distinctions between the five remaining have been proved to be nominal, the whole arrangement is dissolved; anasarca for example, a chronic disease of the mass of fluids and never original, is a genus with hydrothorax, which is local, acute, and original as being a concomitant symptom of pneumonia, and often the cause of sudden death in this malady; whereas in anasarca there is always prædisposition, and without it there can be no anasarca; while on the other hand, any accidental cause may produce the other, and in the healthy state, by exciting vehement action of the arteries, effusion of serum and gluten, consequent obstruction, and even fleshy consolidation of the substance of the lungs, which, while the serous effusion accumulates rapidly, is compressed into a small size or lump, never to be expanded more, (no diffusion taking place) the patient dies partly of the violence of inflammation, partly of suffocation: in anasarca on the contrary, the fluids alone are degraded by previous disease,

from a consistent glutinous eucrasy, to a dissolved dyscrasy; and generally, if not always, the cruor also is decomposed, and anaemia induced, which is the prædisponent state; and should hydrothorax by the abatement of pneumonic symptoms become chronic, the fluids might in process of time be so degraded, that anasarca *as a consequence* would conclude the scene, as in fact often happens, and from causes demonstrable, inseparable, and which therefore should be fundamental in the formation of a natural arrangement; on this principle it is, that the five legitimate genera of Cullen, must be reduced to Two viz. *circumscribed dropsy*, when it is *permanently so*; and *circumscribed dropsy changing into diffusible* or general dropsy called Leucophlegmatia, and finally into the most diffuse viz. Anasarca; and here it must be recollected as observed on this subject before, that the degradation of the fluids in the second genus is no preservative against inflammation, for in humoral diseases, as universally appeared in those of Walcheren,

the solids were very little altered or affected; therefore encreased or inflammatory actions were as frequent and as commonly incident to the remittent constitution and to convalescence, as to any other whatsoever if not more so; and which (were argument to be trusted to in such cases) should follow *a priori*, since the febrile state is one of encreased, or morbid sensibility, real or potential.

The order which these observations have suggested, is annexed by way of Induction from the preceding Theory.

Ordo 2. Intumescentiæ.

Hydropicæ.

Genus. 75. Hydrops encrasius circumscriptus topicus, præcedente febre vel phlogose.

Species. 1. Hydrocephalitis (synonima, Hydrocephalus).

Def: Capitis hebetudo ad cephalalgiam immanem et epilepsiam, pupillarumque dilatatio et insensilitas ad amaurosim, ingravescent; alvo pulsuque tardo.

Sp. 2. Hydropneumonia, (syn. Hydrothorax).

Def: Dyspnoea decubitu augescens, et subito e somno quasi suffocatione expergefaciens cum palpitatione, collo porrecto, costibus dissitis, et manus unius vel alterius cum oedemate.

Varietas. Hydrocarditis (syn. Hydrocardia).

Species 3. Hydraskites (synonima, ascites).

Varietas. 1. Hydroperitonitis

Def: Post febrem vel phlegmasiam, abdomen in universum tumens, tactuique fluctuans, urgente simul siti dysuria et oedemate.

2. Hydrepatitis:

Def: Post dolorem Hypochondrii dextri subacutum inspiratione pungentem; doloremque humeri ejusdem comitantem; hydroperitonitidis symptomata.

Sp. 4. Hydrorcheitis (syn: hydrocele)

Def: Involuceri testis tumor tensus laevis indolens paulatim crescens, teste nihilominus vel epididymide sat sano.

Genus, 76. Hydrops dyscrasius etiamsi phlogisticus et topicus, tandem diffusibilis.

Sp. 1. Hydrophthalmitis (syn: hydrophthalia).

Def: In dyscrasia anaemia—ophthalmia.

2. Hydrothorax sub finem diffusibilis.

Var: hydrocardia

3 Ascites.

var. 1. hepaticus.

2. peritonealis.

3. ovarialis.

4. ab hydatide globosa.

4. Hydrops oppilatus

Var. 1. Œdema.

2. Angina aquosa.

5. H. Diffundens

Var. 1. Leucophlegmatia

2. Anasarca.

*Of the PATHOLOGY of METAPTOSIS,
Or, Natural Commutation of Types; exemplified
in the Endemic of Walcheren; and in
the Doctrine of Crisis in Fever.*

Brutes though always exposed to vicissitudes of temperature, wet and dry, and who err perpetually in the use of the nonnaturals; are notwithstanding little liable to fever; savages approaching brutes so nearly in appetites, are also though in a less degree exempt; even those of the torrid zone enjoy an immunity in a high degree, under all the circumstances which prove so very destructive to Europeans—certainly to us British Islanders, who are remarkably obnoxious to fever, probably more so than the natives of the Continent: the prædisponent causes therefore must subsist in us more universally, and must of necessity depend on habits of feeding, drinking, &c.

equally universal, nothing less being sufficient to produce so great a deviation from nature ; among these causes temperament must not be omitted as a prædisposition still more general ; to which when exciting causes are applied, the fevers which ensue must be of more impetuosity and less regularity, than those of other nations and people of more abstemious habits, and less sensibility of constitution ; yet such is the influence of nature when combined with climate, if the body be much exposed to its intemperance, that we who have few typical fevers among us, not one-third in one of the greatest hospitals in the metropolis—in the West Indies are constantly affected with trytæophyes—one of the most regular fevers ; and probably in the East we should be similarly influenced, were not our regimen of life so ill-suited to that torrid region, that hepatitis (the disease of drunkards) is there perpetually a *subintelligitur* in fever. But our constitutions or temperament (though generally sanguine), offers no absolute im-

pediment to regularity of type, the Walcheren Endemic amply certifies, were the Remittent of the West Indies out of the question.

It is not in the fevers of this country that order is to be sought, nor in the books of our institutionists, who by *husteron proteron* begin their ordination with the most disorderly; Vogel has commenced with Quotidian, a regular fever no doubt, and he was right in principle if not in practice; but Cullen of whom it may be safely asserted,

Nil quod teligit non ornavit,
 went a step beyond him, commencing his methodical nosology with a still more regular fever—Tertian; notwithstanding which advance, it is yet to be lamented, that he lost his hold of the clew which the other had given him to the labyrinth, and did not commence his order with *the most orderly* of fevers viz. QUARTAN, from which he should have proceeded to the less orderly, and terminated

where all arrangement is set at defiance by disorder, that is with Synochus (his own Synocha) *Kat exochen*, in which even the method of Nature can not avail.

Unde coorta queat nova vis irrumperere ; et omnem
Naturam rerum mutare, et vertere motus.

LUCR.

The fever of Walcheren was truly Composite, and not of any legitimate order or genus acknowledged by *our Nosologist*, it commenced with a most acute continent fever, wanting nothing of the Cullenian or Stahlian Synocha but real strength, and was the Synochus of Authors or Synochus imputris ; it was homotonous for some small number of days, after which evening exacerbations ensued, and frequently continued very severe for an undetermined number of days, the exacerbations being salutary though a severe augmentation of the disease, were followed by remissions gradually more perfect, untill the morning, and even the whole forenoon passed with little fever, the exacerbations gradually rising in intensity

and anticipating into diurnal paroxysms, followed by remissions ever more perfect as the paroxysm was severe; the rigors also at the same time lengthening, untill a longer rigor induced a shorter fever, more profuse sweat, and intermission, not however a perfect apyrexia untill by the cessation of an intermediate paroxysm the interval became tertian, and the paroxysm more severe; after which apyrexia ensued, and the tertian paroxysms continued perfectly regular; in three instances of about three hundred, quartan exacerbations were observed, though more did no doubt occur, but to stand on firm ground these only are relied on; in one case the 3rd. quartan paroxysm cured the disease; in the second case the paroxysms were not very distinct, and the 2nd. probably concluded; in the 3rd. case the quartan movements were not distinct enough to decide on them, and they were few if genuine: It was not so with tertian, a few instances of which occurred, which might be called legitimate or exquisite, they held on

for three months, and were the most intractable diseases of the season and even withstood arsenic, or relapsed after they had been interrupted for a time, and this after arsenic, after cinchona, and after aromatics with diuretics and astringents &c. &c.

From this scheme it is apparent, that when this fever pursued its natural tendency to a solution, it was a paracmastic fever, gradually declining from the most acute state of continent fever, to continued remittent; this again yielded to the more mild quotidian remittent, this to the tertian remittent or double tertian, which was permuted for the tertian intermittent; and in a few solitary instances the disease terminated with quartan intermittent, but so seldom as to leave tertian beyond all doubt the predominant Type of the Endemic, and the inveterate one.

When the fever from accident or untoward effect of remedies became epacmastic, it ran the opposite course, from the less acute to the more acute, from the more regular to the less

regular, and ended in irregular fever of incessant violence, with delirium which only abated with the strength, and ended with life.

It may not be inferred from this statement that this fever ran through its course with certain obscure changes, which might be taken either for continued or remittent—for remittent or intermittent; these types were as well marked and regular in turn, as in any fever of a simple primary type; and the permutations were even when languid as evident; so that the existence of a fundamental fever of *every type*, became as apparent as any other observable fact, and this universal.

Due consideration being paid to the weight of evidence, not less than fifteen thousand instances in support of this *Metaptosis* or *Permutation of Types*, it is presumed, the fact is established; the advantages may be incalculable to the practitioner, to judge from one obvious result; “ The mature detection of this “ order, in the yet disturbed efforts of nature

“ to impose regularity on the diseased actions,
 “ which have been excited beyond their legiti-
 “ mate restraints; ” tending materially to aid
 both prognosis and cure.

In the diagnosis this advantage is immediately apparent, in the impropriety, if not impracticability of forming precise general distinctions, like mathematical definitions; which are so far from maintaining the natural affinities of type, that they cut them asunder by a studied affectation of precision: of this our best Institutionist supplies a notable example, who, misled by his pursuit of method, argued himself into the belief of the nonentity of remittent, and which for its ineptitude and irregularity he expelled from the genera of his admirable Nosology; from which bigotry this incongruity has resulted; that the second subspecies of Tertian, has swelled into a catalogue of such number and authority, as to exceed by far the much less important head or genus, so that the minor may be said to include the major; while the grave and antient authors

who have so well defined remittent, and the host of moderns who have by their long and unwearied labours supplied faithful diagnostics of this dreadful malady, and rational indications of cure, are made light of, as unsuitable to our climate; or recounted as having treated of an anomalous variety of tertian: Cullen's fastidiousness therefore in arrangement, however useful in other particulars, is here overstrained, without attaining that accuracy he was in search of; and this by shutting his eyes to the method of Nature, who is quite as accurate in her gradations (or permutations), as in her distinctions; so that if we lose but one link of the chain, the whole arrangement is dissolved; and this dreadful result has followed, that our young practitioners proceeding to hot and unwholesome climates, with their country's defenders in their care and trust, have not even in their nosology a definition of remittent tertian, that tyrant of diseases: nor can the rare occurrence of this fever in this climate, be

admitted as an excuse for this omission, since the learned professor must have known it from reading, and from the *viva voce* description of his numerous pupils who had seen it, treated it, and suffered it.

All the practical writers from Hippocrates to Sydenham, have marked the spring and autumn as the seasons productive of epidemics in middle latitudes; they have not all reasoned on the subject, or by following up the connection of the effect with the cause, they would have found, that except in military enterprizes, the prædisposition to disease was the gradual operation of the winter to a maximum in effect of cold, and of the summer to the maximum effect of heat; by which the subsequent seasons in themselves neutral, or salutary, became the periods of wintry and of estival paroxysms; but as the winter frequently braces the habit, and if not too severe is salutary; and as the finest summer is frequently a sufficient cause or prædisponent of disease, so the result of unseasonable wea-

ther in the latter season, will be to urge on the prædisposition untill it attain its maximum præmaturely, and is exacerbated by the unsteady temparature of autumn.

The character of epidemics therefore should be sought for in that of the preceding season; thus have vernal epidemics been found to partake of the tonic constitution of winter; the autumnals of the bilious, or (so called) putrid diathesis of summer; Sydenham never saw an exquisite quotidian in spring, unless by a wrong use of terms, double tertian or triple quartan might be so called; therefore though epidemics in which prædisposition is long and deeply rooted, are the most obsequious to order of all fevers, they are the most persevering and even obstinate in their tenor; those of spring being connected with tone and plethora, are generally sthenic; those of autumn with excitement and morbid sensibility, are frequently asthenic, in which, causes have greater influence, and constitution less; the latter are therefore the diseases from which

in all countries where there is an autumn, the method of nature has been deduced.

Quartan as a disease is of little importance in England, of none in Ireland, where the physicians of greatest experience may not have seen above one or two instances in a long life ; it is here introduced as the key to order, for it appears that by a whimsical inversion of observation, the Father of Medicine, with assiduity and discrimination beyond all other examples, worked out his critical order of periods which is really quartan, from his observations on continued fever only ; not having been conscious as far as can be judged at this time, of the prædominance of quartan type in continued fever ; nor is there (it is believed) any resolution on any principle, of his critical order of periods to be found ; untill the sagacity of Cullen solved the enigma, by giving the ascendancy in the first septenary to the Quotidian type ; in the second septenary to the Tertian ; and in the third to the Quartan ; a most ingenious and

specious evolution truly, if suited to the whole Hippocratic order; but it only applies *sub finem*; for Dr. Cullen did not even give himself the trouble of comprehending those orders, which were two—the series of odd days, and the series of even days; the one more favourable, the other less; the series of odd days also has a disclostation in it, which Galen threw a bridge over, explaining—that of the three septenaries which form the term of a common continued fever, the two first were counted disjunctly, the second conjunctly; by which the apparent incongruity of even days being critical, in a series of odd numbers, is rendered passable; thus the seventh day ends the 1st week, the eighth begins the second, and the 14th is both the end of the second week, or septenary, and the beginning of the third septenary; and this is the true order of Hippocrates, an order which ages and nations have brooded over, and yet it has stood the test of time and experience; as Dr. Cullen only made himself acquainted

with the first septenary, contenting himself to guess at the other two; what wonder that the laborious Fordyce who disfigured all his masters theories in retailing them, and argued by taking exceptions to all the doctrines and even axioms of medicine, while he admitted them in fact; what wonder that he should conceive the whimsical notion, of Hippocrates ordering his critical periods by the Pythagorean numbers, when he knew nothing about those days either in number or method, beyond the first septenary, as he learned it from Cullen!

When continued fever is obedient to the quartan type, though its increase or epacme extend to the 4th day, if any the slightest remission be detected on the evening or night of the 4th, it is indicative of the prevalence of quartan type; and if any abatement follow on the ensuing 5th and 6th, even though the fever be in fact a triple quartan, and therefore continued and severe on these days, yet if more severe on the 7th provided remission as may

be expected—follow, the fever concludes; if the remission be trifling, it is nevertheless a good symptom and prognostic of the fever becoming typical; but if notwithstanding the exacerbation on the septenary, the fever continue acute, it will thence obey the tertian as a more acute type, and may be expected to lengthen its epacme to the 11th, which, counting anew from the 8th is a renewal of the quartan type; but by the way, it has been observed (and is a support of the Cullenian exposition) by many moderns, that the 9th 11th and 13th have proved critical in this climate; but by Sydenham the renovation of the quartan type on the 14th has been so decisively noted, that in the autumnal continued fever when an epidemic constitution prevailed, if the fever were undisturbed by mischievous interference, it terminated on the 14th; of which the eleventh according to Hippocrates is indicative, being the 4th day of the 2nd septenary, and analogous to the 4th of the first; but were the fever interrupted, it renewed

its progress and terminated its circuit on the 14th of the relapse; so that admitting as it is highly probable, that the 9th 11th and 13th were tertian exacerbations, the termination on the 14th by crisis, proves that the continued or double tertian had exhausted its influence, and the quartan (counting with Hippocrates the 11th indicatory, and 14th critical) had prevailed: the 14th being the commencement of the 3rd septenary of Hippocrates, but according to the tenor of the quartan type the continuation of this, the 17th (analogous to the 4th day of the first septenary) becomes the index to the 20th, which is the true critical day of Hippocrates, and not the 21st; and so he proceeds in his critical order by quarternarys and septenarys, up to the 60th; the quartan type manifestly prevailing all through, except on the 8th 9th and 10th days, when it seems to be overcome by a more acute kind of fever, which on the 11th either combines with quartan to give it double efficacy, or declines into it; so that the next quartan exacerbation

proves critical: the 7th being the most efficacious, the 14th inferior to the 7th though second in efficacy, the 20th the lowest though truly critical: the 21st however has been frequently marked as critical by practitioners in this country and climate, and probably is so under the influence of tertian type, for which the sanction of Hippocrates himself may be pleaded; but this can not avail any farther than it is supported by local evidence, for the days quoted here, are those depended on by him, and as such given in his more finished works, the prognostics, and aphorisms, which evidently are digests of conclusions from his previous experience, and furnish intrinsic evidence of its immensity; however, that Hippocrates did note down the 21st among the many minor critical days, must be admitted; and the frequent observation and registration of it for many years by the learned Bryan Robinson, must attach local credit so it; experience alone can determine on its validity, yet there may be a fallacy in experience; for

at Sir Patrick Dunn's Hospital, the Clinical Clerk a learned and discriminating student and now a practitioner of note, for several years continued to set down those terminations of fever to be on the 21st, if the patients were on that day first free from fever; whereas the fever of the 20th continued through that natural day, and the solution of fever ensued in the natural night of the 20th; whether the professors were aware of this or not, cannot now be determined, otherwise, than by supposing they approved, since they did not notice or condemn this practice; if they approved there would be no small presumption in opposing any instance of private practice, to such a combination of judgment and observation; therefore the fallacy of calling that day the last of the fever—on which it was first perceived that it existed no longer, may be fairly taken for a fallacy of very general occurrence.

This exposition of the method of Hippocrates certainly accords with the order of

nature ; nor is it a trifling support that it receives, or may receive from the observant, that any clinicus if previously instructed by experience of the Walcheren Synochus, might elicit this exposition from the observations of Sydenham, for the fact is so ; but still this order is not to be found in Sydenham, nor wholly in Cullen.

Quartan being the mildest of types, and tertian being less mild, it follows that the fevers which obey this type are much more acute than the former ; of this the tritæophyes or tertian remittent of hot climates is an example, and all the fevers of the West Indies, which, whether continued or remittent, ultimately intermit, if they endure long enough ; the influence of this type extending more than fifty degrees north ; if a scheme, therefore, were to be formed on the Hippocratic plan, for this constitution, all the odd days would be more or less critical, but if the seventh should prove really so, this would be a confirmation of the additional influence of some

other type, nor can any be conceived to have this effect but the quartan—in a remittent or double tertian form, since if it abate, it must either cease or relent into the quartan type as in the Walcheren Synochus; in which fever the præponderance of the tertian type was perfectly evident, so much so, that it was as distinct in the paroxysms of remittent, and of continued fever, as in genuine intermittent, though not so violent; and if to this be added the remarkable propensity to topical determinations of the inflammatory kind, and the total absence of nervous and putrid symptoms; the resemblance to the vernal epidemics of Sydenham is so striking, that it is difficult to conceive any other opinion of the Quotidians of Walcheren, than that they were double Tertians; there Exit still farther proved this, by their remaining for months unchangeably tertian; and like the tertians of North America, renewing their tertian progress the ensuing spring and autumn; so that in the country where they originated, they might

have perpetuated their relapses in these seasons during life; or on any close wooded moist soil, such as the south-east counties of England.

Hence, according to the foregoing exposition of the Hippocratic crises, the mildest continued fever is an approach to, if not triple quartan: the next but more continued fever is an approach to double tertian, which was the *causos* of Hippocrates, and the *Febris Ardens* of Boerhaave: the most acute of continued regular fevers being continued quotidian, or *synochus* of Cullen; or *synochus imputris*, and *synochus putris* of authors, our *typhus nervosus* being this last variety: but here all method ceases, unless we call a seven-day fever, one paroxysm, or an *epacmastic* fever; as we say, an *Ephemera* of one, of two, or of three days; which is not subversive of natural order, nor contradictory to the experience of sound clinical professors.

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typhus nervous being his last variety; but
lately all mixed cases, unless we call a syn-
ochus, one pyrexia, or an epidemic
fever; as we call an Ephemeral fever, or one
of three days; which is not indicative of
natural order, nor contradictory to the ex-
istence of sound clinical prognosis.

METHOD OF CURE,
DEDUCED FROM THE
PRECEDING HISTORY
OF THE
Walcheren Remittent.

IN the investigation of the character of an Epidemic, it is quite necessary to depart from the modern received mode of proceeding in such cases, and recur to that of our ancestors; or, as happened in the Walcheren Endemic, we shall be first warned by our misfortunes, of the defects in our method—of curing the prominent symptoms of every fever as soon as they appear, without regarding the influence of causes, type, period, progress, or termination, as also by the ignorance in which we

are left of the subject by this practice, and by the censure which can not fail to attach to it in the result; for as the natural character of the Walcheren disease might have been thus concealed, if by any chance it had happened that in such case any learned body incorporated collegiately for the good of society, might have been appealed to in their professional character as a Board of Health, for decisive counsel and advice in so great a national calamity; so effectually have the received modes deprived us of opportunities of forming histories of epidemics, and pronouncing prognostics therein, that it would have been necessary to have confessed; that they should search back for centuries among the records of medicine, to provide grounds on which to found a decisive opinion by analogy—to have deferred to the evidence of those who had nearly exhausted health, strength, and life in relieving their fellow-sufferers—or to have submitted to disguise these truths by oracular obscurity in some

trite and equivocal sentence, neither instructive to the uninformed—nor salutary to the suffering: In works of sportive genius the rules of philosophizing are so carelessly treated, and without prejudice to composition, that good taste may be supposed to contribute to bias the judgment, therefore where our fellow-creatures may be the sufferers—and when compassion and a sense of duty actuate both head and heart, it could only be by an error in judgment, that any few though ever so highly endowed could venture on a migratory inspection, to pronounce any opinion on such a subject; nor can ambiguity excuse this error as harmless, since the occasion would decide, that *it should be instructive if not provident*. It was by thus walking over the prostrate labourers in the field, and by substituting egotism for actual information, the great council of the nation might have remained (but for individual patriotism) uninformed of the nature and probable fatality of the Walcheren Remittent, if not met by

measures as prompt and extensive as the emergency demanded.

From premises so founded in error, it is no longer surprising that an opinion could have been entertained, that the aged President honoured as he was by the voluntary suffrages of his Learned College, and equally dignified by the State, could have been so rash as to pronounce a *Prophetic decision*, on the fate of thousands waging war under all its casualties, by day and by night, in a most insalubrious situation—he disdained such affectation of skill; he had never resided in a camp, had never witnessed the effects of interminable battle in a siege, nor did such knowledge except by official report necessarily constitute any part of his duty of SUPERINTENDANCE; the heads of a department (if they know their duty) stand on elevated ground, that they may review the whole of their extensive and subordinate movements, arrange, give impulse, decide on reports, make even expediency obedient to principle, cautiously urge,

maturely anticipate, and prudently maintain ; but if they ever descend to become the *actors* in the offices they should only *actuate*—they desert their duty, and the *general good* is sacrificed to *one* object ; the President therefore wisely stood at his post, candid, and unaffectedly scientific, he proceeded on principle, combining in comprehensive view all the resources of science and experience with his Indefatigable Colleague, that *the* might administer the resources of the Nation through their functionaries, as if with the hundred hands of a Briareus ; nor ever narrowed their views to that dereliction of duty, which would impell them to seize the labouring oar, and leave the helm without a pilot.

If trusting to observation in any future emergency, on the appearance of any epidemic, we shall prefer the prudence of Sydenham as our best example, and leave the early cases as much as with safety may be admitted to nature, the whole progress from causes to effects will be presented to view,

and Rational Indications deduced, to direct the application of such means as we may possess, or to lead our inquiries to the attainment of others more efficacious: but if it be desired to know, why this was not effected in Walcheren? the reason is obvious, that from the multitude of sick accumulated so suddenly and unexpectedly, the medical attendants provided on such occasions were immediately oppressed, unequal to a much lighter duty, and still less competent every succeeding day; so that even when successors were provided who came into the attendance *ex improviso*, their unfortunate predecessors were found among the most deplorable sufferers, and their embecility of body and mind so far removed from the ability to aid their associates by counsel or experience, that there was none who did not require both for his own relief; could this universality of disease have been foreseen, successions of Physicians and Assistants might have been maturely provided to follow, as their predecessors might be exhausted

by sickness and fatigue, which in fact was done so soon as the necessity became apparent, sooner was not possible, and even of the number so retained to succeed, I am not the only one who has become an unpitied victim of patriotism and humanity.

From the history of this disease previously detailed, I very much fear the Indications I have formed may prove insufficient, still more do I fear for the means of answering them; I conceive therefore that the enunciation of my difficulties, forms a necessary apology for the defects which I am sensible must be too apparent, but which I as much as any one wish to see pointed out: as stated at the commencement I generally had from 120 or 130 patients, that is more than one-third of the Hospital to take care of, in which with one assistant whose name I have frequently had occasion to repeat, I hope with credit to him, we drudged on for fifteen hours of the 24, and had often been disturbed after at night, to relieve the pains of those whose fate was not

in our hands, and whose miseries we thereby but prolonged; for though in five months I had fifteen assistants assigned me, the drudgery of that one gentleman with me in one week outweighed all their attendance, from notes so trite as they made and in many cases not only imperfect but absurd, perfect order could not arise: in fact it has been in the intervals of abatement of the painful illness and stupidity I brought from Harwich with me, I have reduced my notes and reasonings to the degree of order in which they now appear, and I fear too much from the resources of memory.

Convinced as I am from contemplating the whole of the History of Epidemics of different years given by Sydenham, by several very striking and characteristic traits before cited, as well as by the following, p. 519, Ed. Leyd.

“ Febris tametsi prorsus continua sit, sæpe
 “ tamen exacerbationes molestissimas ingru-
 “ ente nocte adportat, non aliter ac si duplex
 “ foret tertiana, sive quotidiana,” *i. e.* con-
 tinua; that the Synochus of Walcheren was

a double tertian, or a continued fever with double tertian exacerbations: The question which naturally arises from the state of the case is, why it did not submit to febrifuge remedies in the remission as heretofore? The answer in this case can only be given by connecting the History of the Symptoms, the Pathology and Therapeuties founded thereon, so as by facts and conclusions to demonstrate the reason of the deviation, and that it was not one of theory, but necessity.

Pringle on this subject has left us very much in the dark, not having formed any Indications of cure for the fever of Brabant, which he has described in a miscellany of observations, valuable no doubt, as they are all practical, and has left us nothing conclusive but on the jail or hospital fever, for which he has assigned two causes as proximate—contagion and inflammation of the brain; the former, that is contagion, was evidently by his relation rendered destructive by accumulation; the latter he concluded possibly

from too few dissections, was the cause of danger or death in delirium &c. A third cause of mortality in fever was notional, which he first possibly took up from the antients who supposed some indefinite change, but not real putrefaction in the fluids, though they gave it that name; he attributed to putrefaction which he considered *real* to contagion as a putrid ferment, combining two causes by hypothesis into one, which thus became doubly important, so he instituted experiments to detect the most antiseptic among remedies, by which he might counteract contagion or neutralize it (in imitation of antidotes) which formed the basis of his method.

To cure inflammation of the brain he bled his patients untill the viscosity of the blood in the crassamentum disappeared, and thus though he effectually obviated inflammatory obstruction, he induced anæmia hæmorrhagica at once.

Bile next attracted his attention either as

redundant or putrescent according to theory; this he eliminated by the speediest processes, and thus all evacuation being over, he next had recourse empirically to diaphoresis which neither cured inflammation nor putrescence.

These evacuations premised, it very naturally followed, that as his dernier resource, he was obliged to have recourse to the Hippocratic Canon of "taking care *first* that the vital powers should not fail under the disease;" in this his first caution was, that when he administered cardiacs they should not be so stimulant as to re-excite the local disease of the brain, which might not have been perfectly subdued; but when moderate stimulants had failed, then cordials, volatiles, wine, aromatics, serpentaria &c. were all administered, and antiseptics with them to obviate putrescence; thus less attentive to putrefaction, the chief part of the curative process became the counteraction of the debility early induced by it: for the putrefaction so maturely provided against by remedies given previous to

this possible contingency, if real, can only ensue when the solids have lost their force so utterly as not to be able to act on the fluids more, or when they have been extravacated in high temperature; for while life remains in the solids the fluids can not be dead *i. e.* *putrid* within them, and when the solids are putrid they are not only dead but decomposed—that is disorganised, or no longer organic but brute matter: and it is much more rational to assert, that decomposed animal fluids, as rancid oil dissolved in soda, or urinous or ammoniacal soaps of oil and gelatine in solution should fill the veins, than that blood decomposed in atmospheric air *i. e.* *putrified*, can be found within the vessels. Such absurdities were not forseen at the time of Sir Jon Pringle's curious experiments on Antiseptics, so he gave to the living fluids a process of decomposition, which chemically considered, is not practicable during the existence of the vital powers; and is so incompatible with life, that it implies the

absurdity of life and death co-existing in one being.

The hospital fever being the worst form of the camp fever described by Sir J. Pringle, and that which he most maturely considered, it is supposed that the indication of cure there formed on the hypotheses by which he was influenced in his method, were fundamental, and even if not, he has left no other: leaving hypothesis therefore to its fate, it is necessary to recur to reality in the consideration of, and the connection of causes preceding and attending the Synochus Paludum, otherwise the means by which they were to be counteracted could not be indicated.

The autumn has been shewn to be a neutral season, when, the operation of causes in activity during the summer, become observable in their effects: the preceding summer had been cooler than seasonable, and wet, probably it was the evaporation after every fall of rain which was not compleated before the next

ensued, which rendered the temperature of the summer so low, that the grapes fell from the vines unripe, and late in autumn; and rendered intermittents epidemic in the east of England, even in situations little infested with them before; these causes therefore were epidemic, and probably in some degree operative on all the troops on the east coast before embarkation, so that in some a prædisposition existed on landing in Zealand.

This disease is described by Sir J. Pringle at its outset to be as characterised by the indigenous inhabitants *Gall-sickness*; and when the habits of British soldiers are considered, and their consequent diseases in climates hotter than their own, the encreased action of the liver, and the necessarily encreased secretion of bile, must be admitted as an universal consequence of their habits, and probably in many cases of their temperaments.

Symptoms of bile in the stomach and bowels were according to Sir J. Pringle, the early and

urgent symptoms in this fever, and required immediate attention even when the brain was engaged; to cure them, the young practitioners taught by the experience of others in hot climates, always assailed those symptoms with calomel, in which having not only precedent to guide them, but present relief by the decomposition of bile when present, and the cessation of all the attendant symptoms of bile as if by a charm, to encourage them; this early success invited the farther administration of it, untill dyscracy was induced by its absorption and chemical operation on the blood, by which they so effectually cured all bilious symptoms, that they radically exterminated the very components of bile, substituting a non-bilious disease Acholia, with anaemia, and a permanent prædisposition or febrile diathesis; in which they effected still farther by mercury, what he did by bleeding, with this difference however in favor of his practice, that probably in his patients bile and its components were not so utterly exterminated;

but this is but one, and the bad side of the question.

As to the more rational and successful practice of the judicious, I shall not attempt to trench on ground already so well occupied, and by more competent witnesses and practitioners; but merely to preserve the necessary connection in my narrative, I may state that where calomel had been given to correct bile, and evacuants shortly after to carry it off with the calomel, and bark administered in sufficient quantity while the stomach was yet well enough to bear it, the disease concluded; and the patients would thenceforth have continued well if circumstances had permitted, or if early provision had been made for their removal from the influence of exciting causes, as had been impressively inculcated at the time by competent judges there present.

To the perpetuation of causes therefore was the perpetuation of fever to be ascribed, and hence there followed a continued fever of four or five relapses, or a remittent quotidian or

double tertian of two or more months, or even a tertian of quarter of a year as I saw in one instance in which it was primary in Walcheren, and continued obstinately at Harwich, and and others of as long continuance as the time of the expedition, with fastidious stomach, ungovernable diarrhæa, delirium, enteritis, peritonitis, anaemia, acholia, ephidrosis or rather apocrisis, strangury, hydrocephalus, hydrothorax, hydrocardia, ascites, leucophlegmatia, scurvy &c. &c. all which continually followed with a pertinacity equal to that of the febrile constitution.

In this state it is obvious that some consideration was required before medicine could be administered of any kind, or with any intention, for it could be but very slowly and cautiously ascertained, what nature could bear—or what energy the constitution could put forth in consequence?

It was absolutely necessary therefore to commence on principle, and “to consider
“the state of the patient, if his diet might

“ suffice to support the vis vitæ through the
 “ extremity of disease, or if not duly sus-
 “ tained, he might sink under the efforts to
 “ suppress it; ” Aph. I. 9, for the generality
 of patients (though in the flower of their age)
 were so reduced, that among the worst were
 many lads not twenty, and some still younger
 who by the way were worst of all, a few old
 men excepted; so that when with Hippocrates
 we consider that a strict regimen is prejudicial
 even in health, with him we must conclude
 that in the circumstances of these patients,
 “ the sick would sink under low diet, and be
 “ more injured by it than by a more full
 “ one. ” Aph. I. 5, wherefore, should we err
 in this by such precepts, the error would be on
 the right side, but in Aph. I. 4, the great
 Preceptor touches still more pointedly on this
 subject, asserting that “ low and strict diet in
 “ long and acute diseases, to which it is not
 “ suitable, is dangerous ” and condemns ex-
 tremes only.

The first indication therefore which I
 venture to offer is truly Hippocratic viz.

To support the *vis vitæ* so as to enable the patient to bear up against the disease and admit of remedies.

2nd To remove potential stimuli as occasional causes of fever, when possible; when not, to abate their effect on the *relative morbid sensibility*, or mobility of the system.

3rd To remove the *prædisponent* cause (if there be one) *asthenia* or imbecility of mind and body, and so provide against the perpetuation of fever, and the operation of accidental causes in producing relapses.

4th To remove *dyscrasy* consequent on fever, and with it the predisposing cause of all the parasitical diseases which followed fever.

The first indication embraces the dietetic part, which as I have endeavoured to lay a solid foundation for, I refer to *Anaemia*: in the practice of a military Hospital though restrained to cheap species, yet there is ample room for improvement if due attention be paid, as was fully and fortunately for the patients demonstrated by the attention of the

Inspector, whose entire care was for a considerable time bestowed on the administration of the diet, and by which ultimately no clinical Hospital could be better regulated.

After the administration of diet, it next became necessary to consider, how far remedies might with safety be admitted in this imbecile state of the *vis vitæ*, from the new overproportion which medicines in ordinary doses bore to the strength: for as the causes of *Synochus Paludum* were all of the debilitating kind, so when long operative, the result was a real diminution of force in the vital powers, and a consequent potential stimulation on the part of the *Nonnaturals*, in which case every object in nature became stimulant in excess, the organs all excited to encreased actions, and every movement maintained with febrile rapidity; hence the fastidious stomach bore little or no food, drinks though bland and demulcent sate uneasily on it, the mildest medicines frequently induced tremor and more frequently vomiting, lenitives

operated as drastics, every sense was as it were sore, all objects unpleasant, even thought or mental rumination was painful and the senses exasperated by the universality of excitements, so that night and sleep alone produced a calm, and though morning witnessed a remission of these uneasinesses, the scenes and transactions of day again gradually excited the sensations and functions, untill again by evening the fever attained its maximum of exacerbation, from which it again remitted during the stillness of night: but if by any chance vomiting were provoked even during recovery, the fever relapsed; still more certainly by purging, therefore both remedies were rejected; I have seen very great agitation produced by five drops of tinct. dig. purp. diluted and covered with sugar.

The temperature of the body admitted of vicissitudes most ungraciously, a blast of cool air brought on rigor and the consecutive stages of intermittent paroxysms; if the ward were cooled to 40° Fahr. every symptom of

deterioration appeared at once, with catarrhal coughing, diarrhœa, dry skin, dropsy, local congestions, and inflammations &c. and I have little doubt that a temperature of 32° would have killed half the patients in the hospital in one night, whereas above 44° they recovered steadily, much quicker at 50°; but in general so little confidence could be placed even in the improving state, that aromatic and ammoniated tinctures were always kept at hand, to give to the patients on the first sensation of coldness or yawning; and universally, the temperature of the body was necessarily maintained by wine, by which alone the greatest number of recoveries was effected.

Though the efficacy of wine is so universally admitted in febrile debility or asthenia, the experience I had at Harwich, of the high advantages resulting from the use of genuine wine of good quality, was so very impressive, I can not avoid expressing my astonishment, that physicians can consent to the administration of such dye-stuffs, and astringent tinctures,

as wine-venders commonly sell, nor is there a greater error in practice; and notwithstanding the faith so generally had in the virtues of old Priest-port, many examples might be adduced to prove it is not orthodox; one however for its excellence may suffice, being at once both notable and instructive, it is that of Cornaro (*De Samitate*) who by his proper experience of an hundred years, and still perfectly temperate and in high health, declared, that the new wine of the vintage of the current year, when perfectly defecated, renewed his strength periodicaly; and that as the wine advanced in age with the year, his vigor declined gradually untill renovated by that of the succeeding vintage; as another century has not produced such an instance, this demands the greater consideration, for as wine is a mixture of alcohol and tartrite of potassa with tartaric in excess, the two eminent principles being free, must of necessity by long digestion in a close vessel and moderate temperature, effect that combina-

tion slowly, which in a more elevated temperature takes place rapidly; thus will a tartaric æther be formed, or possibly an acetic, or both, which are perfectly discernible in Burgundy, in good Claret, and in pure well defecated Port, the fragrance of which spreads abroad as soon as the cork is drawn, and without which quality there can be no good wine; to this æthereal principle the volatility of which no cork can long restrain, is to be attributed the anodyne and antispasmodic influence of this cordial; qualities possessed no doubt in some degree by Alcohol, but then the narcotic effect is so much greater than persons not habituated to it can bear, it can not be safely administered, certainly not with a vinous effect, untill by chemical combination with acid it is olefied, or rendered vinous or anodyne; as we have it exemplified in the combination of nitric and alcohol instantly producing æther, the ordinary temperature of the atmosphere being even too high to admit of the admixture safely, but

no doubt it might be effected in strong vessels such as wine casks with as little disturbance as in the defecation of wine; the admirable effect of these qualities in wine are strikingly exemplified in the case of Hunter, p. 32, cured of fever by this remedy only, by which his pulse was lowered thirty-two beats per minute in ten or twelve hours, and tone universally restored to the system; the debilitated state of this patient it is to be observed may be farther worth attention, as a specimen of the whole (provided diarrhoea and delirium were absent) since the rule adhered to in this instance, was adhered to throughout viz. to preserve the natural temperature and no higher heat by wine at all times, but particularly at time of rest to administer as much, as would enable the patient without inducing dangerous debility by sleep, to bear an anodyne, otherwise he might expire unperceived by night as several had, notwithstanding all these precautions.

Our soldiery are unfortunately too much

addicted to strong drinks to be easily persuaded to make free use of weak diluents in fever, and I have frequently known them to refuse such, even when thirst was urgent—if insipid; I had no means of conquering this obstinacy but artifice, and for this purpose I caused half the allowance of wine at least to be added to barley water, sweetened and flavoured with lemon peel or some cheap aromatic, which they never refused; I must acknowledge in extenuation of their obstinacy, that I never have observed the sick of any description dilute freely (unless instinctively) with insipid drinks; nor if they would, can I persuade myself that even in a state of *relative debility* absolute non-stimulants can be of any use, nor that they can excite the absorbents, nor be taken into the blood-vessels in quantity, since all our organs from habit as well as nature, have acquired an artificial necessity for stimulation, and can not otherwise be excited; I conclude therefore from facts, that wine or other fermented liquor in quantity suited to

habit at least, is even necessary to dilution if not nutrition, and in some proportion to every constitution in fever of the character here described; and, that the exhibition of it may be at all times safely regulated by attending to the heat of the body, and encreasing or diminishing the quantity to raise or lower it, of which natural degree of heat, the hand of a healthy person must always be a sufficiently good thermoscope, since bodily heat is a fixed quantity or degree in every climate.

Between the effects of alcohol and wine a very remarkable difference was observed, the convalescents for œconomy's sake were generally put upon spirits, when wine was no longer necessary; by which it was perceived, that the diuretic effect of spirit did not so effectually relieve the dyscrasy, as the diaphoretic of wine; and this they observed themselves, and always considered it a misfortune to lose their wine.

When circumstances rendered other remedies necessary, or advisable, to aid natural movements or to moderate them when in

excess, it was ever to be preconsidered, whether they might or not disturb the stomach in any degree, so as to render the support of the vital powers impossible, by hindering digestion or even retention of food or drink.

But when they were so low as to suppress necessary exertions, and above all when delirium concealed the natural appetites for food and drink, there was the most urgent necessity for watching the operations of the vital functions, least they might fail; and to look strictly to the attendants, who when they are no longer solicited by the calls and complaints of the sick, may unintentionally through multiplicity of business, forget their unfortunate patients; in such cases when they can not be compelled to drink a sufficiency of liquid, much less to take any solid nutriment, it is expedient to cause alimentary glysters to be frequently thrown up with as much tincture of opium as will cause their retention, encreasing the quantity if quickly returned; nor is this an easy task though the existence of

the individual may depend on it, patients being often in this case very intractable, and too often offensive to the attendants, so that in perpetual delirium there is no safety but in doubling the number of servants that they may succeed in turn, and this even at the risque of the less dangerous cases being neglected.

One omission as I had cause to regret, so I must not neglect to state for the advantage of those, who may in future have a necessity to exercise these unpleasant offices of humanity, it is that of an apparatus for injecting liquids into the stomach, that is a long flexible catheter and syringe adapted to it, such as that contained in the cases of the Humane Society for the recovery of drowned persons, and when a physician of any considerable experience considers, how many patients in a large hospital though cured of fever, die of debility, and how suddenly this unsuspected fate may follow a chance evacuation by stool &c. and that the power of swallowing

is one of the first of the natural functions which fails in debility, and how many have been recovered by renewing it even by dangerous means, it must be at once admitted that no hospital, nor even private practitioner, should be without an apparatus so useful and important, and which though employed in practice by the learned Boerhaave has untill of late been wholly laid aside: Another of the inventions of science, laid under contribution by that celebrated professor, was the application of the thermometer to determine the degree of febrile heat, and which was repeatedly recommended by him in his lectures, however, in the specific fever here described it admitted of no useful application, for even where the surface was hot, dry, and stinging to the finger, the lowered *vis vitæ* did not admit of cold affusion with safety, and the few experiments which my ingenious assistant made at the instigation of another, effectually deterred him from farther repetitions of it; while partial ablutions, and sometimes the

Lavatio frigida was found to give great relief.

Second Indication of Cure.

To remove potential stimuli as occasional causes of fever, when possible; when not, to abate their effect on the *relatively morbid sensibility*, or mobility of the system.

The theory by which the sensibility has been explained to be *relatively morbid* or *mobile*, of necessity admits all ordinary objects as stimulants, and shews the separation of them from influence on the senses to be impracticable, therefore, and as the very continuation of life renders these influences necessary to its maintenance, no alternative remains but to diminish by Lenient or Calmant or Antispasmodic, or Anodyne, or even by Narcotic remedies, the Relatively Morbid sensibility or Mobility, while (as this relative excess is in diminution) the active or motive power, or tone is encreasing, under the influence of suitable diet and wine, if not of tonic remedies.

As the effects of all stimuli as occasional causes may be seen in the symptoms, these must be recapitulated in succession.

As in every instance of rigor when severe, danger was at hand by the sudden diminution of cerebral or vital energy, the first attention was to moderate the severity of it, which always (however effected) required the combination of an opiate to abate the mobility with warm aromatics, of those in a solid form when the stomach could bear it, *Confectio Opiata* was the best, in half a drachm for the first dose to be repeated if not effectual, encreasing the quantity at every succeeding exhibition of it, with wine; in this manner the dose has been encreased to the size of a walnut or more, for weights and measures were often rendered unnecessary, by a practical dexterity at dosing medicines in the crowded state of the hospital, and urgency of cases.

The *confectio aromatica* was only employed when the last was exhausted, and with tincture

of opium, or camphorated tinct. of opium, or with pulv. ipecac. compositus, and sometimes with scr. fs. of ammonia or more.

In greater debility and a more unsteady state of the stomach, mixtures and solutions were preferred, as less nauseous, and more immediately operative, as

R. misturæ camphoratæ uncias sex.

Sp. Ætheris vitr. comp.

S. ammoniæ comp. sing. semiunciam.

Tinct. Opii drachmas duas.

Sacchari q. s. M. et tolerante ventriculo, in omni quadrante horæ cochleare amplum detur ad calefactionem usque.

The spiritus ammoniæ was often found unpleasant, in which case the tinct. opii camphorata was substituted in sufficient quantity and part of the tinct. of opium omitted, or the tinct. cinch. comp. with tinct. of opium, and frequently tinct. op. camph. et sp. ætheris v. c. were poured into aq. menthæ pip. and administered instantly with sugar, the want of syrup which was withheld from motives

of œconomy no doubt (though there was as much sugar consumed and more time) rendered these extemporaneous exhibitions very unnecessarily troublesome, and even distressing, as the medicine could not be taken if not covered by sugar, and the patient was often in extremity. The increase of dose was necessary as before observed in every succeeding paroxysm, while every other device which could be invented was resorted to, that the stomach might be preserved in a settled state, as epithegms of powdered ginger wetted with camphorated spirit applied to the præcordia, or the parts dry cupped and stuped with stimulant mixtures, or a hot cloth dipped in tinct. opii camph. laid on, and emplastrum ladani comp. applied permanently after, or some rubefacient liniment frequently renewed, or linim. saponac. with tinct. opii &c. &c. the effervescing draught was found too expensive and troublesome to prepare much of it or frequently; and the substitutes as the mineral or acetous acids and alkaline

solutions, were too ungrateful ; whether rigor was to be counteracted or not, most of these means were required to compose the stomach in many cases, that food might be retained or drink ; and if to this costiveness were added, which though rarely yet sometimes happened, a common glyster was administered before bed time, that in fear of farther disturbance from it, the opiate given to procure sleep might have double efficacy in quieting the bowels also, wherefore a second dose was always ready in reserve, if the first should fail to produce the necessary effect in two hours ; but if watchfulness or headache foreboded a restless night, the head was embrocated with some vaporific liquid as a mixture of spirit and vinegar, and care taken by applying hot bricks to the feet if cool, or by some equivalent device to warm them ; always observing to maintain the bodily heat if necessary, and the strength of the pulse by some pure wine at or before administering the opiate, which concluded the operations of the night, if

watchfulness, violent headache, delirium, or diarrhœa did not ensue.

If by these and similar remedies the Relatively Morbid Sensibility were so far suppressed, that the stomach would bear remedies still more powerful in promoting the indication, the symptoms of febrile excitement of the vital functions were next to be attended to, and their consequences; the history of symptoms has shewn, that the continued fever held for several days apparently unabated, with rapid small and regular pulse, quick respiration, stinging heat and dryness of the skin and tongue with white saburra and thirst, or tongue slightly whitish and moist with little thirst, diarrhœa in most cases, agrypnia, headache, and delirium; that the natural decline of the exacerbation of this fever whether of hours or of days continuance was by diaphoresis, and too often attended with diarrhœa, but with so little diuresis that strangury was a very frequent attendant of the solution of fever; thus far instructed

by nature, it was not difficult to follow the track so legibly marked when once discovered, and accordingly the pulv. antimonialis, pulv. Jacobi, and pulv. Ipecac. comp. were generally employed to promote this natural resolution of fever, in which if they did not succeed conclusively, they very frequently induced remission, and ultimately intermission, in which the recurrence of fever was effectually prevented by cinchona &c.

From the general roughness of the pulv. antimonialis, it was not to be expected it would otherwise operate in this fever than as a drastic purgative, a very common effect in persons of delicate bowels, and though by combination and more subtile division it might be rendered more mild, the pulvis Jacobi so perfectly suited the slippery state of the intestinal canal, that with occasional precautions and attentions, I found it the best remedy the opportunity afforded to answer the intention.

The theory of Cullen gave to antimonials

the quality of resolving spasm; but with this supposed quality, why does it not resolve that evident spasm the character of which is manifest? this it will not do; why therefore assume in a gratis way or by *petitio principii*, that there is a latent spasm only which it can cure, since this is in opposition to matter of fact; whereas the supposed febrile spasm of the capillaries not being by any means demonstrable, is scarcely to be considered an *Ens Rationis*, is therefore very suspicious and by the shrewd supporter of the hypothesis—put out of sight: but as antimony (it may be fairly asserted) never did resolve spasm in any case where its presence was evident, the conclusion must be—that neither is it in this doubtful case a relaxant: wherefore its salutary effect in fever remains to be accounted for, by very different conclusions from the facts offered in evidence: the pulvis Jacobi given in three grain doses and at such intervals as not to nauseate, and also in the form of a pill, a practice I found current in the Hospital and of much importance, as

the solution of it was necessarily so gradual it diffused slowly in the contents of the stomach, so that probably a very small quantity not I apprehend more than a minute fraction of a grain could be at any instant operative, untill the whole were ultimately liquidated; and thus by not dissolving in the fluids quickly, it did not flow directly out of the stomach, but remained long enough to induce its specific effect, while mixing slowly with the chyme it was absorbed, and communicated its virtues to the whole of the circulating fluids, invigorating the heart and arteries which thenceforth acted more strongly, if not by perceptible force certainly by perceptible effect, for the pulse beat more slowly, the circulation was restored gradually in parts where it had been so languid as to have been imperceptible before, the surface was restored to its universal and natural warmth and softness, and perspiration flowed freely where there had been none, the tongue became moist, and the head free from pain, all which continued

without loss of strength, provided the dissipation of the fluids &c. were, as in cases of bodily exertion supplied by suitable nutriment and drink; if not, great debility ensued and other precarious incidents threatened, for if by the stimulation of the emunctories a chance evacuation (very likely to be profuse) ensued, or sleep of too long continuance during which sweat might flow copiously and cold, death might have been the consequence, as physicians who have trusted too much to fortune, have often learned from the administration of this remedy in Typhus; and thus I have no doubt, patients may have expired at Harwich, and probably such conclusion would have been more noticed, if the number of attendants had not been as ample as the occasion required: such being the *effects* of this celebrated remedy in curing fever; in our method of reasoning it becomes necessary to go back to *causes*.

Borelli was probably the first to demonstrate, that the source or proximate cause of fever was the stimulus of the nervous fluid

and not of the blood, Boerhaave first clearly and explicitly set down Inertia of the Cerebrum and Cerebellum as the proximate cause, and attributed what he called Lentor—that is cessation or diminution of vitality on the surface &c. to the inertia of the brain, but when he had thus reasoned up to inertia in the sensorium, though he has described the congestion of the blood which has deserted the surface and retreated to the interior, he confesses, that it must be by a stimulus the succeeding exacerbation is produced, and declares, “ ille
 “ est optimus medicus, qui stimulum natum,
 “ sine corporis læsione potest reddere inertem,”
 reciting the various stimuli which excite fever up to the *To Theion* of Hippocrates. Cullen has very closely followed Boerhaave, and translating the *inertia cerebri* into *diminished energy of the brain*, conceives it also to be proximate, and that the exacerbation is reaction of the heart and arteries though debilitated and oppressed also by congestion, and calls the inertia of the capillaries of the surface

by the name of spasm, which being resolved—the fever is cured; thus has he most unphilosophically set down two causes where one was sufficient; and inconsiderately made *one*, the internal cause, *diminished energy*, the *other*, and exterior cause, *encreased energy*, *i. e.* spasm; that a fever may arise from spasm on the surface or superficial capillaries, as from the cold bath, can not be denied; but here is no prædisposing debility or diminished energy rendering reaction weak, for the spasm or encreased contraction forces the blood inward, and the strength of the heart and arteries as forcibly propells it outward in turn; hence in asthenia Cullen calls in the *vis medicatrix* to produce this febrile action, as Borelli did the *spiritus nervosus*, and which many others have done also; and what is this *vis medicatrix* but another word for stimulation for tone &c. Brown is conceived to be more rational, when rejecting antient terms, he considers sensibility to be accumulated during the diminished energy, which he calls Collapse; and that when

the sensibility bursts forth from its oppressed state—increased action or fever is produced, which having debility for its cause, or collapse, he cures by restoring tone by stimulation, *i. e.* by the *vis medicatrix*; but he has left the perpetuation of fever unaccounted for, in which he is much less rational than Boerhaave who ascribes it to stimulus, and even less discerning than Borelli who ascribes it to the nervous fluid irritating the heart; therefore, fever caused by debility as a *prædisponent*, he cures *as formerly* by supporting the *vis vitæ*, so that all these differences are only in terms; but in fevers of increased force, or phlogistic, or sthenic, as he called them, he has reasoned right by admitting with Boerhaave, that the abstraction of stimuli will cure fever; yet forgets this obvious maxim when he approaches fever in *asthenia* or debility, not, however, altering a tittle of the antient practice, though he has kept clear of the most objectional parts of Cullen's theory. Cullen

and Brown have both erred in continuing the effects of reaction or excitement, far beyond the limits in time and power which by possibility they can attain, and therefore, long after the cause (according to their theory) had ceased to be operative; but as Cullen was an excellent Clinician, he bent his theory to suit his practice; and Brown who studied it carefully, had discernment enough to improve it; his success possibly encouraged Dr. Fordyce to that extraordinary dream, which neither improves theory nor practice, “ of fever proceeding *ad infinitum*, if only initiated by any cause;” for he more than insinuates, that it proceeds without critical periods, and long after its cause has ceased to be operative, therefore *infinitely*; but as he had perpetually aimed at something extraordinary, and even the singularity of contradicting received doctrines and known Laws of Nature, so in this instance of *Effect without a cause*, he could never have intended any more than simply the astonishment of the vulgar.

Having attempted to harmonize the doctrines of such able professors, my hope is from the few remarks I have offered it may appear, that from whatever points they may have taken their departure, they have all traveled to the same goal, nor have left any path unexplored; therefore as the proofs of diminished energy of the brain were very judiciously copied from Boerhaave by Cullen, and improved in precision, so I shall borrow from him in stating; That in the cold stage of fever when the surface may be cut, punctured or burned, and has been burned to the bone without pain, the sensibility or power of the sensorium must then be diminished in energy. That when the heart and arteries act feebly and almost to extinction, this other vital function is greatly debilitated; and the same is true of respiration; but both from the want of energy in the brain: That all the natural and animal functions are consequently depressed or partially suppressed, the blood having retreated from the cold dense and in-

sensible surface, sores dry up, wounds do not bleed, and this from the imbecility of the arteries both deep seated and capillary ; what stronger proofs can be required that the capillaries are debilitated ? and so far are they from possessing any spasmodic power, they are often nearly and sometimes wholly deprived of their vitality ; in this state therefore (like all inanimate matter) as they are deprived of vital energy, so their *dead force* or elasticity is no longer counteracted, but is encreased or restored as the other dies away ; thus therefore the living body no longer possesses that entire vital faculty attached to animal and even to vegetable life, of maintaining an equable temperature, called in the former animal heat, and in every climate known to be about 97° in health ; but as inanimate matter—part with their heat, and gradually cool down to an equilibrium of temperature with all the surrounding objects ; thus evincing that they are no longer influenced by the internal and vital powers, but by extrinsic powers only ; whereas

by an increase of energy in the vital functions, the animal heat is raised to 102° or 103° or even higher.

When the vitality has been lowered as described, Institutionists have stated that the hot stage of fever, or reaction, or excitement, or restoration of energy may be produced, by the quantity of blood accumulated in the heart and great vessels; forgetting that such accumulation is due to want of energy, or that a nervous stimulus is required from the brain not only to renew a vigorous circulation—but febrile increase of action; and whether this be by the escape of the accumulated sensibility, or the act of the *vis medicatrix*, we have arrived at the *Pons asinorum* of pathologists—and a broken bridge it is; for as this renovated force, whatever it may be, and from whatever stimulation it may proceed, can not act perpetually without perpetual excitement, be this intrinsic or extrinsic; yet as it is agreed on all hands, however rapidly it may act, that as debility preceded, so debility must succeed this

erethism, unless there be inflammation or some other local cause of excitement—some exertion in the brain; and thus do the observations and reasonings of our best institutionists come to the same point in conclusion: from whence it follows, that the vital powers must thenceforth remain below the level of healthy sensibility, having sunk into relatively morbid sensibility, or mobility; by which abatement or subtraction of power—all the nonnaturals—or generally all mundane objects—thenceforth bear the proportion of relative or potential stimulants to the senses, by which, fever is maintained untill tone be restored to the system, or untill the sensibility be dulled so far as to produce a balance between stimulation and sensation as in health: and thus the deficiency in the preceding theories is supplied.

There are obviously two methods of effecting this balance; first giving tone to the debilitated system: second suppressing the morbid relation of sensibility to the surrounding objects.

To compass the purport of the former of these corollaries, cold baths, cinchona, croton cascarrilla, angustura, columbo, bitter aromatics, alcohol, wine, antimony, zinc, mineral acids, ammonia &c. or generally, mineral, animal, and vegetable stimulants cure fever, provided their stimulation be so methodized, as that by an alternate and periodical interposition of the means determined on by the second corollary, the accelerated force excited by stimulants be allayed again by sedatives, during an interval sufficient to give rest to the animal and natural functions, and so induce a renewal of their natural actions, analagous to the alternation of motion and rest in health; thus regulated, all such febrifuges (so called) are rationally to be considered—tonics; and notwithstanding the egotism of modern writers—were so employed by our ancestors.

The first and most celebrated of the Willis's (de Delirio &c. C. X.) cured fever by cold bath, and there is not on record another instance so curious and instructive as that of

the woman he put to swim in the river for more than a quarter of an hour by night.

It is above a century since Dr. Baynard cured himself of fever by the cold bath, and by a much bolder experiment though not with more judgment than Dr. Wright has more recently done, as the latter proportioned the application to the climate, which being much warmer than ours, the relative sensibility was consequently greater, and a bath less cold had an effect as powerful as a colder one here.

The North American Indians have been known to practise cold bathing as described by the Patriarch of Pensylvaniæ, for the cure of fever, and for as many centuries as we have been acquainted with them.

That there have been other tonic remedies full as efficacious in fever as the modern specifics, can not be doubted; Riverius either invented the real, or one so near the *pulvis Jacobi*, that the *Arcanum Riverii* is held by very judicious physicians to be the original

of the Jacobus; unfortunately the Father of Medicine, notwithstanding the venerable proof of liberality and humanity he has left to posterity in his oath, and that his practice every where squared with his precepts, gave Riverius the example; but Riverius did not, like Hippocrates, allow his arcanum to die with him, *he published it himself*, little apprehensive that he was leaving his orphan to the churlish adoption of Dr. James; as for my part though I have so frequently employed James's powder in fever, yet I have much oftener confided in the calx carefully mixed with a very small proportion of tartrate of antimony, and ever observed the identity of these remedies in that of their effects, so that when I consider this practice to have been as well known to the profound Stahl, I only wonder at the simplicity of society, in contributing to make a secret of the Jacobus by consent, while they have the identical remedy or one full as efficacious and gentle in their hands; it must therefore be the admiration

of mystery only which catches, not that of public utility.

I have ever found tartar emetic in cool climates and seasons a better medicine in adults, when carefully managed than the Jacobus; and in hot climates have had many opportunities of giving it with advantage; nor with due precaution need the practitioner be over-apprehensive of its effects in any climate, in minute doses when carefully rubbed with the calx, if the liver be sound, the stomach and intestines free from bile, and neither nausea nor singultus present.

All the foregoing matters of experience being duly considered, I by no means conceive I am unwarranted in concluding, that antimony is—in a certain and known state of preparation and dose—a Tonic. I have even tried it in Hectic, and found it abate fever and produce material amendment, if by maintaining the vis vitæ, the discrasy were counteracted by suitable diet and regimen; but notwithstanding my confidence in the efficacy

of this remedy, I should count myself the author of great mischief, were I to omit warning the inexperienced from the free use of antimonials in any form, in the last instance I have quoted; for if careful and mature precaution be not taken, against the evacuant and consequent debilitating effect of an over proportion in the dose &c. the life of the patient is put in imminent danger.

Of the pulvis Ipecacuanhæ compositus as a remedy answering the second indication of cure in this fever, I regret I had not greater experience, though I had heretofore employed it freely in the intermittents of North America; here I prescribed it occasionally only, and with the sole intention of promoting diaphoresis, though it would appear to be particularly indicated in this, which is the Lymphatic fever of Sylvius; yet if the matter be maturely weighed it will be found to fall short of the purpose, for it does not possess the tonic quality of antimony, and can not restore the healthy action of the organs; it therefore is no more than

palliative, the other is curative ; while the advantage of the combination of opium may be obtained as easily as in the pulv. Ipecac. comp. yet even so, I have not found that it cures fever of debility and consequent morbid sensibility, with that certainty which antimony singly does ; nor does it open the emunctories, nor discharge irritating retenta as antimony does, and by which, from the direct removal of stimuli great relief is often procured.

As to dosing of medicines, regard being always had at the first to the mobility of the system, they were repeated after, as often as might be without disordering the stomach and intestines: the pulv. Jacobi was given at from three to four hours interval, so that generally three doses were the daily amount, and commonly were as many as could be borne ; the effect was to bathe the whole surface with a warm perspiration ; when it failed of this, the pulvis Ipecac. comp. was substituted, or even if the Jacobus produced a loose stool, or when (as in diarrhœa) the pulv. Jacobi could not be

ventured on; in these circumstances the warm bath had a most salutary effect, relieving general uneasiness, producing softness of the skin, removing stinging heat, and even delirium, nor do I recollect a more remarkable cure of fever with perpetual delirium than by warm bath; though the patient died after of hydrocardia, which he laboured under at the time unsuspected, his pulse remarkably quick, small and regular to the last.

Since the publication of Glaubers Tractacus entitled *Salus Batavorum per mare currentium*, the mineral acids have been employed in the cure of fever; he particularly recommended them in the fevers of the Guinea Coast: Sydenham cured cholera as at present it is cured in America, by spiritus vitrioli per campanam; Boerhaave used all the mineral acids, but the muriatic in preference, in bilious fevers and in those he considered scorbutic, and depended much on them as correctors of what he considered acrid or putrid bile; he also fumigated the wards of his hospital with nitre

and sea salt, expelling their acids by heat; the same means had been employed at Leyden during the plague, by throwing vinegar on de-flagrating sulphur and nitre, and found very effectual in preventing the spreading of infection. The mineral acids have been lately called into more general use, and no doubt with considerable advantage; in bilious remittent whether refrigerant or not they frequently relieve; and as far as my experience goes in other fevers, they may be refrigerant also and at the same time tonic: I employed them abundantly for some time in the sick of Harwich, and found in some cases of fever when I employed them as febrifuges, the pulse and heat abated though not permanently; I tried camphor in the same patients and with the same intention, and experienced greater relief from it than from the muriatic, though in small doses, but with this material difference, that with one I could be free—with the other not; but as from the muriatic, I expected no permanent good unless bile were present, I

carried my experiment no farther, nor do I believe that beyond the bilious state of fevers acids have much influence, unless they prove diuretic which in fevers of hot climates is exceedingly useful, as perspiration is in these frequently too profuse; even in the fevers of Walcheren in Harwich and which were cured by perspiration, strangury from excessive evacuation of serous fluids was very frequent, sometimes every fever patient in a ward and even the convalescents were affected with it; nor did acids, nor camphor, nor sp. ætheris nitrosi more than appease it a little in general, in the worst cases not at all, in one very distressing case by the advice of Dr. Laffan tinct. ferri muriati produced present relief; this symptom equally attended diarrhœa, and evidently admitted of no permanent abatement but by diuretics which diminish the perspiration and encrease the flow of urine—with diluents; from which it must be apparent that acids in hot climates, if they check perspira-

tion render the fluids more aqueous and are indirectly diluents.

As to the symptom—strangury, my farther attempts to cure it were necessarily limited, or I would have employed *arbutus Uva ursi*, I enquired in the neighbourhood for the *Physalis Alkekengi* and did not find it; *hyosciamus niger* and opium, the latter in case of diarrhœa were therefore to be chiefly trusted to; I conceive however *cerussa acetata* to be preferable to either, but the prejudices then afloat in consequence of my administering it in a case I considered purely topical, compelled me to lay it aside, but were this symptom dangerous I would not so readily have abandoned this refuge.

The repeated examples of the several emunctories and excretions relieving each other, by substituting one evacuation for another when suppressed, left no doubt that diaphoresis, diuresis, and diarrhœa were all cūrative in this fever; but the uncertainty

of relief from the second, and the debilitating effects of the last with its incontrollable obstinacy, rendered their use unpropitious; in stronger patients and at an earlier time of the disease, this method would have succeeded: for when at the ultimate debarkation of sick at Harwich, a number of patients of the ordinary description, such as were at all other debarkations transmitted to other hospitals or barracks, were finally permitted to remain, we felt nothing less than astonishment at the facility of their recovery by such means.

In the dyscrasy which probably perpetuated remittent fever, it is to be presumed, that the debility of the patients sufficiently accounts for the difficulty of curing this, or preventing relapses; Dr. Hay had a patient who was relieved from the urgent symptoms of dropsy by diarrhœa, for this, and for experiment sake, he temporized long with the supposed salutary evacuation, allowing dropsy to subside and then renewing it by turns as the

diarrhœa flowed or was moderated, untill debility at length obliged him to abandon this spontaneous, though ineffectual palliative, and have recourse to diuretics before it might be too late.

The Third Indication of Cure is

To remove the predisponent cause, when there is one, and thus provide against the perpetuation or renewal of fever by accidental causes.

The primary or Bilious Remittent of Walcheren, has been considered so far as to keep up a connection in the history of the Endemic.

The perpetuation of this fever and its change of character, has at least been attempted to be accounted for, and Indications formed on inductions from the phænomena; and to these the Method of Cure has been adapted.

The causes of relapse were twofold, a constitutional dyscrasy as before proved, and secondary causes or symptoms resulting from

this dyscrasy, the inveteracy of which caused abundant trouble and great mortality.

The symptoms which were most urgent were diarrhœa and delirium.

In the preceding method of cure, the fever is supposed to terminate as a continued or continent one ; but when it obeyed a regular periodical exacerbation followed by a remission, though the remissions were known to lengthen and become less febrile after every paroxysm, yet the morbid sensibility continued as if with lessening security to the patient, in so much that cinchona and other ungrateful remedies could not be borne on the mobile stomach ; it only remained to pursue the method of cure laid down for Continent Fever, untill a fair remission permitted the retention of some tonic, which might at once restore healthy tone to the system.

This practice makes directly against that of the venerable Sydenham, who, the more febrile the interval was, gave the more Cin-

chona, even to an ounce and half, by which he put off the fever, or restored the healthy equilibrium of sensibility or tone; Prosper Alpinus by the same use of Croton Elutheria cured remittent in Egypt; Cleghorn succeeded by Cinchona thus administered in Minorca, and Pringle in Brabant; that this practice never succeeded in the advanced state of remittent in Harwich I wont assert, that it generally failed of success I am certain; and yet I am fully convinced it did succeed in the early state at Walcheren; the mobility of stomach and intestines, therefore, effectually prevented this issue in the advanced state, and the astringency (when it did succeed) generally induced dropsy internal and mortal, or external commonly curable.

The epidemic of 1678 in which Sydenham gave such quantities of bark with success, was a primary intermittent, as I believe all bilious fevers are radicaly, and therefore when the stomach and intestines are freed from bile, may be safely treated as intermittents; this is

universally true of the fevers of North America, and even of the Tritæophyes of the tropics; but very different was the Quotidiana continua or Double Tertian of Walcheren, which was exacerbated by this remedy and by most others employed on such occasions: Of the other tonics the Hospital afforded, angustura, croton eleutheria and colombo, the cascarilla though in my opinion much preferable to cinchona could not be procured in powder, though abundantly supplied; when the angustura was employed, an epithegm was applied to the stomach previously, and the doses administered as often as could be borne, as a drachm with some capsicum, or two scruples every two hours in wine, untill the time of the quotidian exacerbation passed without uneasiness; after which sleep was permitted, taking strong broth when the appetite might permit; sometimes the carbonate of potassa was added, or some diuretic given in a liquid form, as the acetate of potass, carbonate of potass &c. the doses were few but repeated for some days and then a chalybeate administered.

Both angustura and colombo were also found very useful in restoring the state of the stomach, when given in decoction, as well as preventing the recurrence of paroxysm.

The chalybeate I employed was the carbonas ferri of the Edinb. Pharm. in the administration of this remedy in which the iron is in most minute division, I conceive it to be of great importance to prevent the carbonate from precipitating, therefore I take a drachm and half, dissolve it and decompose the solution by dropping in the alkaline solution, I then allow the precipitate to subside half way only—when I decant off as much water as I can, I add fresh water and wash it a few times in the same manner, lastly I permit the carbonate to subside to within an inch nearly of the bottom, when I decant conclusively and add the wine with powdered pimento and sugar, this gives half a drachm to a bottle of wine, which is sufficiently agreeable, and is never refused by the patients; while by this process (the carbonate never having precipitated) is so

exceedingly subtile, the particles are easily suspended in mixture.

I had electuaries formed of *confectio opiata* and *ferrum tartarisatum*, and of *confectio aromatica* and the same, these were given freely to the convalescents.

Aromatics of some species or other were perpetually administered, for they promoted diaphoresis, diuresis, and digestion of food, while they abated diarrhœa by the cure of griping and flatulence, and promoted the recovery of tone in the semi-tympanic intestines, but being themselves digested it became necessary to renew them perpetually, so as to preserve their effect, therefore they were given in medicine and in diet, and the cheaper species supplied for cookery, and in the wards also for seasoning the food.

When diarrhœa became so severe as that the stomach and whole system sympathized, food and drink frequently produced nausea, the skin became dry, and the tongue—though white, and after some time the belly tense,

than which a worse symptom could not be in fever, especially if delirium supervened, for the intestines were semi-tympanitic and often inflamed, and yet this last circumstance was seldom detected untill death.

At the outset, opium and astringents were freely administered in this diarrhœa, so that we quickly ran through our stock, and had recourse in turn to every medicine of this description in the hospital, and found that of the whole, camphorated tinct. of opium gave greatest relief; and in failure of this, camphor and opium in a pill, but if not repeated as often as necessary to produce quiet if not sleep, they were of no use; I have known a patient to take several ounces of the tincture in one night with great advantage, and among the worst were some patients who could not be persuaded they could live without it; nor did the means in my power afford any substitute which the patients would take, or when tried had nearly equal effect, not excepting the pill, though next in efficacy.

From the ample experience I had of astringents, I was fully satisfied they were of no efficacy in this diarrhœa, the disease was out of their reach, and they flowed through the open intestines nearly as quick as the ordinary drink, nor was it until I was fully convinced, that a serous dyscrasy rendered some open emunctory necessary to prevent dropsy—and even suffocation, that I bethought me of Dr. Moseley's nauseating vitriolic mixture, but as he had strong men to deal with, and mine were shadows, I was obliged to dismiss all ideas of such a composition, and content myself with pulv. ipecac. comp. I had ample cause therefore to regret the want of a fundamental indication of cure at an early time of my attendance, for when instructed, it was by every concurring circumstance of labour, care, and dear-bought experience; and where was it to be learned? Had I been present at any of the epidemics or endemics in the West Indies, I might there have followed up the facts I had detected several years before, in the dissection

of the Valetudinarians who returned from St. Domingo; but wanting such experience, where could I have learned but at Harwich or Deal, that anaemia was produced by remittent; nor untill that discovery could I account for Dr. Moseley's success in curing dysentery or rather diarrhœa by sudorifics, nor conceive why I myself had not similar success, when it was customary to give ipecacuanha and opium to procure rest in dysentery, nor even when I repeated his experiment in private practice.

Another useful fact I learned also from treating this febrile diarrhœa was, that bitters were among the most efficacious remedies; as when Acholia attended they prevented fermentation of the food, borborygmi and flatulence, and therefore it is, that a tincture or even infusion of cascarilla proves highly serviceable in this state of diarrhœa though not in any other; so of tinct. aloes with tinct. serpentariæ, and other similar mixtures. On this principle ox-gall might be considered an useful remedy, and answering the indication of cure founded on

the nature of the case, but former experience had instructed me that it is among the most nauseous emetics, so I did not dare to try it, however if forced up by way of glyster it by possibility might be of use.

When diarrhœa could not be relieved by any of the foregoing means, it became colliquative if fever did not kill; or ended in lientry, of which a few cases occurred so extenuated, that the pulsation of the aorta could be seen to raise the bed-cloaths as the patient lay on his back, the skin being as dry as parchment and quite brown; yet among the hundreds admitted, not one case of marasmus appeared.

If in this dyscrasy the redundance of serous fluid passing by ephidrosis or rather apocrisis were suddenly checked, diarrhœa followed; the danger however was remote and even doubtful in this case, compared to the imminent fatality of a *sudden* determination—inflammatory to any part, as the brain, pericardium &c. in the former case—diaphoresis supplied a vicarial drain, in the latter—the accumu-

lated fluid frequently could not be eliminated, too often—was not perceived to be confined.

A catarrhal affection has been brought on by a cold night, and neglect of keeping a fire lighting to preserve the temperature of 45° or 50° by which every patient in the ward has been affected, in which the cough and expectoration of frothy serum was perpetual, and sleep dangerous for fear of suffocation; in one whose lungs were so full of liquid as to be probably anasarcaous, the dyspnœa was very distressing, and after some hours, blood was expectorated to a considerable amount, yet a full dose of pulv. ipecac. comp. with wine, soon relieved every symptom, and with a flannel shirt he recovered well, no trace remaining nor any secondary symptom in consequence, but strangury; it is to be observed that anaemia was present.

That there should be no confusion in the history of febrile diarrhœa, it is necessary to state, that though incident to anaemia, this

was confined to a late period of fever, so late that it is not common any fever should attain to it; and that it therefore differs toto cœlo from those incipient evacuations, or overflow of the healthy but redundant secretions of alimentary retenta—by vomiting—by diaphoresis or by diarrhœa which (always salutary efforts of nature) were only dangerous from the late time of the disease in which they occurred, for in the early stage they are always curative, and not only attend the resolution of fever, but of every paroxysm which terminates with remission or intermission; in the late stage of fever they encreased debility, and yet it has been shewn that when anaemia has been produced, some one of them must be resorted to; the choice therefore is easily made: how fearfully purging is to be avoided in anaemia febrisequa, is still more strikingly exemplified after scarlatina, and after variolæ confluentes, which decompose the blood more rapidly than any other febrile process, and yet such is the force of vulgar prejudice, that

not a day passes that some victim is not sacrificed to the notion of purging off the dregs of disease ; the detection of anaemia therefore as a consequence of fever, and the danger of purgation in this dyscrasy, will it is hoped procure assent to these causes of proscribing it, especially as a substitute is offered, which has been fully proved to be efficacious, and not dangerous with proper nutriment.

For the reasons here stated, supported by the experience of Sydenham who has carefully detailed the bad effects of purging in similar epidemics, though he again relapsed into the very practice he condemned ; I almost abandoned purges in this fever of relapse, not because purging was not at all necessary—on the contrary, I was obliged to keep two attendants employed every evening to administer glysters, and sometimes untill midnight.

I should be very much disappointed were it to be supposed from this, that I considered purging in fevers improper, in those of a

bilious character I know it is essential to recovery, and the best preventative of relapse.

There was no symptom attending this fever which required greater foresight than delirium, the precautions to be employed on the appearance of headache, have been sufficiently animadverted on, and the treatment of delirium also in ordinary cases.

It is probable that delirium, in many instances, is no more than a dream, for when a patient is of such relatively morbid sensibility as to feel perpetual excitement, the faculties or senses will be fatigued and fall into a state approaching to collapse, but still too much excited to be lulled into perfect repose; if with this, such extreme debility be connected as that the vital powers would be dangerously lowered by sleep, then the vital functions fail as sleep comes on, and were it to ensue—death would be the consequence, and no doubt has been the consequence in such cases when opiates have been prescribed without previous attention to the *vis vitæ*. The

brain itself when in a state of relative morbid sensibility, or mobility, will be excited by causes which in health had no perceptible influence on it, and it is not improbable that the vital functions of respiration and pulsation, though imperceptibly performed in health, may stimulate in fever; in healthy sleep the mind is abstracted from all extrinsic attentions or impressions, and therefore sleeps extrinsically, but if excited by any internal stimulus, it will even perform volition, as in children dreaming who make water when the mind is stimulated by a distended bladder; it must therefore (reasoning by analogy) be from some internal stimulus that the mobile sensorium is roused while dozing, for the mind is extrinsically asleep, as can be easily proved by rousing or *awakening* a patient in low delirium of typhus, that is in a dreaming sleep, he replies rationally, and when again permitted dreams as he sleeps, or raves: all that is required, therefore, for the production of delirium is, a morbid sensibility

of the sensorium, *relative* in one case, which is the present subject; *real* in that where real strength exists, and *local* in some instances of both kinds. I considered the perpetual delirium, whether I could detect local affection of the brain or not, to be phrenitic, and treated it as such, nor do I believe that anodynes in this case could cure, unaccompanied with locally diminished action of the vessels, the success of this treatment satisfied my expectations; it is to be observed, that I had so often detected local appearances of inflammation in typhus, that I long doubted if fever could exist without some gross material cause of irritation; but this of Walcheren has fully satisfied me, that there is fever of relative encreased sensibility, and relative encreased action, without real strength, or real inflammation, local or general.

When the patients raved all night, notwithstanding the cooling of the head by shaving and embrocations, fomenting the feet, frictions to the abdomen, glysters, &c. with

camphor, hyosicamus and opium, there could be little doubt of some local excitement, and accordingly whether the pupils were dilated or not, topical bleeding was employed; if dimness of sight, and dilated pupils were present, diaphoresis was resorted to with the other remedies, but blisters did not always relieve delirium when this might reasonably be expected, though generally effectual in headache.

In one very violent case of delirium which was phrenitic, camphor in large and frequently repeated doses gave great relief, in several others of less violence, though full as acute, I experienced its good effect, sometimes combined with hyosciamus.

I have had the head shaved and left bare, while vaporific liquids were frequently applied and this for days and nights, and have known the patients to desire it from a sensation of relief from it.

Though strangury has repeatedly been produced, and even Cystitis by blisters, I never

detected ischury in delirium, nevertheless I suspect it, as I observed the bladder quite full though never distended in death: the secretion of urine it must be admitted commonly ceases some time before death in fever. One cause of my suspicion was the detection of ischury in a short symptomatic fever, in a case to which I was called in the neighbourhood, but which had not even been suspected though the bladder was bursting, owing to the presence of delirium, which rendered me fearful of giving opium in this symptom.

The headache so commonly occurring in convalescence and productive of relapse, required all the precautions and attentions that were employed in fever, to guard against this result; washing the head frequently and otherwise cooling it produced great relief, for which reason flannel night-caps were interdicted.

Cinchona was frequently administered during convalescence as a tonic or restorative, a practice in cases of debility not to be approved of, unless in a small quantity if acholia were

present; since it diminishes the appetite for food, which where men have only a certain ration of food, is not useful, as they can not commit excess; another but worse consequence resulted, the astringency affected the kidneys, and unless diarrhœa or diaphoresis produced relief, dropsy was produced; this no doubt could be obviated by diuretics &c. but as the croton cascarilla is a better febrifuge (so called) and free from this inconvenience, I shall observe farther on it.

Croton eleutheria or cascarilla, heretofore denominated Cortex Peruvianus Gryseus, and by the Spaniards Cascarilla de la Oia, *i. e.* anti-febrile, often mistaken for the Canella Winterana by writers, has continued from the days of Stahl to this time in high repute among the Germans, with which their physicians in our army cured the intermittents of America much more certainly, and with fewer bad effects or consequences than we with our cinchona; to which it in is my belief and experience far preferable, in every case which does not require a simple bitter, and with this particular

superiority of cascarilla in remittent, that it is antispasmodic, or calmant, or nervous, a quality probably due to a camphorous impregnation though the fragrance be musky, wherefore it may be given as a tonic in certain pulmonic cases or catarrhal when cinchona would injure; one striking example of its efficacy is the relief it produces in febrile diarrhœa, in which it is preferable to almost every other remedy though not astringent, a fact sufficient to establish its febrifuge virtue whatever this be attributed to, wherefore I have the greater cause to regret the loss of the opportunity in which this might have been put to the test; in dysentery it is evident—the same quality recommends it, nor will it disappoint reasonable expectation with proper concomitants: in intermittents I know of no remedy of equal efficacy; as a stomachic bitter though inferior to cinchona, it will be found in a fastidious state of that organ to be retained when that will not, therefore allowing more time, it will prove ultimately in this case as effectual,

as must be evident from the combination of aromatic with tonic, bitter, and subanodyne qualities, the first and last being wanting in cinchona: In febrile cases however the aromatic quality requires consideration previous to its administration, as it might encrease heat and thirst when present in any great degree, but this may not always be an objection even in remittent fevers; It is given in substance, tincture, infusion, extract and fumigation, the oil only as far as I know has never been employed as a remedy; this bark is so much less in use in this country than in Germany, that there appears something inconsiderate in the remark of our first authority (Dr. Duncan) on this subject, when he ascribes *their* high opinion of its virtues to prejudice, assuredly those who have the greatest experience of the matter are best qualified to decide: In the cure of the rheumatic intermittents of the vicinity of London, in which it is singly very efficacious, I have found it sometimes necessary to join aromatics with it, how much

more necessary must they be when cinchona is given to cure these chronic or non-febrile cases, in which cinchona is generally inert? the prospect of a cure therefore from cascarilla is much more certain, as I have convinced myself by ample experience; and whether it be an error in the Stahlians or not, to ascribe bad effects to cinchona, the immediate production of Œdema and even Anasarca if not by large doses of cinchona, certainly after it, induces me to believe that the astringency is the cause; hence has resulted the very efficacious combination of diuretics and aromatics, very much used on the continent since the time of Boerhaave.

The perpetual necessity for the administration of anodynes, rendered the extract of *Hysciamus* a valuable substitute for opium in many cases, and in some to a great amount, one patient for a painful disease took frequently a drachm in one night, and continued months in the use of it by day and by night without injury, with constant relief from pain; neither in

this nor any other did I observe any narcotic quality, nor any very perceptible effect but that of abating pain, which in hernia humoralis it did much more effectually than opium: it is very desirable that the two species may be introduced into practice, the hyos. albus was formerly preferred to the h. niger, and cultivated commonly in gardens for its valuable properties as a medicine, Dr. Duncan takes no notice of it; He confines his remarks to the herb and seeds, whereas the expressed oil has been heretofore much employed, and even the oil by decoction, and with much more propriety combined with consistent substances for plasters, than powder of the leaves, which the Doctor quotes from other authority no doubt; in fever of the character before us, though frequently useful, yet opium was generally preferable as inducing costiveness, and being cardiac; on the other hand, in delirium, great advantage resulted from the quantity of extr. of Hyosciamus which might be administered, as far as I know from my experience to

an indefinite amount; and I must in candor assert that from a small dose—as five grains, I never observed any benefit in adults.

OF THE
METHOD OF CURE
IN
Intermittent.

FROM the history of the synochus paludum remittens, particularly of the permutation of types, it appears; that intermission in this fever was regulated by tertian type, though exquisite tertian was a very late occurrence in this fever, and it is probable it was also an early one, therefore, at both periods there was a cause of regular intermission, which in the intermediate tedious quotidian or double tertian form did not subsist.

From Galen's time, intermittents have been by one or other writer considered bilious, for that observant practitioner made the true distinction, exactly as it subsisted in this composite fever of Walcheren, between intermittent that is tertian even when prolonged to a seeming remittent form which he called *Tritaiophyes* (*Tertianaria*), and *Hemitritæa* or genuine Remittent which is only tertian by corresponding exacerbations—but continued quotidian in reality, marking the characteristic of tertian or true intermittent to be bilious, of the quotidian or *hemitritæa* to be (as truly at Harwich it was) pituitary ; Galen no doubt uses the expression of putrid (septic) phlegm, which I do not adopt to avoid mistake, as he attached no such meaning to the word as modern supporters of septics and antiseptics do, for his terms implied no more than our word acrimony ; but his distinction of bilious and phlegmatic fevers was just, and this redundant exemplification of remittent supports it .

I have endeavoured to prove from Sydenham,

the Walcheren remittent to have been in its advanced state—double tertian or hemitritæa; my Journals were too imperfect to exhibit proofs to the hour before or hour after, of the exacerbations of the first and third, and second and fourth paroxysms alternately corresponding, but the authority I have quoted to support my own observation, though this were only a notion, gives it consistence; in this advanced state I have shewn that Acholia subsisted, during which for two three or more months quotidian was the prevailing type, and anaemia the predisposing cause, or certainly the concomitant, or *possibly* the effect only; and when at length bile appeared in the stools, exquisite intermittent type was then also appearing among the patients. In north America where intermittent is epidemic and is truly bilious, I have selected ten patients in similar circumstances, put them into a Ward, and vomited every one for that evening for experiment sake, and in this instance cured five of the ten by

the first trial, all having thrown up much bile; the fever patients there were frequently jaundiced, sometimes almost to a mahogany color, and even some comatose, yet purging the bile off by calomel and jalap even when the pulse contraindicated evacuations, proved speedily curative, nor was there any safety in omitting to purge repeatedly while the eye retained any yellowness, or the tongue was foul with ill flavor, for the strength and pulse rose even in the comatose cases from this evacuation, the fever was immediately marked with a critical movement, remission followed and tertian type; but frequently a vomit abridged all by producing intermission in the commencement of continued fever.

The remittent of Walcheren (by which I neither mean the primary bilious remittent, nor terminal intermittent) never terminated in dysentery, nor did this disease appear for three months notwithstanding the perpetual and mortal diarrhœa; In north America, the

bilious Remittent and Intermittent continually ran into dysentery, and it was by dysentery the most acute fevers terminated; in Harwich dysentery did appear in about one case in one hundred, after acholia had been cured or had totally ceased, and when bile was again secreted, and no sooner; yet is it agreed on all sides, that we must never again call one fever which is bilious—*choleric*, nor the other which is only incident to a watry state of blood—*phlegmatic*; this would be heretical in the advanced state of the animal stereopathology, for morbid actions, and healthy actions, active and passive actions, encreased and languid actions, variolous actions, morbillous actions &c. &c. are so much more intelligible, that notwithstanding the decompositions and combustions in vacuo by the most powerful chemical agents, and the proofs that our bodies are influenced by these agents, and notwithstanding geometrical proofs of the forms of the primary atoms of some fluids, the ACTIONS which are such comprehensive

terms, fortunately render such minutiae unnecessary.

Considering exquisite intermittent as a bilious fever therefore, the indication is to evacuate bile, by the method best suited to the state of the patient; if strong and the paroxysm commence with nausea—to promote it, but as to vomits—there are bounds to be set, for though in the commencement of fever they are salutary, yet in the advanced state it is quite otherwise, as they either urge the liver to increased action, or emulge the ducts so as to exhaust the bile and induce obstinate costiveness; the former case is not of this latitude, therefore the prohibition of vomits concerns tropical diseases only, the latter I have treated of under the head of Acholia; the prudent practitioner will give into neither, inconsiderately, and though not over-cautious as to the exhibition of vomits when indicated in a sound state of the viscera, he will bear in mind the circumstances which rendered them inadmissible in remittent.

Purgatives I need not touch upon here, as they have been amply commented on above and shewn not to relate to this subject.

The next indication in intermittent—was to prevent the recurrence of fever by restoring healthy tone, or an equilibrium between relative sensibility or mobility, and potential stimulation.

The remedies answering this indication have been all sufficiently noted except arsenic.

I tried Fowler's Arseniate and solution, and the real neutral salt, not being certain of the strength of Dr. Fowler's solution as not knowing of a certainty that it is neutral, I considered it necessary to compare it with the neutral prepared as I apprehend accurately, I therefore procured the latter, and employed it in those cases in which the Fowler's solution had been administered as long as supplied to the Hospital, and found the Arseniate evidently more mild and full as efficacious; I commenced with the solution in as simple a form as might be viz. diluted in

Aq. Menth. Pip. and sweetened, it was given twice and afterwards three times a day, from three to five and six drops slowly encreased, when it caused in some cases derangement not amounting to nausea, and heartburn, and when farther encreased as to nine drops vomiting—and sometimes severe, which induced relapses into continued fever; in several cases by laying it aside for some days, untill the effects on the stomach had ceased it agreed much better, but if given more frequently than before—sickness certainly ensued: guarding the remedy then with aromatic as Tr. Cardamomi and Tinct. of Opium this in equal quantity with the solution, it could be retained to the amount of twelve drops, but not in any case that I observed to fifteen, and at the utmost five times, but a sixth dose induced violent vomiting, relapse of fever, and a permanent sickness of stomach, as did a farther encrease of the dose; a most obstinate vomiting has even attended twelve drops three times a day, thus

guarded. I gave this remedy at least to twenty, but I believe to more patients, and the first effects were promising; in some not more than three—the intermittent ceased, which happening in cases in which cinchona or other similar remedy could not be retained, and therefore very difficult to manage (for in none others was it exhibited by me), I formed the most happy prospects in consequence, for the poor patients who were the remnant of the worst, or the residuary chronic cases out of near 7000, and pursued my experiment untill a few more intermittents yielded, among the rest the two of longest duration I had to treat—when the supply being exhausted, I had to provide myself with the arseniate as I could, and during the interval every case relapsed: One the very worst and whose paroxysms had become lighter, happening through anxiety to recover to take a sixth dose of twelve drops, obstinate vomiting ensued, and he could bear no more of the Fowler; by every device I could invent I combated this

vomiting, and so effectually that the patient could again take the arseniate in small doses, when having encreased it to six drops—the vomiting returned, and no means I could recollect were sufficient to prevent its recurrence, with every paroxysm, and with great violence, and even on taking his ordinary meals, so that I had every reason to apprehend a permanent stricture of the pylorus had ensued.

The arseniate seldom produced cardialgia, and seldomer nausea, and is I believe at least as efficacious as Fowler's preparation though milder in the same dose.

Among the most prosperous cases were a few whose paroxysms became less severe and intermissions more perfect, and who bore the bark &c. after, in sufficient dose to cure them; of those who returned after an interval to the arsenic, few if any were benefited materially; those who were relieved, and those cured in particular were among the earliest instances, and I believe this drug injured every one who continued to take it a month, and some in a shorter time.

I must not omit that I was favored at the time with a visit of a traveling Physician a Dr. Makenzie (I believe) who was collecting materials on this subject, and with the laudable hope of rendering them immediately serviceable to the attendants on the Walcheren sick; he assured me he would either return or communicate with me in writing, when he should be able to ascertain the result of the free use reported to be made of it in Lincolnshire with great success; from my experience though so limited, I apprehend his discoveries have not answered his benevolent expectations, for I can not think that any *unmerited* coolness of reception, which he might have experienced at Harwich (as I heard) could have been sufficient to abate the enthusiasm of a mind so philanthropic; and I still hope to see his communications in public.

The Hindoo Physicians give a larger dose of arsenious acid formed into a pill and repeated morning and evening; in the Asiatic researches

there is an instance of a cure of elephantiasis in three weeks by it, their combination being no more than black pepper, and some betel leaf which is not so strong as the pepper.

In Stahl's time arsenic was used to cure Intermittent and abandoned as dangerous.

These evidences are so contradictory, that I do not conceive any rational person can attempt to decide between them unaided by experience and this less limited in time and number; as for my part, seeing that the Hindoos make frequent use of arsenic and are therefore more experienced, I am far from considering that it should be abandoned, because our experiment at Harwich was unexpectedly crippled; for we gave commonly as much arsenic in three days as they do in three weeks, but not untill small doses failed in effect, nor did we give it exactly so combined as they do, nor so long continued—the supply having failed.

Again I am unwilling to reject a remedy in other constitutions and in other circumstances,

because in the dyscracy induced by remittent, or by mercury, it has not proved so fortunate as report has made it in Lincolnshire.

In fine as to the effects operated by arsenic or its oxyd on the living solids or fluids, I have not been able to trace them beyond the *primæ viæ*, and if there be any other I am ignorant of them, except by report.

Sudorifics, it might reasonably be presumed, which were so constantly and fundamentally indicated in remittent, would afford the happiest results here; I did try them, not I confess with that confidence Boerhaave (who copied Sydenham in this) had placed in them, and therefore not as he did; the preparations of antimony I considered best suited to the disease, and though I gave doses of tartrate of antimony to two and three grains, with nearly an equal quantity of opium before the cold fit, in a few of the stronger patients, the benefit I had observed in other cases and circumstances, did not follow here, and the tartrate invariably vomited; nor did I follow

Sydenham's method strictly in any case, of inducing a profuse perspiration and a purging some hours previous to the period of the ensuing paroxysm, and maintaining the former by warmth and by aromatic drinks untill some hours after the paroxysm, though I am fully persuaded it would have succeeded had I recollected it at the time; but a scene so crowded was ill adapted to recollections of this kind.

Truly I repent I did not employ Sydenham's method of cure in the identical disease of Harwich, p. 92 and 93, which is in every tittle so precisely applicable.

“In *Tertiana duplici*, quæ typum variavit, ob Aegrum vel evacuationibus, vel alio quovis modo, debilitatum, sudor pari etiam modo provocandus, et pari temporis intervallo à futura Paroxysmi invasione, vel medicamento jam laudato (omittantur vero *Pilulæ Cochiae*, cum nec tutum sit, nec ad rem faciat, Cathartico, jam ab eodem, fractas aegri vires amplius dejicere, et Paroxysmis ejusdem ope

ingeminatis suppetias ferre) vel diaphoretico alio aliquo *drastikotero* atque efficaci, quod etiam repeti potest Paroxysmo genuino proxime subsequente: In summa aegri debilitate, à dicta Paroxysmi ingeminatione, Electuarium, quod jam sequitur, præscribo: *R. Conserv. fl. Borrag. Buglos. aa. unc. j. Conserv. Anthos. unc. fs. cortic. Citrei condit. Nucis Mosch. cond. Theriac. Andromachi aa. drach. iij. Confect. Alkermes drach. ij. M. F. Opiata*, de qua capiat ad magnitudinem avellanae mane et vesperi, superbibendo cochl. vj. sequentis Julepi. *R. Aq. Ulmariae & Theriacalis stillat. aa. unc. iij. Syr. Carophyll. unc. j. M.* vel hujus loco Aquam aliquam Epidemicam simpliciores saccharo dulcoratam exhibeo, interdicto Enematum usu; aegro Juscula è pullorum carnibus, Avenacea, &c. concedo.

Curandum est ante omnia, ne praemature nimis hic Cortex ingeratur, ante scilicet quam morbus suo se marte aliquantisper protriverit, (nisi collabescentes et jam fractae aegri vires, eundem temporius sumendum esse dictave-

rint:) neque enim illud solum est metuendum, ne à praepropero ejus usu inefficax iste redatur, et spem aegri fallat, sed etiam ne de aegri vita agatur, si sanguini, omni fermentationis nisu se despumanti, eam derepente injiciamus remoram. Proximo loco, neque Catharsi, multo minus Venae-sectione, subducenda est materiae Febrilis pars aliqua, quo liberius cortex suo fungatur munere: cum enim ab utraque labefactetur quadantenus oeconomia corporis, eo promptius, certiusque, recrudescant Paroxysmi, evanescente simul pulveris vi."

The prevention of the recurrence of intermittent in the succeeding springs and autumns is the only topic remaining to be discussed, and this I have endeavoured to state in a popular form in my address to the legislature, therefore it need not be repeated here.

To conclude this Subject.

These tertians being the conclusion of a

composite fever, became ultimately the prevalent type, and were then with precaution easily cured.

There were primary tertians but very obstinate, and as inveterate as the primary quotidians, but not more than about one in an hundred.

They preserved the autumnal character of prevalent remittent type, but belied the account borrowed by Pringle from local authority, of declining with the fall of the leaf; on the contrary they became more numerous, obstinate, and relabant as the winter advanced; and so far exceeded the epidemics of Sydenham, that they doubled the duration of two months, and did not evidently decline with the great advantages of situation at Harwich, untill January; so that they approached to, or were the identical intermittents of Sydenham which exceeded the ordinary duration, from bleeding, purging, and other debilitating evacuations (and latterly by the operation of mercury) and which he judiciously

attributed to cachexy, for though I am confident it was dyscrasy, yet I am as certain his cachexy is of the same meaning, though of more latitude.

The cure of autumnal remittents and intermittents confirmed the characteristic difference between them and vernal as given by Sydenham, the autumnals being injured by all debilitating causes as evacuations, which in the vernal were salutary.

The consequences were far more fatal and various than Sydenham had observed;* as the chronic diseases induced were in greater proportion and variety, several of which he has not noted; but of all the sequels he has recorded, one only was not observed viz. angina; of mania there was a solitary instance only.

Boerhaave who copied Sydenham in every tittle which related to the cure of fevers,

* Allowance being made for the selection of the worst cases only at Harwich, this may be, and probably is diametrically contrary to the fact.

declared that evacuants caused autumnals to continue all winter, and though he did not equally approve of cinchona as a remedy, except for the British only whom he has asserted required astringents (tonics) as they were prone to ephidrosis and cachexy, yet he very emphatically declared, “Non mirum est
 “ febrem autumnalem Maio mense curari, nil
 “ enim facilius est, sed eandem mense Decem-
 “ bri sine cortice Peruviano curari, *artis*
 “ *est.*”

Galen who distinguished the different characters of vernal and autumnal intermittents, pronounced calefacients destructive in the former, curative in the latter.

I conceive Boerhaave to have known the fevers of Zealand intimately ; for treating of autumnals, these are his maxims ; “nunc
 “ medicus nec missionem sanguinis, nec pur-
 “ gantia, nec debilitantia applicare debeat,
 “ sed resarcire quod est exhaustum ; si tamen
 “ subministret priora, quartana fiet lethalis ;
 “ *Idem de tertianis autumnalibus verum est,*”

He then proceeds to shew, that the evacuant plan and spare diet inevitably prolong the disease through the winter.

Again Boerhaave whom Dr. Fordyce considered the source of destruction by bleeding in fevers, adds, “*Ingens est error quod omnes*
“*medici qui antiquos sequuntur, velint in*
“*omni morbo vires imminuere.*”

The next observation applicable to my purpose is so perfectly in point, that I shall conclude with it, “*ante biennium orta est ca-*
“*cochymia in bile et hepate; unde febris*
“*est nata de qua dici non poterat—est con-*
“*tinua—vel intermittens; nec quotidiana;*
“*nec tertiana; nec quartana; sed cochymia*
“*erat; omnes medici qui dederunt corticem*
“*Peruvianum ægros suos in plurimos morbos*
“*chronicos injicientes, mortem accelerabant;*
“*et omnes ægri qui leniter tractabantur, sa-*
“*nati sunt.*

OF THE CURE

OF

Dysentery.

THE preceding pages have sufficiently proved the fact which had before been rendered indisputable, by the dissections given by Sir John Pringle, that Dysentery is Enteritis of the rectum and sometimes colon; the various stages presenting all the varied appearances from slight inflammation to gangrene, as noted above.

The pathognomonic symptom was Tenesmus, scybalæ were wanting, and blood also, mucous stools frequently excluded with pain were very characteristic, but the fever was acute beyond every other, and the countenance marked with extreme anxiety above that in any other disease.

The only indication I was able to form from these premises was, that as the disease was

within the reach of topical treatment, hence all the topics employed successfully in other inflammations applied equally here; and this I had previous experience to sanction.

I therefore ordered in the first instance an injection of cerussa acetata which with starch and opium produced great relief, and I believe would have cured my patient, but finding unpleasant observations afloat, I abstained—my patient died, possibly his fate might have been inevitable, but I regret having so abstained.

Another patient treated with calomel recovered, which I attributed to bile having been the exciting cause, for bile was then secreted as might be observed in the color of the stools, and was accordingly decomposed by the muriate of mercury.

Astringents were useless in this disease, since if they were remedies for it, when they had attained the seat of the inflammation they were then expelled by the inflamed or sore intestine.

Aromatics and all other stimulants shared the same fate, so that sedatives only and locally applied as well as internaly, were of any use; except mercury as above. No doubt that opening an hæmorrhoid, or applying leeches to the anus might have given relief if either were practicable, but no hæmorrhoid was visible, nor any leeches to be had, and general blood-letting would have proved destructive, therefore out of three dysenteries two died, but it must be noted that they had been long ill and dangerously previous to the attack of dysentery.

OF THE CURE

OF

Enteritis.

This disease was only evident to the feel, therefore Physicians in any degree apprehensive of handling their patients in delirium,

N N

must be content with a want of success which less cautious practitioners will obtain.

I had one patient only among several, who though ill of fever was able to describe his obscure sensation of pain to me, it might be covered by the hand at the umbilicus, and was very sore on pressure, his pulse remarkably quick, sunk very soon and became exceedingly small and weak; I treated him as in the dry bellyache (so called) of the West Indies, to which the disease bore a very exact resemblance, with full doses of opium untill he was relieved from pain, not quitting the ward untill this was effected; I then had light nutritive food given, and glysters with a little opium to cause their retention only; these produced stools, and he then took solution of cremor tartari untill purged; he suffered a relapse in which he was as bad; and since my retirement I am sorry to learn that he died of a second relapse some months after at an inland Hospital.

Blisters were applied in other cases over the

pain, but in this I preferred a synapism for expedition sake.

The deception we laboured under in this disease was so great, that untill dissections first proved the existence of it we did not suspect it, after that it was my misfortune, since I suffered severely by it, that I was too particular in my manipulations, but with due attention to cleanliness I never observed even in malignant fevers and in hot climates, that the nurses were liable to infection, nor had I suffered by it at any other period, though I had slept in the cabin of an Hospital Ship in which my friend and companion lay ill of the (so called) yellow fever, and immediately near me, but ventilation was there perpetual.

As among the thousands of instances which I have seen of dysentery, which was the most fatal disease to our Armies in North America and the West Indies generally, untill the contagion of the yellow fever or tritæophyes icterodes, was at length so condensed in Prison Ships, as to prove equally destructive with the

plague, and swept away armies, navies, and cities; untill this superceded dysentery, Physicians concluded that other external influences could not operate so general a destruction, and many gave to the air a pestilential quality; and even those who perceived the multitudes of bilious fevers which were dysenteric, which remitted, intermitted, and again became dysenteric in the last instance previous to dissolution, or in the convalescent Hospital—the most fatal to our armies in America, as it was kept in the middle of a large city; those otherwise acute observers suffered their judgement to be so far blinded, as to take this bilious disease for a contagious idiopathic fever and to be putrid or malignant, though they perpetually witnessed the locality of the symptom, and never looked beyond the colon to find the effects—nor could they without disbelieving the evidence of their senses; yet they never considered enteritis or dry belly-ache, in those countries the most acute of all diseases except cholera, as a contagious disease;

and yet the inflammation of the ilium is as liable, or of the jejunum, to produce contagious matter as of the cæcum or colon; for who can draw the limitation between them? or is the valve of the colon the door which shuts out contagion?

The truth is therefore, that in predisposed habits the bile (I can not assert from acrimony) which in the stomach is an emetic and in the intestines a purgative, is at first superabundant, is therefore violently evacuated even to exhaustion, often ceases to be secreted, and when secretion at length ensues, the intestines being in a morbid or relatively morbid state of sensibility, it operates the more severely as a purgative, accumulating in the colon and rectum where it causes inflammation, and where it is detained by constrictions, or in the valves of the former.

The stricture which an inflamed intestine irritated into contraction presents, naturally hinders full evacuation, and may no doubt as in enteritis perfectly close the Intestine; but if

I have shewn any fact demonstrably, I have proved that this disease is in the reach of glysters or topicals only, therefore it must be the fault of the Physician if this stricture take place while mechanical means will remove or abate it, except in so far as the disease depends on its exciting cause—bile, which it has been shewn elsewhere should be decomposed by mercurials.

I can not conceive therefore, that any arrangement can be more consonant to the nature of things, than the rejection of dysentery from the Genera of the nosology, and defining it as a Species (which in fact it is) of Enteritis.

Genus 16. Enteritis

Sp. 1. Iliaca. dolor abdominis pungens tendens circaumbili cum torquens; vomitus; et alvi constipatio; cum pyrexia typhode.

Synonima &c.

S. 2. Colica. Abdominis distensio flatuosa subitanea cum dolore immani.

Verictas. 1. Pictorum.

2. Nervosa.

Sp. 3. Dysenteria. Dejectio mucosa crebra

aliquando et sanguinolenta, cum
tenesmo, interdum et stranguria,
(retentis plerumque fœcibus cras-
sioribus) et cum pyrexia.

Varietas. 1. Phlegmonodæa.

Synonima. Proctitis
Proctalgia.
Clunesia.

This definition of dysentery may be objected to as not containing that characteristic circumstance, and which I have insisted on as the exciting cause, *bile*, and consequently bilious mucus, and fluid bile in the stools; though at present I am not acquainted with any other sufficient cause of dysentery, yet the diarrhœa before described may be considered dysenteria phlegmatica or alba, and then the species here defined would be dysenteria hepatica; to this I have only to object, that the former never has the characteristic symptoms of dysentery, and amounts only to what Celsus has considered *Laevitas Intestinorum*; I conceive therefore it is better to leave some latitude to the meaning a definition may bear, than by too

great strictness to give rise to a multitude of unnecessary definitions.

OF THE CURE

or

Anaemia.

FROM the History of Anaemia, the indications of cure are so evident they scarcely require recital.

First. To restore the red globules, or their principal constituent viz. Suboxyphosphate of iron; which may for brevity be called Feroxyphate.

Second. To restore Fibrin.

Third. ————— Gelatine.

Fourth. ————— Albumen.

And Fifth. To restore tone to the debilitated solids when required; by all which means the fourth indication of cure in fever will be fully answered viz.

To remove dyscrasy consequent on fever,



and with it the prædisposing cause of all the the parasitical diseases which followed this fever.

The first step in this progress is of necessity to relieve the symptoms and diseases which portend danger, of which several have been treated, and while by suitable remedies the stomach and bowels are rendered tolerant of food and drink, albuminous foods and gelatinous are to be supplied with suitable condiments; at Harwich milk and eggs were freely dealt out and though the former was very poor, yet there were some cases of fastidious stomach which could bear no other food, and recovered though slowly, very well; and whether it was rather from the gluten of wheat, or that albumen of egg is by animalization convertible into gelatine, this principle was supplied to the blood by them, and anaemia was thus cured though slowly; but much more rapidly by preparing gelatine for food; with this intention, and because strong

broths contain phosphats, I directed beef and mutton with spices to be stewed into jelly broth, when to my great astonishment, I perceived that all the meat then furnished to the hospital would not afford a pound of jelly, so that the beasts killed for the supply of the patients were all ill of Anaemia; yet however poor this diet, there was no other which comforted and restored the men so much at the time: On the return of the Inspector, and so soon as by his interference and attention, the provisions were supplied of a good quality; the sound flesh produced excellent jelly or gravy soup, and in the worst fevers I found it (as I always had before among the soldiery) the best restorative; not that I by any means think it sufficient singly, for in slaughtering beasts for market, they are always by bleeding deprived of their serum or albumen, which being the vehicle in which the gelatine, fibrin and feroxyphat are soluble, these can not without a fresh

supply of albumen and soda be circulated, nor conveyed to the parts where they are to be deposited or secreted ; wherefore the fluids may abound to plethora and yet not restore the waste of the solids.

These considerations led me to the conclusion, that the Inspector should have recourse to an analysis of flesh, by boiling in water impregnated with a given quantity (which practice will best ascertain) of common salt, never to be exceeded ; reducing a pound for instance of the flesh to a certain measure suppose two pints of soup, and then with an hydrometer trying the density of it, by which the quality of meats may be easily and quickly ascertained ; a common phial corked and loaded with a weight on one end to sink it partly, if marked with lines across, may be so graduated as to form a very good Sarcometer, particularly if the bottle be slender and long ; and if greater accuracy be required, the gelatine of a pound of flesh may be precipitated by Tannin prepared from

galls, by boiling, but more quickly from Catechu.

The albumen or menstruum when sufficiently supplied, like all other of the fitness's of things in nature, is endowed with farther utilities in the animal œconomy, for it is solidescant, and though not the vital fluid to which irritability is attached, yet it assumes certain organic arrangements forming membrane, cartilage, nail, hair, and in some beings horn, in some shell; so that as there is no part destitute of membranous fibre, neither is there any destitute of albumen; it must therefore be the most universal constituent of the animal, nor is any extravasated liquid destitute of it; the embryo of every animal appears to be solely albuminous, and thus it forms as it were the basis of solids as well as fluids, since the chick previous to ossification lives on no other nutriment, nor is it improbable that the muscular fibre is horny.

When the digestion of the sick and valedudinarians became more efficient, the food

was changed to fowl broth, as an advance from albuminous to a mixed albumino-gelatinous diet, to which if I could have so influenced matters, fish might have been economically and frequently substituted with great advantage to such sickly appetites, as the full impregnation of phosphorous matter in fish, must render it restorative in a much greater degree than any other albumino-gelatinous animal food.

Lastly, in strong beef broth as observed above, Gelatine, Fibrin, Phosphat of Lime and of Soda were supplied to the blood, so that of the deficient components of blood, the oxyphosphate of iron only remained to be supplied, and this the Hospital did not—nor could it be supplied; as yet therefore I only reason from the chemical fact of this being a principle to be supplied, and as it is found to dissolve in serum and in albumen even in a minus state of oxygenation—though not in water, it must cease to be circulated if the serum be too aqueous, and must become again soluble when

the serum is rendered albuminous; here however it is necessary to recollect, that though this salt of iron is found in the state of suboxyphate in blood, yet this is not its most soluble and active one, as may be collected from the analogy of red oxyd or hyperoxyd of iron, which is soluble in fluids (as alcohol) in which the protoxyd is not; the oxyphosphate is therefore reduced from its maximum of oxygenation to a lower one by the action of soda, which is plentifully separated by decomposition from muriate of soda, by the chemistry of the living alembic; in whatever formula this salt—the feroxyphate be administered, the agency of soda is not to be forgotten; therefore to restore the surplus of phosphoric which has been neutralized by it, and farther, as a much better stimulant in debility than carbonat of ammonia, it will be necessary to administer phosphat of ammonia, which readily decomposing, will give its phosphoric to the metalline oxyd, and act after as free ammonia in maintaining the tone

of the solids; and this is the more necessary, as phosphats are not easily decomposable, consequently the excess of phosphoric so necessary to the perfect solubility of feroxyphat, as well as to other restorative processes, without this supply, would soon be exhausted.

Where there is a considerable quantity of provision to be supplied, and therefore much off-Fall, were the kitchen to be furnished as it ever should with a digester, the ears, cartilages, tendons, &c. which yield the best glue, may at a smaller expence, than that of the ordinary provision, provide gravy soup for the more weakly patients, and if managed with moderate heat be quite savory and palatable.

As gelatine varies in consistence from age, becoming firmer as the animals older, if well fed, and free from disease which the experience of Harwich taught me to enquire into, the aged flesh—particularly beef must be the most restorative in soup; and the younger meat therefore easier of digestion: these are distinctions too nice it must be acknowledged for

general practice, but where an Hospital becomes as at Harwich and Deal, the Lazaretto of an army, and where notwithstanding the extremity of disease, as the patients are generally young and but a short time before were robust, there can be little doubt that they will recover by attention; and if not, by change of climate: No means therefore within the limits of ordinary resources should be left untried.

In other cases of anaemia and in which the resolution of the gelatine, and decomposition of the cruor ensues more rapidly; as in scarlatina and in the process of a mercurial course; it is expedient to provide against these morbid changes, by the administration of so moderate a quantity of gelatinous fluid as will obviate such a result; I conceive that the sarsaparilla broth found so remarkably restorative after mercurials in syphilis—and even curative, acts only, or chiefly by preventing or curing anaemia; the same do I conceive of the Lichen Islandicus digested into a mucilage, and in fevers I have found the common Imperial sweetened

and rendered mucilaginous by gum arabic, highly restorative: why such preparations are not more generally employed in long fevers, I conceive can not be satisfactorily accounted for.

These reasonings which tend to the restoration of Incrassants so long banished from our *Materia Medica*, will no doubt alarm the stereopathologist; chemical philosophers on the contrary will find their labors compensated, and will the more pleasurably renew their exquisite researches, on finding they meet attention, if not full approbation; they have achieved much, but were the faculty to admire without acting on the conviction which such luminous facts produce, the chemists might thenceforth call us obstinately blind, and abandon us to bigotry and ignorance: for my part I can never sufficiently admire the ingenuity of that Gentleman and philosopher, who so lately gave the example of curing diabetes by interdicting fermentative food; why he did not adopt the common

process of checking fermentation by Picrine (bitter) I know not, but I am persuaded, neither this nor any other remedy will cure diabetes, or diarrhœa, or any watry secretion and excretion, but curing the dyscrasy in which it occurs; I therefore apprehend that in anaemia diabetes may have been observed, though I have no example to adduce, and the more so as in one patient a temporary diabetes was produced by a mixture of tinct. digitalis purp. tinct. opii. sp. ætheris nitrosi, and some vehicle, which Mr. Gibbon had given with the intention of abating strong action of the arteries in peripneumonia.

OF THE CURE

OF

Dropsey.

While the foregoing regimen was continued to cure dyscrasy, the superabundance of watry serum required perpetual evacuation,

the outlet provided by nature (diarrhœa) would no doubt in warmer weather have proved sufficient, if moderated and the strength maintained, but unfortunately it induced Acholia, and chylification became thenceforth impossible, while the fermentation of food caused tympanitis.

To substitute another drain for diarrhœa was the only remaining indication, and fortunate it was that opportunities offered of ascertaining this rational one, by inspection of the dead as well as the living, as thenceforth I may safely declare I lost no dropsical patient.

The production of diaphoresis required no farther attention in this case than to support the vis vitæ, and not prolong it unnecessarily.

Diuretics cured all the minor cases, to which remedies I found it necessary to have recourse, as the patients were not liable to relapses from cold: but if the skin was not

kept warm and perspirable) the production of diuresis was not so certain as of diarrhœa, I therefore combined a warm opiate with diuretics in general, and made the patient wear flannel in cold weather.

I have no doubt the case of dropsy which was cured by Sand-bath in Anson's Voyage, was one in point, and if ever I have the same opportunity I will try it.

OF CATARRH

IN

Anaemia.

In cold catarrh I found pulvis polygalae senegae more certainly efficacious than the pulv. ipecac. comp. In Canada the senega is generally used in pneumonic cases, but the impropriety must be evident of administering it indiscriminately, since a sudorific so powerful and stimulant must be unsafe, untill by

abstraction of much cruor and crassamentum by bleeding, the blood is rendered serous, and there is danger of anasarca of the lungs; In what is called cold defluxion of the lungs, and when the aqueous fluid is not evacuated by perspiration or by urine, this remedy on the same principle becomes very usefull.

OF THE CURE

OF

Scurvy.

In the few cases which I treated at Harwich the worst symptom was epistaxis, and I recollect no other which required particular attention.

In all curable patients the disease may be said to be stationary, if in a week after change of diet no mortal symptoms appear, after which the patients improve rapidly on restorative diet; I never before found any other means necessary, yet those few instances

at Harwich recovered very slowly; I am therefore inclined to infer, though three instances warrant no legitimate inference, that scurvy the concomitant of anaemia differs in some essential from sea scurvy.

I had formerly seen scurvy produced by labour and spare diet, in a cool and moist climate (in Cork) and in the form of Melaena in males who were very temperate.

I had seen fatigue long continued with spare diet produce sea scurvy in the soldiery.

I had also seen scurvy produced in females of temperate habits by very abtemious diet, attended with vibices as in melaena, but no dejection of black mucus.

These I recount to shew, that scurvy is an effect which in cool climates and situations, may be expected to result from causes similar to those at Walcheren, nor should weakly men after long and excessive fatigue, be considered as malingerus when they become apparently indolent, and confine themselves to bed; the cool surface, inability to exercise,

and tender gums will mark the disease to be scurvy, but if anaemia be present I conceive there can be no doubt.

Upon the whole I apprehend that scurvy incident to Anaemia, is in some particular different from scurvy of a more rapid production, and in which latter, blotches of the extremities or efflorescences, are of more frequent occurrence—but this is conjecture; except only, that I have observed indolent men, who having been pressed or trepanned into the service, were therefore dispirited, quickly yield to scurvy, if they should escape typhus.

FINIS.

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