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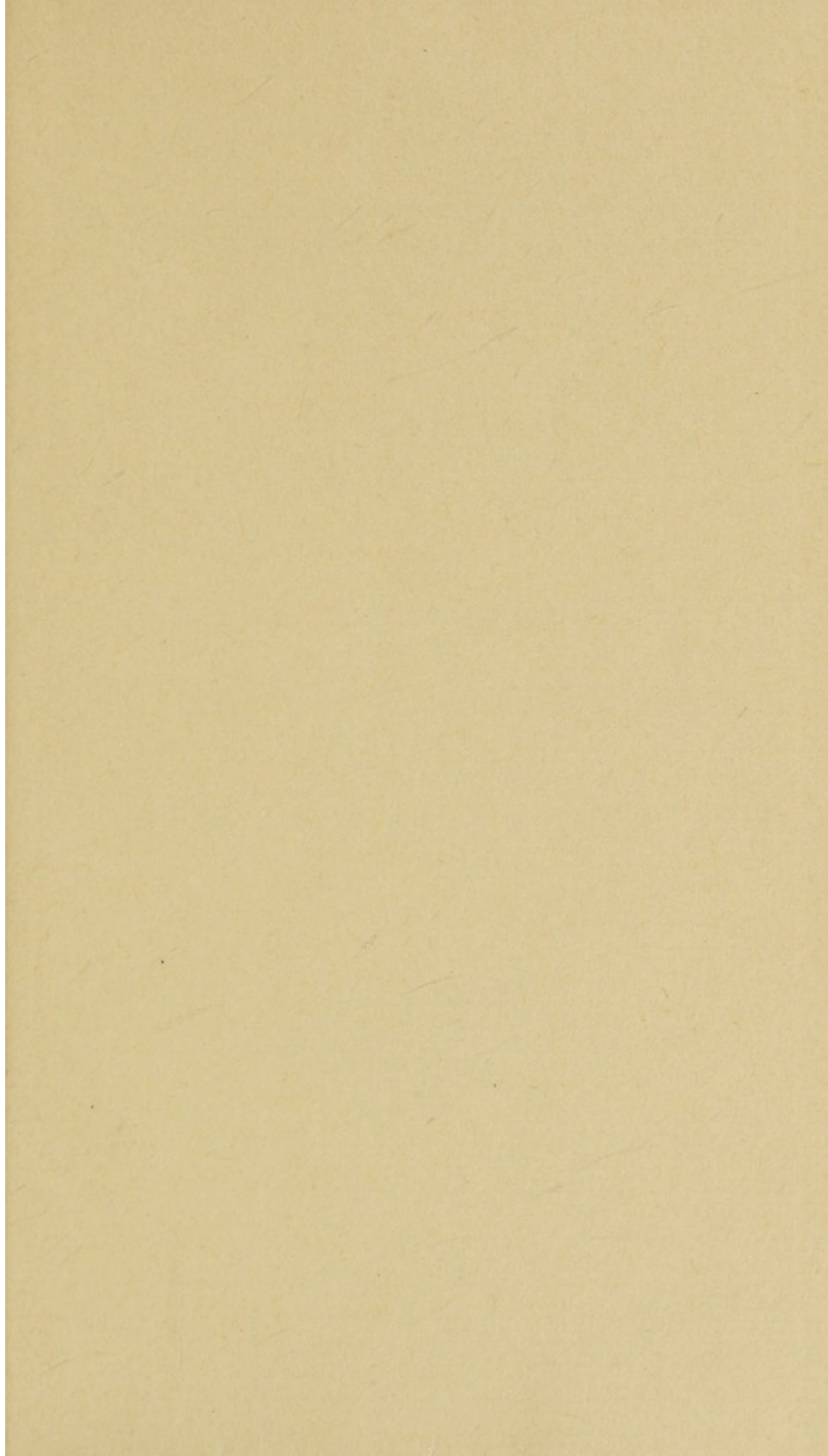


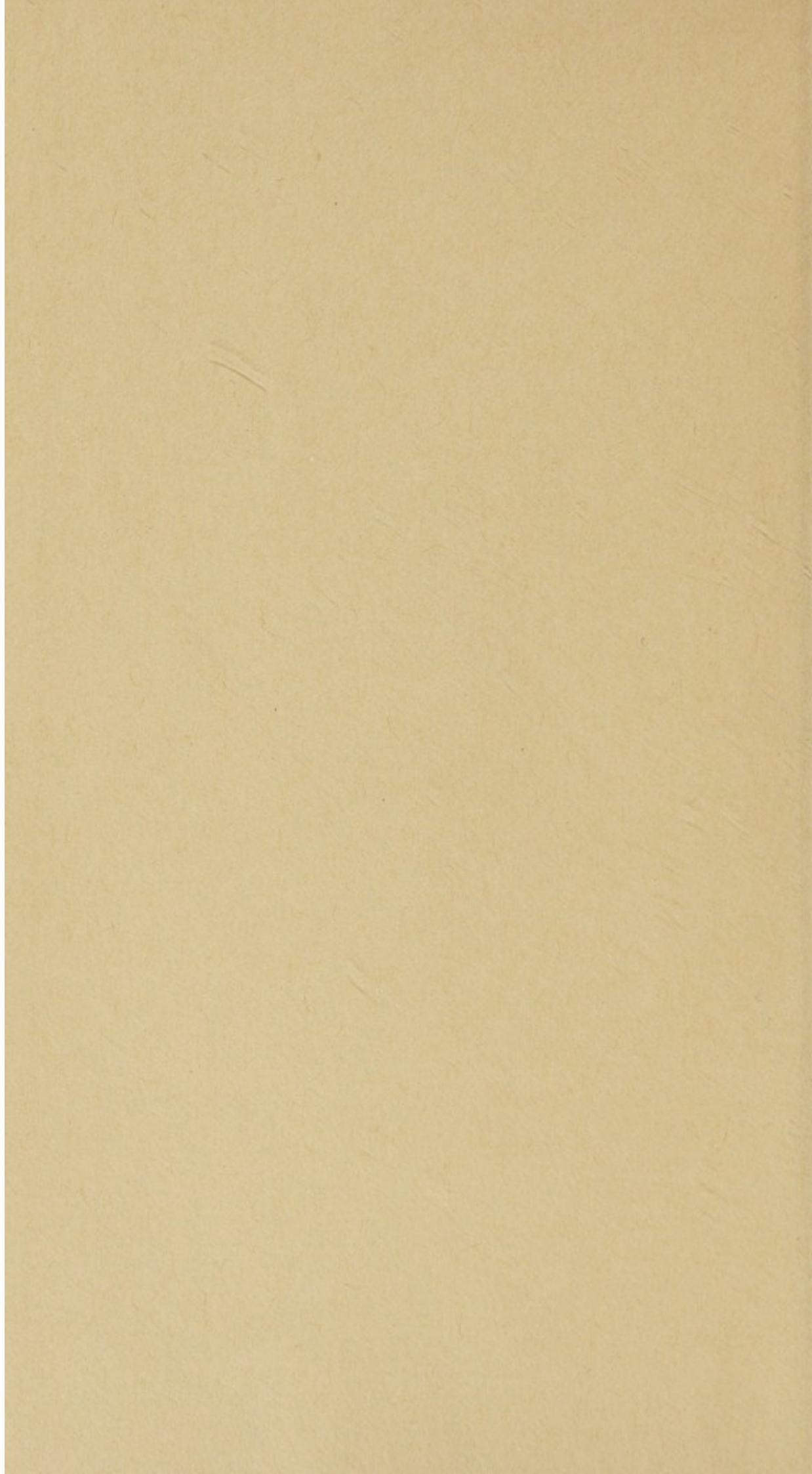
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GRASHUIS, J.
C





A
DISSERTATION
ON
SUPPURATION.

Translated from the LATIN of

JOHN GRASHUIS, M. D.

Fellow of the *Cæsarean* Academy, and of the
Royal Academy of Surgery at *PARIS*.



LONDON:

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336180



T O

JOHN RANBY, Esq;
F. R. S.

Principal *and* Serjeant Surgeon

T O

H I S M A J E S T Y.

This T R A N S L A T I O N,

Is humbly, and gratefully addressed

By his most obliged,

Most humble Servant,

J. D A R G E N T.

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INTRODUCTION.

AS I was lately reflecting with Attention on the Generation of Pus, and endeavouring, as well as I was able, to account for the unknown Action of Suppuration, thinking it possible to illustrate and make plain the same, there fell into my Hands an Advertisement published by the Illustrious *Royal Academy of Surgeons at Paris*, by which any one, even among Foreigners, was invited to exercise themselves on the four-part Argument, *Of suppurating Medicines; Of their Action; Their Division into Classes; Their Preparation, and Use in external Diseases*; a Premium being proposed for the Treatise which should be adjudged the best. On this Account I changed my Scheme, and what before I had scraped together merely for my own private Use, I now applied entirely to the Questions proposed by the Academy, and divided it into so many Chapters, designing each for an Answer, such as I could give, to the Question prefixed. Hence the Origin of this Treatise as it now appears. Which having gained the Victory, and been honoured

B with

with the Premium by the Judgment of the most skillful in the Science of Surgery, I have, by common Custom, been induced to publish. It appears in the same Form and Style in which it was presented to the Academy; for thus I determined to publish it, least, being more polished by greater Labour, it should appear a different Dissertation; only that I have added a few marginal Notes, easy to be distinguished from the Text,



A DIS-



A
DISSERTATION
ON THE
GENERATION of PUS.

C H A P. I.

*Of Suppuration, and Suppurating Medicines
in General.*

PUS is a viscid, and somewhat Definition
fattish, Liquid, that will mix with of Pus.
Water, and subside in it; produced
in a diseased Part of a live Animal.
It is said to be well concocted, and
laudable, if without Smell or Taste; but, if it
differs in any of these Points, it is depraved,
and not so good.

The Action of the Body, by which such Mat- Definition
ter as we have called Pus, not before existing, of Suppu-
is produced in any Part covered by the common ration, and
Integuments, is called Suppuration; and any suppurat-
Application soever which brings on and helps ing Medi-
cines.

forward this Action, is denominated a Caufer of Pus, a Concocter of Pus, a suppurating, or maturing, Medicine.

Circum-
scription
of Digestion.

The daily and constant Renewal of Pus in an Ulcer is, by Surgeons, rather termed Digestion, than Suppuration; and the Medicines which bring this about, Digestives.

Action of
Suppura-
tion to be
first con-
sidered,
before the
Medicines
which

It will be found extremely difficult to explain the Properties of suppurating Medicines, and their Method of operating, unless the Action itself, which we call Suppuration, be first explained, and set in as clear a Light as possible.

cause it.
Suppurati-
on a spon-
taneous
Action of
the Body.

Suppuration, or the changing into Pus of certain Parts, whether liquid or solid, not so in their own Nature, is a spontaneous Action of a live Body, excited by some special Cause, which any Assistance of Art is not capable, or at best in a most imperfect Manner, of imitating.

Explana-
tion.

It is impossible, by any Means, to excite an Action of this sort in the human Body, unless there is such a prior Disposition, caused by some Disease naturally inclined to Suppuration, and then incident to the Body, to bring it on; nor could the most skillful Chemist, by any Operation, ever produce Pus from the Humours of our Body. In a Part once inflamed we often see Pus spontaneously formed, without any Assistance of Medicine; nay, in Defiance of Art, and the most proper Methods used to prevent it. On the other hand, in vain are tried the most powerful maturing and suppurative Medicines; it is found sometimes impossible to gene-
rate

rate Pus. We daily see that the most terrible Inflammations, after Suppuration has been for a long Time looked for, and promoted by every possible Attempt, disperse kindly of themselves, and so are cured beyond the utmost Hopes and Intention of the most skillful Physicians and Surgeons. Again, notwithstanding every the best chosen and most proper of the Resolvent, and Discutient Tribe of Medicines has been Time enough, and long enough applied, yet will some Inflammations still proceed to Suppuration. We can sometimes produce such an Inflammation as usually precedes Suppuration; but are never sure that it will have this immediate Consequence.

There are certain Circumstances and Symp-^{Requisites} toms, sensibly perceptible, which always accom-^{to Suppu-}pany this Action, and by Means of which the^{ration.} Work of Suppuration is happily perfected: if these are entirely, or in part, wanting, Suppuration either totally ceases, or goes on very poorly. These Circumstances being then absolutely necessary to this Operation, either as efficient or secondary Causes, seem to deserve great Attention: and as they will give great Light in treating of the Nature of suppurating Medicines, we shall begin by them. The principal of these Symptoms and Circumstances are as follows.

1. Pus is never generated, but in a Part that ^{Pus al-}preserves it's vital Motion. In a Corpse every ^{ways}thing putrifies, nothing suppurates. If in any ^{formed in}particular part vital Motion becomes extinct, ^{a Part}the Consequence is a Gangrene, no Suppuration. ^{preserving}
In great and violent Contusions, where several ^{it's vital}Parts ^{Functions.}

Parts are deprived of their vital Faculty, Suppuration can with Difficulty be obtained. In Burns, Mortifications caused by Cold, and Eschars made by Caustics, Suppuration is very slow : and that only of the neighbouring Parts, whose vital Motion was not destroyed. Therefore,

Vital Motion is a Circumstance necessary for the Concoction of Pus.

Never in
a sound
Part.

2. A sound Part of the Body never suppurates : for never has it been known, that a Part, till then sound, should at once yield Pus. Many Symptoms of Illness either in the Part itself, where Pus is to be formed, or in the whole Body always precede it's Formation. True it is, that sometimes by a Metastasis, or Translation, as 'tis called, Pus is suddenly deposited in some Parts of the Body. But before that this Pus could be produced, the Body must evidently have been, for some Time, in a morbid State. Therefore

Some Distemper must have preceded, that Suppuration, being it's Crisis and End, might follow.

Inflamma-
tion al-
ways pre-
cedes,

3. Suppuration never happens without a preceding Inflammation. When external Parts are affected, Heat, Pain, Tension, Pulsation, and Fever, the pathognomic Signs of Inflammation having appeared for a Length of Time, plainly inditicate, that purulent Abscesses will at last be the Consequence of the precedent Inflammation. In Wounds, especially if large, Phænomena of Inflammation pretty much the same, signify the Pus to be formed. It is known indeed,

indeed, that in these Cases Pus is produced every Day afterwards, without any observable Symptom of Inflammation, or Fever. But the Question at present is, about the first Formation of Pus, according to the Definition we have given of Suppuration. If before the Wound is healed, Digestion is by any Means interrupted, and the Pus ceases to flow, we always observe some fresh Symptoms of Inflammation to appear before the Return of Matter. Indeed it is believed by many, that Inflammation always accompanies the Efflux of Matter, happen when it will. And if by any Means Pus can be produced by Art, it must be by first raising an Inflammation.

Suppuration, therefore, is the Consequence, or Exit, of Inflammation; which is necessarily required for the Production of Pus.

4. Suppuration is not a Consequence of every Inflammation. If the Inflammation is not acute, nor the Heat in the Part great, a Resolution happens instead of Suppuration. Again, if the Inflammation be too violent, instead of Suppuration, a Gangrene, or Sphacelus, will be the Consequence. If a violent Inflammation should attend a fresh Wound, it would prevent the coming on of Suppuration, or Digestion. Too much Heat in an Ulcer dries it up, or causes it to ooze a bloody Sanies, and not a laudable Pus. In glandulous Tumours, commonly termed scrophulous, which are stuffed with crude Humours, Suppuration never happens, till we have excited a sufficient Inflammation to change the Matter with

with which these Glands, and the neighbouring Parts are stuffed into Pus. Therefore,

A certain Degree of Heat is required in a Part, in which Pus is to be concocted, or, Inflammation must be carried on to a certain and determined Degree, which if it exceeds, or falls short of, Suppuration either is very imperfect, or cannot be brought on at all.

Free Access of Air the Part is covered, and defended from the external Air. An inflamed Part left uncovered, and not preserved from the Access of the Air by proper Medicines, is with great Difficulty, and very slowly made to ripen. If even after the Inflammation in a beginning Suppuration, the Surgeon should by Incision lay open the Skin of the affected Part too soon, the perfect Formation of Pus would be put a stop to; the Operation by which it should be generated, being as it were choaked up, as common Experience teaches. Neither is Pus formed in a Wound, unless it be kept covered by a certain Crust formed by grumous Blood, or defended either by proper Plaister, or due Application of Bandage for a sufficient Time.

5. Suppuration cannot be performed, unless the Part is covered, and defended from the external Air. An inflamed Part left uncovered, and not preserved from the Access of the Air by proper Medicines, is with great Difficulty, and very slowly made to ripen. If even after the Inflammation in a beginning Suppuration, the Surgeon should by Incision lay open the Skin of the affected Part too soon, the perfect Formation of Pus would be put a stop to; the Operation by which it should be generated, being as it were choaked up, as common Experience teaches. Neither is Pus formed in a Wound, unless it be kept covered by a certain Crust formed by grumous Blood, or defended either by proper Plaister, or due Application of Bandage for a sufficient Time.

Hence appears, That the free Access of external Air, to those Parts in which Pus is to be formed, is a great Enemy to Suppuration.

Freedom of Expansion necessary.

6. It is difficult to bring on Suppuration in Places where there is not free room for Expansion, and Tumefaction of the Parts. In the Joints in tendinous Places, in the Extremities of the

the Fingers, and under the tendinous Production of the Sole of the Foot ; and in some other Places, where the Tension, or Rigidity of the Parts, hinder a free Expansion, Suppuration is with great Trouble brought to Perfection. It is the same Case, when the Parts affected have been streightned too much by Bandage, or any other way compressed. For then either Suppuration is very imperfect, or sometimes even a Gangrene is the Consequence.

We see then that Parts inclinable to suppurate require free Room for Tumefaction.

Suppuration is known to be perfect by some Symptoms certain Phænomena. After the Inflammation has been protracted for a certain Length of Time, with the Symptoms constantly increasing, if then the sick Person begins to have less Fever, less Pain, the Part grows less tense and softer, we find the Inflammation tends to Maturation, and that the Pus is now formed. Fluctuation, as the Surgeons call it, appears ; and the Tumour, before called inflammatory, is now distinguished by the Name of Abscess.

How indeed this Change is performed internally, is difficult to be explained. All the Operations of Nature being hidden, it is no wonder this is not entirely perspicuous. By attentively considering the Phænomena, we may however gain some Light in this Affair.

The Inflammation and Symptoms which accompany it shew, that the Vessels in the inflamed Part are preternaturally full, and distended,

ed, not in the Skin only, but also in the subjacent Parts, as are the cellulous Membrane and Muscles. A Part of the Humours causing this Obstruction is either perspired, or reabsorbed; the rest (a great Number of Vessels being thus stuffed up) stagnates, and is retained in the Part. The inflammatory Motion and Heat increasing violently, and for a Length of Time render the Cure by Resolution, or dissolving of the Tumour impossible. Then if no Gangrene happens, the Pus proceeds to Concoction, and the Cavity is made for it's Reception. For the cellulous Membrane, thro' which many Vessels take their Course to the neighbouring Parts, and which has proper ones of it's own appropriated for the Secretion and Distribution of Fat, is the Part which is principally obstructed. Now this Membrane being easy to be distended, tumifies; till not capable of farther Extension, as naturally extreamly slight, and easily inclined to putrify and corrupt, breaks in several Places where it is thinnest. By which Accident a Cavity is formed in this very Membrane, into which the Fat, half dissolved by the inflammatory Heat, beginning to putrify, and not restrained by the broken Membrane, is poured. The broken Vessels which had their Course through the cellulous Membrane, as also it's proper ones, and a great deal of crude Fat, or the Humour destined for the Formation of Fat, discharge into this Cavity an Addition of Matter to be changed into Pus. It may happen that some of the Fat, even after it has been liquified by the Heat of the Part, and resorbed by the sanguiferous, or pinguiferous Vessels passing again in the Course of it's Circulation

lation near the lacerated Part, may there fall into, and be retained in the Cavity. Now by the Rupture of the cellular Membrane, the Parts which were connected together by means of this Membrane are loosed, and their Tension taken off: the many Blood-vessels which before were stopped up, and consequently compressed, are now freed; the Blood circulates freer, and therefore the Motion and Heat decreases, the Inflammation ceases, the Fever goes off, and the Part looks less red, and grows soft: and by these Means, the Inflammation seems to terminate in an Abscess. If the cellular Membrane gives way more and more externally, the Fluctuation of the Matter contained within may be easily felt by the Fingers. And as the Vessels destin'd for the Use of the Skin, and distributed through the adipose Membrane perish together with it, the Texture of the Skin is destroyed for want of it's due Nutrition by these Vessels: and by the congested Pus it is elevated and made to point where there is least Resistance, and at length to break: or if this does not happen time enough, the Surgeon, by Incision, easily gives it way. Thus to the Ease of the Part an Issue is procured for the enclosed Pus, now become foreign, and noxious to the Body.

Pus itself, which is produced by the Action ^{Pus de-} we have just now explained, seems to be a Mix- ^{rives it's} ture of various heterogenous Particles, the chief ^{Origin} Part liquid, very few solid, and all changed in- ^{from Fat.} to one homogenous Fluid. But from what Particles it may primarily arise, is difficult to say. If we attend to the Part in which it is collected,

collected, and conserved, and diligently consider the Properties of Pus, there will appear some Probability of it's deducing it's Origin from that Part, and it's Contents.

Demon-
stration.
The ad-
ipose
Mem-
brane con-
cocts and
digests it.

The Part which conserves, collects, digests, and concocts the Pus, is the cellular Membrane. It is this which forms the Cavity just now methodically explained; and supplies a proper Place for the Maturation of the Pus. This is confirmed by the following, as well as the foregoing, Arguments, taken from Experience: and indeed known to all, except those totally ignorant in our Science.

All Col-
lections
of Pus are
in it.

Every Collection of Matter, which may occur in the whole Body, is always observed to have it's Seat in the cellulous Membrane: as well in the internal Substance of the Viscera, as on the external Superficies of the Body, and among the Muscles. Wheresoever a Metastasis, or Translation of purulent Matter, happens, the Pus is always found to abide in the cellulous Membrane.

We always find the largest, deepest, and most intricate Abscesses to run along with this Membrane: and though different Openings of these Abscesses seem to communicate, it is found to be only by Means of this Membrane.

It perishes,
and is
consumed
along
with the
contained
Fat.

We have ocular Demonstration that this Membrane, in great Quantity, is often consumed, and destroyed in large Abscesses, together with it's contained Fat. It happens frequently that the contiguous Parts, which being before

before connected by the Assistance of this Membrane, admitted of easy Motion, after the Abscesses are healed, grow together, and become immoveable: And it is remarkable, that oftentimes Portions of Fat issue from the Mouths of Abscesses. Every one is convinced, that any thing of a Fibre, or Membrane that is discharged from an Abscess is Part of the cellulous Membrane. Except, indeed, those glandulous Abscesses, from which sometimes even the whole Gland, loosened from the adjacent Parts, and almost entirely corrupted, is extracted *.

The Probabilities we have been endeavouring Farther to establish will appear nigher the Truth, if we Proof. can some Way derive each Property of Pus from a similar one of Fat.

The Matter first poured into the Cavity of From it's the adipose Membrane, from it's broken Cells, first Prin- is Fat of an inflammatory Colour, and beginning ciple. to putrify, much changed from it's natural State. This stagnating receives other Humours, derived apace from the Vessels that suffered together with the Rupture of the cellulous Membrane. In the first Place, the Fat, as yet crude, indigested, and not inspissated, is continually, by some of the aforesaid Vessels, brought to, and deposited in, the now broken Cells: Sometimes also, but rarely, we see the larger Blood-Vessels break into the Abscess. When this is the Case, the Blood remains pure, and is

* The Suppuration of most of the larger glandular Parts and Viscera is much more tardy and imperfect than in muscular Parts: for in both Cases the Blood-Vessels are very large, and the membranous Parts few; which, among the Muscles, are very frequent, and spread every where.

no way changed into Pus, though discharged at the same Time with it: Nor, indeed, does the Serum and Lymph, which gleet from their own small Arteries, or Veins, seem of a Nature to be changed into Pus, although it easily inspissates by the great Degree of Heat and Inflammation; and, if mixt in any Quantity with the Pus flowing from the Abscess, changes the Property of it's Nature, rendering it either thinner, and more aqueous, or of such a Contexture as shows that something heterogenous, and not well assimilated, is mixed with it.

From it's
White-
ness, Vif-
cidity, and
Fat-like
Appear-
ance.

Pus is whitish, viscid, and somewhat fattish. There is no Part in the Body it resembles by these Qualities so much as the Fat. Fat Substances are naturally white, and, if mixt slowly, and gradually, with a small Quantity of a watery Fluid, make it grow whitish. The Humours deposited by their secretory Vessels, in the Cavities of the membranaceous, adipose Parts, although crude, are white. The Aperture of these membranaceous Cyfts, when aposthemated, give Proof hereof, by leaving Part of the Cyft, in which a Humour of a milky Colour will be daily collected. Fat things are tenacious of their natural Quality: Pus pretty well agrees with them in this; but then Pus is more fluid than Fat, which is no Wonder, because it's fatty Principle is, for the most Part, crude and indigested; not inspissated by Concoction, or worked into perfect Fat, as in a natural State; and to this a perpetual Supply of the same Sort of Matter is always flowing. It is heavier than Water, and subsides in it. Here, indeed, it differs much from the Nature of Fat; but the Matter destined for the
Formation

From it's
Gravity.

Formation of Fat, while it is crude, has as yet neither the Appearance or Properties of Fat. If to this crude Matter some better concocted should be joined, it will, partly by mixing with the Former, partly by a spontaneous Change, caused by the Heat of it's Situation inclining it to putrify, be made to differ much from what it was.

'Tis plain, from manifold Observations, that Fat may easily degenerate by many various Ways. In diseased Bodies Fat soon degenerates from it's proper, original State, and is changed into either a mucilaginous, pituitous, aqueous, purulent, or other different Kind of Matter; by which Changes it may become heavier, and easy to be mixed with Water *.

There is a surprizing Quantity of Fat consumed in large, deep Sinuosities and Abscesses; but it is not discharged in the Form of Fat, but Pus.

From the Waste of Fat in Abscesses.

Autopsy seems to teach, that the Pus discharged from Ulcers of Persons infected with the Venereal Disease, differing only by a greater Degree of Viscidity or Foulness from laudable Matter, is derived from the Fat of the cellulous Membrane,

* What is said above may be confirmed by an easy Experiment. Let Fat be macerated in a sufficient Quantity of Water, till some Symptoms of Putrefaction begin to appear; there will fall to the Bottom of the Vessel a whitish, viscid, and somewhat ropy Matter: which (having poured off the superfluous Water) may, by being stirred up, or even only shaking the Vessel, be rendered miscible with the Water, and an uniform Fluid; and, upon standing, it will subside in it again, differing little in any Shape from Pus.

evidently

evidently shewing that it first grows mucilaginous, and then is changed to a foul sort of Matter, in which Shape it comes away.

From unctuous Matter, causing something like Pus.

We know for certain, that somewhat analogous to Pus may be formed by an unctuous Matter, mixed with Water, and secreted in the Cavities of Membranes, by Stagnation, and intervening Heat. Something of this Sort frequently distils from the Eyelids of Children, after having been for some Time as it were glued together, without any thing previously sensible either of Inflammation or Suppuration. In other Parts, where thinner Humours are collected, it is very rare to find any thing of this Sort.

From the Change Fat undergoes in Fevers.

In acute or inflammatory Fevers, the rest of the Humours become more and more acrid, for Want of fresh Chyle. The Violence of the Heat continually burns up as well the Solids as the Fluids. From this two-fold Reason the Fat is every where dissolved, and mixed with the circulating Humours; which Accident is, in all likelihood, the efficient Cause of that Matter so like Pus, that, after a happy Crisis, we often find to subside in Urine; or, if a Metastasis happens, we sometimes see deposited in some Part of that very cellulous Membrane, from which it took it's Rise, without any particular antecedent Suppuration.

From what has been said, I think it is sufficiently evident, that, when the State of Inflammation is changed into an Abscess, it principally and commonly happens in the cellulous Membrane:

Membrane: That those spontaneous Operations by which we have been arguing Pus to be concocted, are performed in this Membrane: Finally, that Pus itself is the greatest Part made and derived from Fat.

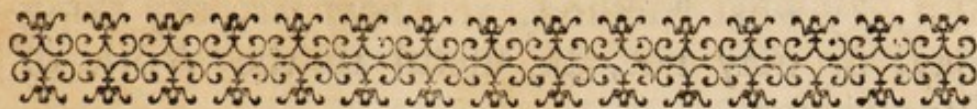
There is, 'tis true, a Conflux of other Hu-
 mours, which mix with the Pus. But these, Other Humours assimilated to Pus. be they of what Nature soever, are by an intimate Mixture assimilated to this pinguedinous Matter, and seem as though overpowered by it, to become of the same Nature; because this Fat is the primary, and more abundant Humour than the rest. Yet there may be such, and so great an Afflux of other Humours, as to exceed the Pus in Quantity; by which Means it may be changed from it's natural State, and appear either watery, ichorous, sanguineous, or some other Way altered. All other Changes observed in purulent Matter may be deduced from the mutable Nature of Fat itself.

From what has been so far proposed, it will be easily collected what is meant by causing Pus, and bringing on Suppuration, and what Medicines may deservedly be called Suppuratives. The Generation of Pus depends on certain spontaneous Operations of Nature, inimitable by Art. Suppurative Medicines, therefore, which specifically bring on this Operation, are, as we yet know of, no where to be found in the *Materia Medica*. However, this Action seems to depend on certain Circumstances, absolutely necessary, either as essential or assistant Causes; and is perfected either with greater Ease or more Difficulty, as these Circumstances prove more or

D less

less favourable. Now these may be excited and assisted, and the Impediments thereto in some measure removed, by certain proper Applications. The whole Business of Art then consists in removing those Impediments, which either intirely keep off, or retard, Suppuration; and in promoting those requisite or efficient Causes by the due Operation of which Pus is easily generated. Lastly, all Medicines whatsoever, which may serve in any one, or in all these Senses, may be said to be Suppuratives, and Causes of Pus. But, as the Cases of Inflammation, tending to Suppuration, may be various, and the Circumstances that favour it may be very different, therefore it is evident that various Remedies, and different in their own Nature, tho' in some Cases they may help forward the Work of Suppuration, yet, if applied in others, will greatly obstruct it. Therefore, those Medicines can only, strictly speaking, be called suppuratory, which, in any certain, determinate Case, can help those Symptoms, by the Means of which Suppuration, in that Case, is brought to Perfection.





A
 DISSERTATION
 ON THE
 GENERATION of PUS.

CHAP. II.

Of the Operation of Suppurating Medicines.

WE come now to explain the Action of Accidents suppurating Medicines, with the Altera- and Medications that, by their Means, are made in a Part ^{cines assisting} where Pus is to be formed. But, as the Sub- ^{Suppuration to be}ject is naturally obscure, we must consider separately the various Medicines the Skillful use for jointly this Intent, together with the Circumstances and ^{consider-}Symptoms we have just now mentioned, as al- ^{ed.}ways necessary and requisite to the Work of Suppuration; and which, being either in Part, or totally, wanting, or there is no Concoction, or the Production of Pus is at best attended with great Difficulties. By comparing all these

things together, will appear of what Nature and Sort, by what Method, and how far, any thing may, or may not, be useful to the Work of Suppuration.

Medicines
only assist
in some
Circum-
stances.

Properly speaking, Suppuration is, indeed, the Effect of no Medicine, since it is brought on by certain spontaneous Motions of Nature. Neither can all the Symptoms necessary, requisite, or concurrent to it, be with equal Ease either excited, or changed by medical Applications. The Existence of vital Motion is absolutely required; if this be totally extinct, it can never be restored; if it subsist, it may, by various Methods, be increased or diminished; and, by it's Assistance, suppurating Medicines may promote the Maturation of Pus. But Suppuration does not entirely depend upon vital Motion; neither is Pus prepared by the Humours as they circulate in the Vessels, but when they are deposited, or as they are discharging in the preternatural Cavity. No Medicine can, therefore, in the Nature of things, be said to concoct Pus; yet, by their general Way of acting, some particular Symptoms, with their Causes and Effects, by having somewhat added or diminished, may, in some measure, be altered; but the rest plainly appear to remain immutable to all Applications. Medicines operating on the Vessels, and Humours circulating in them, are of no great Use, because the Formation of Pus is out of the Vessels. In general, those Medicines may be said to help Suppuration which serve to regulate such Inflammations as cannot be cured by Resolution, and by preventing

ing Induration or Gangrene, bring on Suppuration. By attending to the most familiar Methods and Prescriptions used by the ablest in our Science in various suppuratory Cases, we shall find that all Medicines, approved as proper in these Cases, seem to operate by some one, or several of the following Methods.

There are some Medicines, which being endued with no peculiar Virtues, are applied without any particular Intention, yet by their Helps is Suppuration very often brought to it's desired End. Other Applications act by some particular Property; and according as these vary assist Suppuration by different Means. We shall treat of these separately.

1. We see certain Medicines, whether Plai-By keep-
 fters, or Cataplasms, endued with no special^{ing off the}
 Virtue, applied to the Part inflamed, and tend-^{Air.}
 ing to Suppuration, not only by the Ignorant, but also by many Surgeons. It is also observed, that Suppurations, though unskilfully treated, do sometimes, though not always, succeed as well as could be wished. I don't deny, that the Success is rather to be attributed to the Kindness, and spontaneous Motions of Nature, than to the Assistance of Art, or the Surgeon's Prudence. Yet can it not reasonably be concluded, that in several various Cases Things of this sort give no Assistance to Maturation. For the most simple Applications, whether truly medical, or only so called, by merely incompassing the Part, keep off the Access of the Air, and thereby preserve the internal Heat. Now
 this

this Access of the Air from it's perpetual Change of Heat and Cold, is the greatest Hindrance to Suppuration. Whatever therefore can take off this Impediment, is of great service to Suppuration. Thus all that lurks internally in a State of Fluidity or Stagnation, is kept in equal Heat. Concoction being thus promoted, brings on an Assimilation of the heterogenous Particles into one homogenous Fluid. This is not performed momentarily, but successively, and by the most intimate Mixture of the Ingredients. It may be said, if Suppuration happens to be easy, that these sort of Things do in Fact concoct Pus after the foregoing Manner.

On a Foot with these may be reckoned those Things composed of various, and directly opposite Medicines, *viz.* of hot and cold, of astringent and relaxing Medicines, and yet cried up for most powerful Suppuratives. They can only assist Suppuration, by keeping up and preserving internal Heat. Otherwise they are of little or no use, or even hurtful. Fortunate Events do not always prove a just Choice of Medicines.

By stop-
ping Pers-
piration.

2. These and such like Applications farther promote Suppuration, by preventing the Parts from perspiring too much: for they ought not only to have their natural Heat preserved, but to be kept from growing dry. Humidity and Heat are allowed, by the Experience and unanimous Consent of all Practitioners, to be equally necessary to perfect Suppuration. By their joint Means the thicker Parts mix easier
with

with the Fluid ; a Circumstance highly necessary for their Transmutation into Pus. Such Medicines therefore as tenaciously adhere to the Skin, and obstruct the Pores, though endued with no special Virtues, are by these Means, of great Service to Suppuration.

3. Many Forms commended by the best Writers, and approved by Use, consist of relaxing, and emollient Compositions. These Medicines are truly specific, and endued with peculiar Virtues. By relaxing the Skin and external Parts, they dispose them to be easier distended, which we have showed to be of great Use to Suppuration. Things of this sort humect the solid Parts of the Body with an aqueous, suboleous, mucous Matter, and softening them by their oleo-pinguious particles, lessen their cohesion, so that when pressed from within, they easier give way. Many Vessels compressed and streightened from every Part are hereby freed, and a Suffocation or Gangrene prevented. The internal Parts so moistened and relaxed are brought to break with greater Facility. The Cavity in which the Humours to be changed into Pus were poured, and in which it is to be collected and concocted, is formed with ease. Emollient and relaxing Forms thus do the Business of Suppurators in the aforesaid Manner: the entire Work of Suppuration is often brought to the wished Crisis; and by these Means, even the Skin is caused to break, and a free Exit procured for the Pus. Now nothing else being required in most Cases, it seemed proper to reckon such Remedies as Specifics among Suppurators. But that they alone should

should equally, and in all Cases answer our End, no wise Man will venture to say.

By dimi-
nishing
Heat of
Inflam-
mation.

4. Many Medicines proper to diminish the Heat of Inflammations are inserted into the Catalogue of Suppurators: nay, many Forms are composed of these Medicines only. Relaxers are sometimes ranked among them, under the Title of Coolers. Lastly, others that potentially or actually produce Cold are added to this Class. It has been said before, that too much Heat prevents Suppuration. Almost all relaxing Medicines, by lessening the Spring of the solid Parts, moderate the too violent Motion, and consequently the too great Heat produced by it. Hence the Increase of Inflammation is put a Stop to; the Circulation, or Retrogression of the stagnating Humours, is every where restored; the Inflammation itself is greatly resolved, and the instantly impending Putrefaction always attending a Suffocation of a particular Part, is prevented. What Part of the Humours remain have now a less Degree of inflammatory Heat, yet not able to return through the Vessels, they undergo such a Change as the State of the Disease brings on, that is, by an ensuing Suppuration are changed into Pus. The cooling Medicines, either potentially, or actually so, are still more successful in bringing on Suppuration, as having a greater Power to extinguish Heat, and constrict the Parts. Thus we see how Medicines that diminish Heat, or increase Cold, assist Suppuration.

5. Warm

5. Warm Medicines are also very often, and By in-
 with great Success, applied to a Part in which ^{creasing}
 an Abscess is forming. A certain Degree of ^{the Heat.}
 Heat is required for Maturation; without
 which, as hath been demonstrated, we meet
 with no Success. Stimulating or hot Medicines
 incite Motion in the solid Parts, and conse-
 quently increase the Heat, and that in a greater
 Degree, if both assisted by the Fire. Thus the
 vital Motion, or even that which is particularly
 necessary to preserve Life in the Part, is ex-
 cited: and that spontaneous Action thereon de-
 pending, and serving to concoct the Pus, which
 before was too languid, is raised. Those Par-
 ticles which ought to be dissolved by the Heat,
 that they may run into Pus, are hereby liquifi-
 ed. These are the Means by which warm Me-
 dicines are of service to Suppuration.

There are, besides the several Kinds of Me-
 dicines we have been speaking of, others that
 give Assistance to this Work, by other Means.

They excite a certain intestine Motion of ^{By causing}
 the stagnating Humours, or of those actually ^{an inte-}
 discharging into the Cavity. An Assimilation of ^{stine Mo-}
 the various heterogenous Parts into one homo- ^{tion.}
 genous Fluid, can by no Means be made with-
 out intestine Motion. For many of these Parts
 are too tenacious, unless a certain Motion be
 excited, to be easily changed into a Pus-like Li-
 quid. Medicines hot by Nature, or any other,
 provided they are made hot by Fire, laid on a
 Part threatening an Abscess, are able to increase
 it's Motion. Things fermenting and fermented,
 E and

and such like, by exciting some Motion, or increasing what is already there may be of some Service, though not so much as the former.

By bringing on Putrefaction.

Again, they occasion a slight beginning Putrefaction. Putrefaction in a living Body is that State, where the Fluids degenerate in such a Manner from their proper Nature, that there is a mutual Solution, and Commixture of the Parts; and the Texture of the Solids is so weakened, that a small Impression is now sufficient, but which in a sound State would be easily overcome. Thus Putrefaction must be generated in the Humour, in order for Suppuration to ensue. A like Disposition is required in the Solids, especially in the cellular Membrane, to produce the Rupture by which the Cavity of the Abscess is produced. Moist Warmth, applied to the Parts of animal Bodies, dispose them to putrify. All moist Bodies made hot by Fire, or mixed with hot Things, will bring on such a State in a suppurating Part. Oleous, and fat Medicines added to them, increase and accelerate their Effect, in as much as by their own Nature they with ease putrify if made hot: and this the sooner the more rancid, that is, the more prone they are to putrify before their Application. Wherefore, by many Authors, they are preferred to all other Medicines. Lastly, by these the external Openings that the Patient so much desires, and wishes for, in order to avoid the Surgeon's Knife by these Medicines, is promoted and accomplished.

From what has been said I think it may plainly be seen how, and by what means, Medicines

cines may assist Suppuration ; which of them, being judiciously applied, act in a specific Manner : how others, by the Conjunction of various and different Virtues, may contribute to the Service of Suppuration, and in what Cases they answer the Surgeon's Intention, and in Fact bring on Suppuration.

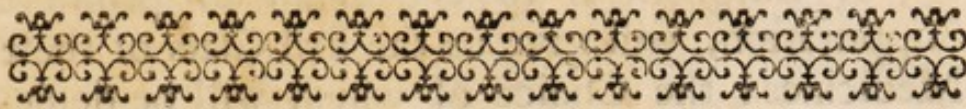
As to Digestives applied to Wounds, as well ^{Digestives} to correct as to help the Concoction of Pus, they ^{operate} operate by the same or such like Methods as ^{by much} have been described in treating of Suppuration. ^{the same} Means. The chief Difference is, that Digestives are immediately applied to the humid Matter itself, that is to be formed into Pus, as it flows out of the Parts. They are laid to the very distempered Parts from which the Pus takes it's Origin, and are put into the Cavity in which it is concocted. In fresh Wounds those Applications prove digestive, which by keeping off the Access of the Air, and the Injuries of the Cold, give Room for the Rise of Inflammation, without which there is no Production of Pus : or, when the Inflammation is already begun, if too vehement, moderate it ; if too little, increase it.

In old Ulcers infected with Sloughs, or foul ^{By dis-} Matter, relaxing Medicines, by moistning the ^{posing the} Sloughs and thick Sordes, break their Con- ^{Sloughs to} nexion, and cause them to come away, and so ^{come} promote or restore Digestion. ^{away.}

But if the Matter be too thin, and too ^{By cor-} abundant on Account of the cellular Membrane ^{recting} being too much lacerated, or it's Vessels too ^{the too} much distended, stimulating resinous Balsamics ^{great} assist ^{Laxity.}

assist Digestion, by restoring the Spring of the Part. Astringents, strictly so called, promote Digestion the same Way: while they prevent the too great Afflux of Humours, they retain what is discharging, that by it's longer Stay the thinner Particles being dispersed, or resorbed by the capillary Vessels, it becomes laudable Pus. In malignant Ulcers, the stronger Astringents are sometimes able to thicken ichorous Matter, and change it to good Pus, by much the same Method,





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CHAP. III.

The Classes of Suppurating Medicines.

THOSE Medicines are called maturing, ^{What sup-} that by general Means, or some peculiar ^{purating} Virtue, are of service in exciting, promoting, ^{Medicines} or assisting one or more Symptoms necessary to ^{are.} Suppuration. Here, to mention all that we know of in the whole *Materia Medica*, proper for this Use, would produce a prodigious Tribe of Remedies : nay, there would be no End, if we were to run through every Form of Medicine, as well simple as compound, which might, in any different Stage, be of use to Suppuration. It will be sufficient to pitch on some, and to class them according to their Qualities. The first general State of Suppuration, that is, where

The Classes of Suppurating Medicines.

where the determinate Intention of the Physician, or Surgeon, is to endeavour to promote Suppuration, will give us the first Class of these Medicines: the Choice of which will be determined by the Difference of Symptoms, either preceding, or accompanying Suppuration. Of these every one is at Liberty to choose those that appear to be the fittest for his Purpose.

The first Class.

General
Defen-
sives.

The first Class of suppurating Medicines are such, as being applied to a Part inflamed, and tending to suppurate, conserve and determine the Degree of Heat and Moisture, by keeping off the external Air. In the Choice of these we do not much regard any particular Property, or specific Virtue: and these are either simple without any Preparation, or mixed and blended together. Of this sort are,

Plaisters.

1. Emplaisters, which spread, or applied on the Part, adhere tenaciously; and by stopping the Pores prevent Perspiration, and preserve internal Humidity and Warmth. They are generally applied cold, and are,

Simples. *Pitch*
Oil
Resin
Wax
Fats.

Compounded of this, and such like, as,

The Empl. Basilicon minus, &c.

2. The

2. The following, which act much after the Warm
same Manner, are applied warm, and pre-^{Warm}Defen-
pared, as, ^{tives,}

Rape-Seed

Oats

Barley

Linseed

Biscuit

Wheaten and

Rye Bread.

The Liquors serving to give a proper Con-
fistence to these are,

Water

Ale

Milk.

Of these chiefly are compounded Fomen-
tations and Cataplasms, made up ac-
cording to the Pleasure of the Prescriber.

The second Class

Comprehends those Applications that are Relaxers.
proper to relax, and by that Means to render
the Swelling and Rupture easy. Of these,

1. Are such Vegetables that abound with a Mucilagi-
watery, and mucilaginous Juice, which, as it ^{nous Ve-}
were wrapping the Parts with a suboleous Mu-^{getables.}
cus, and moistening them, renders them ex-
tenfile : as,

Simples.

*The Classes of Suppurating Medicines.*Simples. *Roots of Marshmallows.**Comfrey**White Lillies.**Herbs. Mallows**Marshmallows**Vervain**Bears Breech**Violets**Pellitory.**Flowers. White Lillies**Mallows**Marshmallows**Vervain**Elder.**Fruits. Fat Figs**Ripe Medlers**Seeds as in Class 1. No. 2.*Besides the Meals of *Beans**Fenugreek**Lupines**Bitter Vetch.*Of Animal Substances. *Honey**The Yolk of Eggs.*The Liquors are the same as in first *Class*,
N. 2.

Oily and
fat
Things. 2. Oils and Fats, got from Vegetables and
Animals, which exceed the former in an emol-
lient and relaxing Virtue ; as

Simples. *Oil of Palm**Rape**Olives**Hogs*

*Hogs Lard, and the
Fat of other Ani-
mals.*

*Marrows of various
Kinds*

Sperma Cæti

Butter without Salt.

Compounds. *Oil of white Lillies.*

*Ointment of Marshmallows
Basilicon.*

Emplaister of simple *Diachylon*
the *Mucilages.*

These made into Poultices or Plaisters will
serve for the foregoing Intention.

The third Class

Is composed of such Medicines as promote Refrige-
Suppuration, by diminishing the Inflammation rants,
when it grows too violent. The Vegetables
mentioned in the second Class, if infused, or de-
cocted with Water, and laid on warm, will
produce this Effect. These, by decreasing Mo-
tion and Friction, may be said to be Refrige-
rants: but those Things are most efficacious,
which cold of their own Nature, and also ap-
plied so, do produce actual cold; such are,

Simples. *Duckweed.*

Leaves of Nymphaea

Henbane

Sorrel

Crab Apples

Salt Petre

Ammoniac.

*The Classes of Suppurating Medicines.*Compounds. *Ointment of Populeon.*Vehicles. *Butter Milk**Vinegar.**The fourth Class.*Warm
Medi-
cines.

The fourth Class takes in those Medicines that excite, and increase the inflammatory Heat, when it is so small as that Suppuration proves very tardy, or does not come on at all. Of which some are used without any preceding Mixture, or Preparation: others are reduced into Forms, by being mixed with other Things. As for Example,

Potenti-
ally hot.

1. Those Things, that by intestine Motion are warm, and give Heat.

Fermenting. *Any Meal mixt with
Honey*

The Leaven of Bread.

Putrefying. *The Dung of Oxen*

*Swine**Goats**Doves.*Fragrant
Aroma-
tics.

2. Things endued with fragrant and aromatic Virtues, increase Heat, and Motion, and so bring on Suppuration: the resinous and gummy especially,

Simples. *Gum Ammoniac**Galbanum**Bdellium**Sagapenum**Elemi*

		<i>Elemi</i>
		<i>Styrax</i>
		<i>Labdanum</i>
		<i>Myrrh</i>
		<i>Opopanax</i>
		<i>Aloes</i>
		<i>Frankincense.</i>
Compounds.	Emplaisters.	<i>Diachylon, with the</i>
		<i>Gums</i>
		<i>of Galbanum, with</i>
		<i>Saffron</i>
		<i>Melilot.</i>

These are used either simply by themselves,
or mixed with other things.

3. Things endued with fragrant and volatile aromatic Qualities : As

Volatile,
fragrant
Aroma-
tics.

Simples.	Herbs.	<i>Basil</i>
		<i>Feverfew</i>
		<i>Sweet Marjoram</i>
		<i>Sage</i>
		<i>Mint</i>
		<i>Rue.</i>
	Flowers.	<i>Camomile</i>
		<i>Melilot</i>
		<i>Honeysuckle</i>
		<i>Saffron.</i>
	Seeds of	<i>Fennel</i>
		<i>Cummin</i>
		<i>Dill.</i>

4. Those which are less volatile, yet have a very penetrating, heating Quality.

Penetra-
ting Me-
dicines.

*The Classes of Suppurating Medicines.*Simples. Herbs. *St. John's Wort**Mugwort**Phellander**Wormwood.**Seeds of Mustard.**Grains of Pepper.**Berries of Laurel.**Roots of Orrice**Cost-mary**Birchwort**Ginger.*Liquids to make up with *Wine.*Compounds. *Oil of Camomile**Rue**Dill**Wormwood**Honeyfuckle.*

These are seldom applied by themselves only, but with other Medicines either alternately, or mixt with them.

5. Such things as, by their great Acrimony, are very irritating :

Simples. *Roots of Garlick**Squills**Onions.*

Of these the First and Third are sometimes applied alone, and sometimes mixt with other things; but the Second is never used by itself.

6. *Acriid*

6. Acrid things: which are added to increase the Virtues of Compositions of the hottest Kind, are :

The Gall of Bulls

Treacles

Black Soap.

These will be enough for the fourth Class, and satisfactory and useful for the forementioned Intention.

I think, from what has been proposed, proper Medicines may be judiciously chosen, and artfully compounded, for every Indication incident to Suppuration.

As the Remedies comprehended in each Use general and particular. Class are not equally useful, so neither are they equally necessary for every Indication. The general Intention, indeed, necessarily requires several of these things. Others again, are used by way of Assistants, or Correctors: Some are fit for Dissolution, and used for that Intention only. Others again serve as a Recipient, or Vehicle, for the Composition. Of these also we have great Variety, and such as differ widely in their Propriety, or Nature; that we may be able to choose such in each Indication as may best agree with the other Parts, that make the Basis and Foundation of the Remedy, and, at the same Time, help the Intention. There are some of these too that can serve for several Indications, as shall again be more fully taken Notice of, when we come to speak of the Use of Suppuration: Wherefore, though these Classes seem to be determined by narrow Limits, yet skillful

skillful Surgeons find it often very useful to join some things of different Classes together.

DIGESTIVES.

As to what relates to Digestion, it will be best promoted by such things as were proposed to obtain Suppuration by like Indications. What we gave in the first Class of suppurating Medicines, will serve for the same Use in Digestion. Those in the second Class will cause to fall off that Sordes, or Crust, which is an Impediment to Digestion. To which may be added the following :

Simples. *Wax in the Comb, or Propolis*
Inspissated Fats.

Compounds. *Ointment of Marshmallows*
Basilicon
Common Digestive.

Besides, Digestion is assisted

1. By whatever increases the Heat and Motion of a Part, as Resinous and Balsamics. See the fourth Class, No. 2. to which may be added :

Simples. *Turpentine.*

Balsams. *Cajupi*

Peru

Opobalsam

Olibanum

Mastic.

Compounds. *Balsam of Arcæus,*

and the Preparations of Gums and aromatic Resins, more or less compounded: As

Tincture

Tincture of Myrrh

Aloes

Lacca.

2. What by it's astringent Virtue contracts too great Laxity of the Part : As

Simples. Herbs. *Ladies Mantle, or
Great Sanicle*

Leaves of Sabine

Water Lilies

Oak.

Moss of the Oak.

Flowers of Red Roses

Pomegranates.

Compounds. *Honey of Roses*

Lime Water

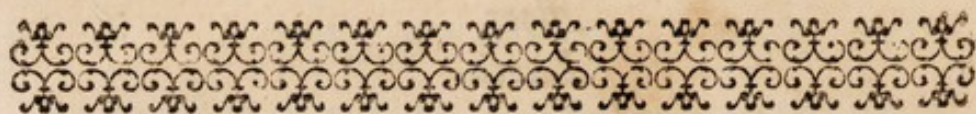
*Divine Water of Fernel-
lius.*

3. Escharotics, that, as it were, renew the Ulcer, as

Mercury sublimate

Butter of Antimony.





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CHAP. IV.

The Use of Suppurating Medicines in external Diseases.

Suppurative Medicines where necessary.

WHEN any Part is seized with a violent Inflammation, and the Symptoms increase, notwithstanding the proper Use of Resolvents, we know such a Disorder cannot be cured by a kindly Resolution. We must then expect Suppuration, and promote it by all Means, as without it the Part cannot be freed from the Distemper. The various State of Inflammations; the greater or less Degree of spontaneous Action, conducing to, or hurrying on, Suppuration; Age, Constitution, and other concomitant Symptoms, will indicate the Difference and Variety of the proper Medicines for obtaining this End.

In all Inflammations tending to suppurate, and in every State of Suppuration, we must, as has been frequently inculcated, endeavour that the Part be preserved warm and humid; oftentimes, nothing else is required. Emplaisters alone, or Remedies of that Kind, are sufficient for this Effect. To preserve Warmth.

Emplaisters are the most simple Form of all, whether prepared of one single Ingredient, or mixt and compounded of several. Pitch spread on Linen, or Leather, and applied to the Part, promotes Suppuration. Emplaisters.

If it sticks too tight, an equal Quantity of Pitch and Tallow, with half as much Oil, melted down together, will serve.

Such like Remedies may be prepared from an equal Quantity of Resin, Wax, and Lard melted together.

The Emplaster of Basilicon will be a sufficient Example of such things of this Sort as are ready prepared at the Apothecaries. If the Tumour be not very extensive, and most of the Symptoms necessary to Suppuration attend, Maturation will succeed as one could wish. Cata-plasms.

The same Effect is produced by other Medicines, applied warm, and wrapping up the Part. These are simple, or compound. A Poultice is above all other Forms the best adapted to every Intention that promotes Suppuration. It gives no Uneasiness to the Part by it's

too great Adhesion ; it is easily fitted to every Part by it's soft Consistence : It is with Ease occasionally heated by the Fire, and retains it's Heat a great while. For any thing crude seldom is proper for Suppuration, unless it be of the Meal-kind, mixt with Honey ; in which, if applied to a warm Part, a Fermentation and sort of Heat arises ; otherwise, such things do hurt by their Coldness. The more simple, and less compound a Cataplasm is, so much the better, if it does but answer the Intention. The greater Farrago of Ingredients are crouded in a Medicine, the easier is an Error committed in the Choice ; and things different in themselves are joined together as of the same Intention, which proves a Scandal to the Surgeon, and of great Detriment to the Patient. Care must be taken that Poultices be not made too fluid by the Liquor, in which they are compounded, for it is a great Obstacle to their keeping warm ; and, on the other hand, that they be not made too hard, because, though that keeps the Warmth, yet it would dry the Parts, which is contrary to the Intention. This may be prevented by adding a moderate Quantity of Fat, or oily things.

Simple Rape boiled soft, or baked under the Cinders,
Forms for makes a good suppurative, warm Cataplasm,
Poultices. of the most simple Kind.

Oats, or Barley, or Linseed, after the Oil has been pressed out, ground fine, and boiled with a sufficient Quantity of Water, till they acquire the Consistence of a thick Poultice, laid on the Part, and properly secured, and renewed twice
or

or thrice in a Day, procure Suppuration by the
aforesaid Manner of acting.

Rye, or Wheaten Bread, or Biscuit, broke
very small, or macerated to Pulp in Water,
and boiled to the Consistence of a Poultice,
spread upon Linen, and applied to the Part
expected to suppurate, will cause Pus to be con-
cocted in the Cavity. A wonderful Simplicity,
demonstrated and confirmed by the very Event
of the thing!

But if Suppuration does not succeed, or come
on quick enough by the Use of the Remedies
prescribed, and a Difficulty of tumifying is the
Impediment, such things should be applied as
render the Parts extensile, and give Room to tu-
mify, which may be effected by such Remedies
as are recited in the second Class of Suppura-
tives.

The simple Plaister of Diachylon, and others
of this Kind, may serve for this Intention. Pro-
per Cataplasms may be made of the Simples
aforesaid, or may be compounded after the fol-
lowing, and many other various Ways.

To Poultices of the bruised Seeds, or Bread,
as before, may be added Herbs, and Oil, and
Fats, in such Quantities as may appear necessary
to bring on Swelling. Or,

Take Fat Figs a sufficient Quantity; let
them be boiled in Water, and bruised
to a Pulp. Add Flower of Fœnugreek,
enough for the Consistence of a Poultice.

The Use of Suppurating Medicines

Take Roots of Marshmallows, six Ounces ; let them boil in Water enough to make them soft : Bruise them, and pulp them through a Sieve. Add Oil of white Lilies, one Ounce ; Flower of Linseed, a sufficient Quantity ; Mix and apply, spread upon Linen.

Take Leaves of Mallows, two Handfuls ; Flower of Vervain, one Handful : Let the Herbs and Leaves be dried, beat to Powder, and sifted. Boil them in a sufficient Quantity of Milk and Water. Add, whilst boiling, of Biscuit powdered enough to make it of a proper Thickness ; of Honey, one Ounce ; Butter without Salt six Drachms.

Herbs, Leaves, and Flowers, except fresh succulent (used for that Reason) are always pounded and sifted before mixed for the Poultice. Thus also all Meals and Breads are mixed with the other Ingredients, for that the Poultice is thereby made more tenacious and adhesive.

The Heat
to be
moderated.

These are the more simple Forms, but others of the same Nature, more compounded, may be substituted, and prescribed at Pleasure.

Sometimes the inflammatory Heat is so violent, that, unless it were moderated, a Gangrene would ensue, before the Tumour could be brought to Suppuration. In that State we must keep to such things as diminish the Heat, and cool the Part. All relaxing Medicines perform

form this in great Measure, as prescribed in the second Class: But, if these don't appear sufficient, we must have Recourse to the Refrigerants properly so called, to be found in the third Class. Either of these is used singly, or combined with the other Class, as:

<i>Take, Herbs.</i>	<i>Bear's-Breech</i>	Relaxers
	<i>Pellitory of the Wall, each</i>	and Re-
	<i>two Handfuls,</i>	frigerants.
	<i>Fresh Sorrel</i>	
	<i>Henbane, each one Hand-</i>	
	<i>ful.</i>	

Boil them in Butter-milk till tender, bruise them, and add Meal of Lupines a sufficient Quantity, common Nitre two Drams.

Crab-apples boiled or roasted may be applied alone.

Take Duck's Meat, recent Leaves of Nymphaea, each six Ounces, or a sufficient Quantity: Boil them in common Water to Softness. Mash them till they become a watery Poultice; to which add, powdered Biscuit enough to thicken.

And in this Manner, to various Compositions Mixt taken from the relaxing Class, may other Refrigerants be added, as Sal ammoniac; and, instead of Oils and Fats to soften the Poultice, Ointment of Populeon. Vinegar, mixt with an equal Quantity of Water, also affords a commodious Vehicle.

But

Necessary Caution. But here we must proceed with great Caution, least the too copious, or too constant Application, of cooling Medicines, by their cold restrictive Quality and Operation, repel forcibly the spontaneous Action of the Part, and so be of great Detriment to Suppuration, instead of helping it.

Corollary. 1. Hence may be understood, how an Inflammation tending to an Abscess, treated too long with these Kind of Suppuratives, changes so suddenly to a Gangrene.

2. And how, instead of an Abscess, an Inflammation is often succeeded by an Induration.

Additions to the warm Forms of the first Class. The contrary to this last Case happens much oftener, that is, when Pus is to be formed, the proper Motion and Heat is too languid, and the Work of Suppuration goes on very slow, or is at a Stand. It is then the Business of the Physician, or Surgeon, to excite these spontaneous Actions by Medicines that raise and increase the Heat and Motion of the Part. On these Occasions, to the former Remedies prescribed in the first Case, may be added such things as are in their own Nature warm and stimulating, and may be found in the fourth Class. These last may be used by themselves.

To the Composition of equal Parts of Resin, Wax, and Fat, as before prescribed, may be added a double Quantity of Myrrh, or some other aromatic Gum, reduced to a fine Powder.

The

The Plaisters of the fourth Class will find their Use in this Case. Or,

Take Crumbs of Bread, boil'd in Cow's Milk to a moderate thick Poultice. To half a Pound of this add Gum Galbanum, dissolved with the White of an Egg, one Ounce; Powder of Saffron half a Dram: Mix and apply, spread upon a double Linen.

In like Manner may any warm Medicine be added to any of the simple Forms. Relaxing and warm Remedies are easily, and with good Success, applied together: As,

Take Leaves of Marshmallows
Violets.

Herbs. *Marjoram*

Basil, each one Handful.

Flowers. *White Lilies*

Elder

Camomile

Melilot, each half an Handful.

Boil in a sufficient Quantity of worked Ale. Add Meal of bitter Vetch, enough for Consistence; Oil of Camomile, one Ounce.

If a greater Stimulus be necessary, the Forms must be composed of heating things only. Hot things alone.

Meal worked up with Honey conveys a gentle Warmth to the Part. The Dung of Animals, Simples.

The Use of Suppurating Medicines

mals applied hot, or mix'd with other Compositions, would make a very good Suppurative, if that the Stench were not so ungrateful.

Onions boil'd, or roasted in the Cinders, and bruised, make a very good Suppurative Medicine of the hot Kind ; or,

Com-
pounds.

Take, *Leaves of Mint*

Rue

Wormwood

St John's Wort

Flowers of stinking Orich,
each one handful

Roots of round Birthwort

Berries of Laurel each one
Ounce.

Boil in equal Quantities of Wine and Water. Add Onions roasted in the Ashes, No. 2. Bean-Flower enough for Consistence.

Take *Roots of Orrice*

Cost-mary, each one
Ounce.

Herbs, Feverfew, 3 hand-
fuls.

Saffron one Drachm.

Seeds of Dill and of Cummin,
each two Drachms.

Boil wheaten Bread crumbled to the Consistence of a thin Poulrice ; then sprinkle in these Ingredients powder'd and sifted, and make the Cataplasme thick : to which
add,

add, when done, of Wine, or even Spirits of Wine, as much as may be requisite.

By this Method, which may be applied to other Forms, very little of the fragrant Virtue is lost in the Boiling.

In Compositions of this sort may be added, Stimulants if a still greater Degree of Motion and Heat be requisite, the Gall of an Ox, black Soap, and Theriaca *.

When an Abscess grows ripe, the external Parts must be greatly relaxed, that they may easily break. Oily and fat Things, either simple or compound, as in *Class second*, are to be applied immediately to the Part, or mixt in large Quantities with Suppuratives, especially Cataplasms. By these the gentlest Putrefaction is brought on, which causes a Rupture in the Part: but if there is any Apprehension of a Gangrene, they are to be omitted, or very sparingly used, otherwise the Putrefaction, to which the Parts then much inclined, would be enlarged too greatly.

Without somewhat of Inflammation appears to forward Maturation, Suppuratives are of little use, and scarce can all the Efforts of Art procure Suppuration in such glandular Obstructions,

* From what has been said, it appears, that relaxing Things may, to very good Purpose, be mixed, equally with warm, or cooling Medicines. But that warm and cold, relaxing and astringing, if joined together, would only destroy each other alternately.

that though not schirrous, yet cannot be cured by Resolution. In the inflamed State of these Parts indeed, the strongest and most penetrating Suppuratives ought to be applied to succour the spontaneous Motion of the Part *.

As like-
wise Con-
tusions.

With much the same Precaution are we to use Suppuratives in large Contusions, which cannot be cured without making Way for the Issue of the Pus. If there be no Wound, great Inflammation, acute Pain, watching with other Symptoms, are Prognostics of an impending Suffocation or Gangrene: and indicate, relaxing Medicines to quell the Heat and Motion; the Choice, Preparation, and Use of which have been before shewn.

It is common in these Cases to mix Resolvents with Suppuratives, lest the neighbouring Parts already inflamed should run too much to Suppuration. For the Inflammation is to be kept off, and Suppuration brought on at the same Time. Many Things prescribed in the 2d and 4th Classes, joined together, will serve these Uses: of which this, or such-like more, or less compounded Forms may be made.

Take, *Leaves of Pellitory*
Mugwort

* Experience has taught, that venereal Buboës difficult to suppurate, have in a short Time been brought to yield a purulent Matter, by the Application of an Escharotic of Mercury sublimæ. And it has been observed, that by mixing Vitriol of Cyprus with the Plaister applied to obstinate scrophulous Tumours, they have, though very slowly, been made to suppurate.

Pbellander

Pbellander

*St John's Wort, each
one handful.*

Flowers of White Lillies

Elder

Melilot

*Stinking Orich, each
one Pugil.*

Seed of Fenugreek, half an Ounce.

Cummin two Drachms.

Let them be powdered, sifted, and boiled
in common Water. Add, when near
done enough, Flower of Linseed for
Consistence; when quite done, Oil of
Rue.

Chamomile each six Drachms.

Apply, to the Contusion spread on Li-
nen.

For the same Reasons Bleeding, always to be Bleeding
remember'd among surgical Remedies, must not often use-
here be neglected. ful.

But if the Motion in contused Parts be almost Heat to be
suffocated, the Inflammation and Heat not be- increased
ing sufficient for Suppuration, must be excited where
by the fore-mentioned warm Suppuratives: Danger of
Suffoca-
which may be made in the same and like Form tion.
as before, proposed by way of Example. The
Bark given internally to the Quantity of half a
Drachm every four Hours, is of wonderful Ser-
vice to Suppuration in such Cases.

Where any Parts are denudated of their ex- Bare Parts
ternal Coverings, or Teguments, if the Place to be de-
is

defended by
Oint-
ments.

is dry, and Inflammation great, it must be dressed with the lightest Digestives as the Ointments already prescribed: but if the Inflammation is so small as to want raising, balsamic and aromatic Digestives must be used; with which warm Cataplasms may, with great Success, be applied. Digestives are used in external Solutions of Continuity, whether fresh called Wounds, or inveterate termed Ulcers. The free Access of the Air, not less hurtful to Digestion than to Suppuration, must be prevented. It is necessary then that the Part where is the Solution be so defended by it's Covering, that Pus may be freely formed in the Ulcer. Any simple Medicine that will answer this sole End, and is not contrary to the natural Properties of Digestion, comes under the Denomination of digestive. Every inspissated Fat, and emplastic, simple, or compound, applied either as Plaister or Ointment, will suffice for this Intention.

Corollary. Hence appears, That too frequent Dressings, and clearing away the Pus, are too often great Hindrance to Digestion.

Sordes to
be cleared
by Oint-
ments and
Cata-
plasm.

Often a Crust or Foulness appears in an Ulcer, adheres too close, and prevents the Issue of the Pus. Here Depuration is requisite, and may be obtained by those Things, that by relaxing the Parts to which they are applied, lessen the Connexion of the Slough or Crust, and so dispose it easily to fall. Namely, oily and fat Things, Ointments, Golden, of Marshmallows, Basilicon, and other: Or

Take,

Take, *Butter without Salt,*
Oil of white Lilies, each one Ounce.
One Yolk of an Egg. Mix and apply
to the Ulcer spread on Lint.

Take, *Oil of Olives*
Palm, each one Ounce.
Yellow Wax half an Ounce, melt
them over the Fire, and mix.

If these are not sufficient, such an emollient
relaxing Poultice, as was prescribed for increas-
ing the Swelling in the Business of Suppuration,
must be used : Or,

Take, *White Lily-root two Ounces,*
Great Comfrey one Ounce.
Leaves of Marshmallows,
Pellitory, each half an
Handful.

Boil the Roots tender in common Water ;
add the Flowers and Leaves beat and
sifted, and at last

Biscuit powder'd enough for Con-
sistence,
Ointment of Marshmallows, one Ounce,
or at Will.

Care must be taken to leave off the Poultice as
soon as the Slough falls, least too great a Relax-
ation should prove hurtful to Digestion.

Sometimes too great a Laxity occasions the Laxity re-
Ulcer to abound with a thin and aqueous Hu- quires re-
mour, and not to yield kind Pus. In that Case finous Sti-
the mulants,

and Balsamics.

the resinous Tribe, and Balsamics prove excellent Digestives, by their Stimulus restoring the Spring and Motion of the Part : of which many have been prescribed under the Title of Digestives. These are applied by themselves alone, or alternately, or mixt with other Things of like Virtues; as hath been repeated in the fourth Class of Suppuration.

Take, *Turpentine one Ounce,*
One Yolk of an Egg,
Depurated Aloes, one Drachm.

Mix the Turpentine with the Yolk of an Egg. Add the Aloes finely powder'd. spread on Lint.

Take, *Root of round Birthwort, half an Ounce,*
Theriaca, half a Drachm,
Honey enough for the Consistence of a soft Liniment, mixt.

Take, *Gum Myrrh,*
Ammoniacum, each one Drachm.
Turpentine two Ounces, which
mix with two Yolks of Eggs ;
add the Gums finely powder'd.

Sometimes, though the Part wants bracing up, yet less Heat and Motion is required : and in some Persons, their particular Constitutions won't admit of hot, and resinous Applications ; where it is better to keep to Astringents, as follows,

Take,

Take, *Honey of Roses* two Ounces,
 Tincture of Myrrh, half an Ounce.
Mix, apply with Lint.

Take, *Of the Herb great Sanicle*, or *La-* Astring-
 dies Mantle, gents.
 Leaves of Oak, each one Handful.

Boil in common Water to eight Ounces.

Apply Pledgits dipt in this strained : if
the neighbouring Parts are too much re-
laxed, foment with Flannels squeez'd out
of this Decoction.

Poultices may also be made of the astringent By which
Herbs boiled with Water, or red Wine, by ad- the Ichor
ding crumbled Bread or Flower enough to in Ulcers
make a proper Consistence. In malignant Ul- may be
cers, nay even of a cancerous Kind, it is possible corrected.
for a Time to change the thin, and ichorous
Humour into Pus, and in some Measure to
inspissate and render it kinder by these, or some
still more astringent Medicines. And above all
others, Lime-water, either by itself, or mixed
with some Astringent, is most efficacious. It
may be joined with Tincture of Myrrh, or
Aloes ; or Moss of the Oak, red Roses, Leaves
of Sabine, Root of Birthwort boiled in it, and
strained off, may be used by way of Fomenta-
tion with Flannels : or by the Help of Lint
dipt in it and squeezed, it may be applied to an
ulcerated Carcinoma, or any other inveterate,
incurable Ulcer.

Mercury
precipi-
tate, and
divine
Water of
Fernelius
sometimes
Astrin-
gents.
Corol-
lary.

On the same Account, Mercury precipitated, especially red astringing by it's vitriolic Quality, is used to correct Ulcers, where there is too much Gleet. Also the divine Water of *Fernelius* must be reckoned among the Correctors of Pus, for the same Reason.

It is plain therefore in what Manner, and what Cases Suppuratives are of use for the Digestion of an Ulcer: and where other Medicines of different Virtues are requisite.

Escharo-
tics form
new Ul-
cers.

It sometimes happens that an Ulcer is fordid, and it's Parts so degenerated, that there is a Necessity to destroy the whole Superficies by Escharotics; and of an old inveterate, to make a new Ulcer: which may be done by Butter of Antimony. By which Means such a Medicine, though not the immediate, is yet the mediate Agent of restoring Digestion.

Acciden-
tal Dis-
eases to be
removed,
before the
Ulcer can
be cured.

An Erysipelas, or Inflammation, arising in the Neighbourhood of an Ulcer, keeps back Digestion. This Distemper must be first cured by it's proper Remedies, before we endeavour at restoring Digestion.



