

Academical lectures on the lues venerea / Translated from the Latin, with notes, by Jonathan Wathen.

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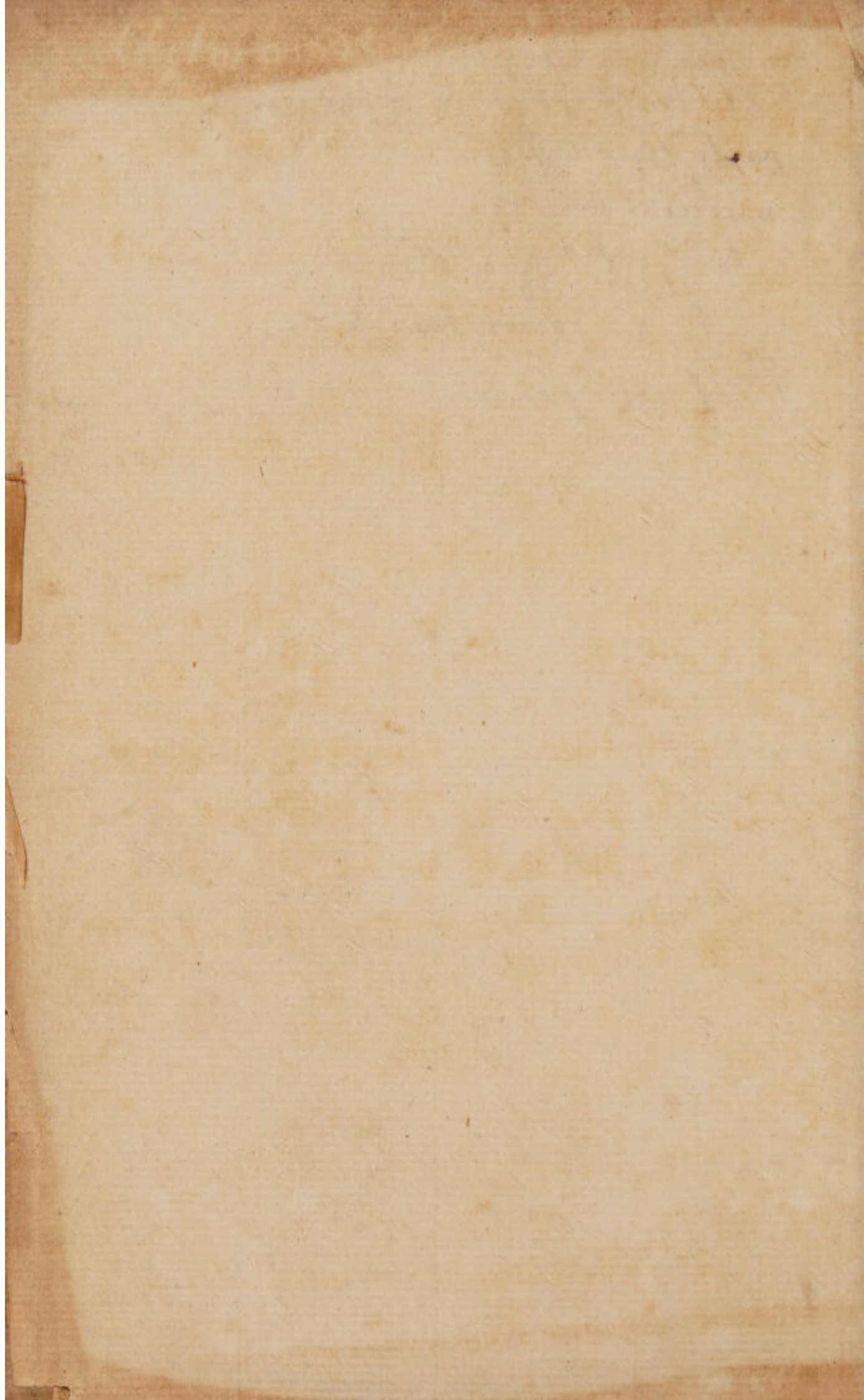
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BOERHAAVE's
ACADEMICAL LECTURES
ON THE
LUES VENEREA.

In which are accurately described,

The HISTORY, ORIGIN, PROGRESS, CAUSES,
SYMPTOMS, and CURE of that DISEASE.

Translated from the Latin, with NOTES,
By JONATHAN WATHEN, Surgeon.



L O N D O N :

Printed for J. RIVINGTON, in St. Paul's Church-yard.

MDCCLXIII.



TO

EDMUND SANXAY, Esq;

DEAR SIR,

YOUR acknowledged skill in your profession, and particularly in that branch of it which is the subject of these lectures, will not suffer me to doubt for a moment the propriety of fixing your name to them. I could not have chose a more *capable* judge, and I do not wish for a more *candid* one. As much as I regard you for your abilities, exerted in a long and successful practice, I admire you still more for that ingenuity of heart, which is a stranger to selfishness, envy, and pride; qualities which fully the greatest merit, and which too often prevail among candidates of the

a

same

iv DEDICATION.

same profession. As I never heard you detract from the reputation of your brethren, I never found you unwilling to communicate any thing that might tend to the improvement of medicine, deeming it infamous to consult private interest, where the good of human kind is concerned. I flatter myself these lectures and notes will throw some light upon the nature of a disorder, which it is so much the interest of society to check by every possible remedy. In the translation I have endeavoured to retrench the repetition of my author, and, in the notes, to convey such hints as have been suggested to me by my own experience. If the perusal of these sheets shall afford you any pleasure in your retreat from the world, I shall think my time not wholly misemployed. If the public
receive

DEDICATION. v

receive any benefit, I am fully recompenced. However, let the fate of this work be what it will, I hope you will do me the justice to believe, that I want to borrow no undeserved influence from your name, and ask no protection for errors and mistakes from your authority.

That many years may be reserved for you to spend with dignity a fortune acquired with reputation, is the ardent wish of,

DEAR SIR,

Your very humble,

And obliged Servant,

J. WATHEN.

DECLARATION

respective may be made. I am (I hope) not
compromised. However, let the facts
of this work be what it will, I hope
you will do me the justice to be-
lieve that I want to know no un-
desired influences from your friends
and ask no protection for errors and
mistakes from your authority.
That many years may be relieved
for you to spend with dignity a for-
tune expended with reputation in the
ardent wish of

Dear Sir,

Yours very humble,

And obliged servant,

J. WATKIN.

P R E F A C E.

THE reputation of Boerhaave is so universally established, that it is a sufficient recommendation of the following Lectures to say they were composed by that great professor. By what means they came to see the light, after lying so long dormant, the Leyden editor has not informed us. The smallest remains of a great genius are preserved with care, and the rudest draughts of a masterly pen are superior to the most correct productions of middling authors. The inaccuracies which run through this performance make it probable, that it did not receive the last finishing hand of its author. However, with all its imperfections, I doubt not but it will be found to contain such judicious observations on the origin, nature, and cure of the Venereal Disease, as no later discoveries have rendered obsolete.

Our author declares, that nothing of importance had been added to this subject by the moderns, to the time of these lectures ; and
from

from that period, the only distinguished improvement is in the composition and use of the Bougie ; for as to the Solution, other mercurial medicines, and the various decoctions given in conjunction with them, or alone, they are nothing else than a revival of the ancient practice ; from whence, nevertheless, considerable advantages have been derived, as they afford us the strongest proofs, that the disease, in many instances, may be cured without having so frequent recourse to a salivation.

Upon the whole, as this treatise seemed to contain many useful hints, it was judged not unworthy of appearing in an English dress. The translator claims no other merit but that of attempting to convey the sense in the clearest and concise manner, and reducing the original into a smaller compass, without losing any valuable remark.

The tautologies and digressions which are permitted in a course of lectures, will not be indulged in a regular dissertation. I have, therefore, taken the liberty of retrenching, abridging, and enlarging those passages, which were either superfluous, tedious, or defective.

defective. The critic may spare himself the trouble of examining the style of this performance, if he pleases; because the translator has not aimed at gratifying him in that respect, but rather endeavoured to imitate his author, in preferring perspicuity to ornament, and the importance of his observations to their elegance. After all, I am sensible there are faults in this performance which would make me fearful of venturing it into the world, if I did not flatter myself, that those who are most capable of discerning errors are the readiest to excuse them.

I shall only add, that the Notes are the result of long experience and practice; and if they shall contribute any thing to the improvement of Chirurgery, the author's design will be sufficiently answered.

Devonshire-Square,
Sept. 20, 1763.

ERRATA.

corrected

Page 11. Line 8. *and* p. 288. l. 19. *for* labiæ, *read* labia.—P. 12. l. 7. *Note, for* chancre, *read* cancre.—Ibid. l. 9. *for* discharged, *read* discharge.—Ibid. l. 11. *Note, for* chancri, *read* cancri.—P. 13. l. 27. *after* gonorrhæa, *add* is.—P. 14. l. 2. *Note, p.* 16. l. 10. *Note, p.* 182. l. 13. *Note, p.* 263. l. 14. *for* prostata, *read* prostatarum.—P. 21. l. 30. *and* p. 345. l. 18. *for* these, *read* those.—P. 22. l. 1. *dele* that.—P. 27. l. 16. *for* refuted, *read* cited.—P. 29. l. 23. *Note, for* veroucæ, *read* verrucæ.—P. 31. l. 16. *for* anthelmentic, *read* anthelmintic.—P. 45. l. 12. *for* more, *read* meer.—Ibid. l. 16. *for* campages, *read* compages.—P. 79. l. 12. p. 258. l. 1. *Note, p.* 288. l. 20. *Note, for* cancerous, *read* cancrus.—P. 122. l. 7. *for* dilation, *read* dilatation.—Ibid. l. 19. *for* dilatibility, *read* dilatability.—P. 136. l. 13. *for* below *read* above.—P. 173. l. 7. *for* tabuli, *read* tubuli.—P. 190. l. 2. *and* p. 251. l. 6. *Note, for* vesicula, *read* vesiculæ.—P. 191. l. 32. *for* desparation, *read* desperation.—P. 229. l. 1. *dele* and.—P. 233. l. 19. *and* p. 245. l. 1. *Note, for* cancer, *read* cancre.—P. 255. l. 5. *for* balsams, *read* balsamic.—P. 256. l. 8. *for* Eoque, *read* Coque.—P. 282. l. 19. *for* callure, *read* collare.—P. 291. l. 15. *Note, for* of, *read* or.—Ibid. l. 24. *Note, for* reverted, *read* inverted.—Ibid. *dele* inward.—P. 318. l. 10. *Note, for* buboe, *read* bubo.—P. 319. l. 11. *Note, for* Reverius, *read* Riverius.—P. 321. l. 12. *Note, for* sarsaparilly, *read* sarsaparilla.—P. 323. l. 10. *Note, for* œzena, *read* ozœna; *and* *for* chaffed, *read* chapped.—P. 333. l. 9. *Note, for* Essays, *read* Observations.—P. 339. l. 31. *for* gastroenemii, *read* gastrocnemii.—P. 343. l. 8. *for* informations, *read* information.—P. 346. l. 25. *and* p. 347. l. 7. *Note, for* œzena, *read* ozœna.—P. 349. l. 12. *for* Terrerius, *read* Ferrerius.—P. 361. l. 16. *instead of* aquæ font, *which is transcribed from my Author, he must have intended* aquæ fort, *by which an ointment much like the ung. citrinum is produced.*

LECTURES

ON THE

VENEREAL DISEASE.

CHAP. I.

Of the ORIGIN *of the* VENEREAL DISEASE.

THE Venereal Disease is a disorder wholly singular in its nature, and, perhaps, bears no resemblance to any other. — It is, alas! too common. It is the fire of death; more to be feared, and by far more dreadful than death itself.

We will now see what advantages may be derived from medicine against it; but let not the hopes of safety prove a temptation to the too licentious youth.

Whilst my thoughts have been engaged on this subject, I have often recollected a remarkable story, which was told me a long time since by a learned tutor to a British nobleman, with whom, whilst young and gay, like Mentor with his Telemachus, he travelled over most of the European countries, that he might instruct him in the manners and virtues and preserve him from the vices of the inha-

bitants. Whilst they were in Italy, they happened to meet with a certain prince advanced in age, who formerly had the greatest intimacy with the father of this noble youth; and having engaged the friendship of this young gentleman, by the many honours and favours conferred upon him, the prince asked, Whither he was next going? The youth answered, To Venice, for the sake of being present at the carnival. He no sooner heard this, than he burst into a flood of tears, and embracing the young man, he fetched a deep sigh, and said, "O lovely youth, had I but been in the same situation you now are, received the same advice, and followed the friendly counsel, I had not now been condemned, an infirm old man, to spend a solitary life in this palace without children." Instructed by this example, may you, my noble auditors, be the more solicitous to avoid this shameful disease, and assist others by your good advice.

The immortal Christopher Columbus was born in Portugal. This man, in the year 1488, presented a petition to his most faithful majesty, desiring he would grant him some ships, with which he might pursue a design he had long and maturely thought of, viz. of discovering the unknown and richest parts of the globe: but it happened not long before, that the king (who was well skilled in affairs of this nature) being induced by the hope of gain, had caused an expedition to be undertaken to Guinea in Africa, called the Gold Coast; the ill success
of

of which rendered him deaf to the solicitations of Columbus.

He then sent his brother, Bartholomew Columbus, into Britain, to see if he could prevail on king Henry VIII. to promote his design. To him he presented a map, wherein was delineated the now newly discovered world: (which, nevertheless, the late celebrated Sir Hans Sloan, after the most diligent searching of the royal library, confesses he was never able to find, as we are informed in his history of the island of Jamaica; but tells us, there was something of that kind drawn on tapestry in the palace.) Being repulsed here also, he went into Spain, where, by the assistance of the queen's confessor, he prevailed on her majesty to give him seventeen thousand florins to begin the expedition; which having performed, he returned to Europe from America, on the 4th of March (a fatal day) 1493: he not only discovered the new world, and arrived with great riches, but with them also imported the Venereal Disease; and this appears to me to have been the true origin of this disease in Europe.

In the space of three years it was become so frequent and terrible, that Antonius Bennivennius says, in the first chapter of his book, *De abditis nonnullis ac admirandis morborum & sanationum causis*. This disease then, viz. 1496, had spread itself over the greatest part of Europe.

In the year 1494. Charles VIII. king of France, declared war against Alphonfus king of

Naples, and besieged Naples with his troops ; at which time the disease had not yet appeared in the French army ; but it so happened, that the Neapolitans, who were resolved on the most resolute defence, expelled the whores, as an impediment to the war. These meeting with a welcome reception from the French, in return, presented their lovers with the first symptoms of this distemper.

Fracastorius, in his book *De morbis contagiosis*, tells us, that this malady was never known before this time, but that afterwards it appeared suddenly every where ; whence also I believe it a disease then new to Europe.

It is remarkable, that, in the year 1464, some writings were published, chiefly in Spain, Italy, &c. in which were described some uncommon diseases, but principally those which affected the parts of generation. On which account many have been of opinion that this disorder was known at that time, which was before America was discovered ; and some eminent writers in Britain have produced some things from ancient records, from which they have endeavoured to prove, that the virulent *gonorrhœa* was communicated by infected women to men, and that in the most ancient times*.

Others

* An abstract of these records, so far as they relate to this subject, were collected by Mr. William Beckett, and published in the 30th vol. of the *Philosophical Transactions*,
N^o. 357.

Others have thought that this distemper was known to Hippocrates and Galen, nay, even to Moses, and by him described in the sacred writings, which opinion does not appear to be true. I do not assert this precipitately, but after the most critical enquiry, and the strongest conviction of its truth. I say, such a disease never did appear before the years 1493 and 1496; I mean such as bore a like form, was excited by such causes, affected such parts, and produced similar effects: otherwise indeed very many diseases bear some resemblance to it, but from thence nothing can be deduced with respect to this contagion; for the true distemper (except a few rare instances) contaminates every one who has to do with an infected man or woman; but there is no disease which so suddenly, and in this manner, affects the parts concerned with such violence; and is thus dispersed all over Europe.

1. But as this subject deserves our farther consideration, we shall observe first, that the *scabies* or itch, (a strange disease) was known before the time above-mentioned, which being endued with certain volatile or spirituous *efflu-*

Nº. 357. His authorities are eight in number, taken from manuscript and unpublished writings; the principal of these is what he produces from a manuscript treatise of John Arderne, an eminent English surgeon in the 14th century, who speaks of a burning, and calls it an inward heat and excoriation of the *urethra*.

A like description is given by some other ancient English writers, who have called this complaint, the sickness of brenning.

via, almost every one is exposed to its infection. For at first having its seat in the thin *epidermis* only, it affects all those warm parts to which it comes in close contact: as the disorder spreads, it degenerates into crustaceous ulcers, renders the body filthy, and penetrates by slow degrees into the *membrana adiposa*. No part of the body is exempted from it, not even the parts of generation; so that if a man who is free from the *scabies*, has to do with a woman affected by it in her private parts (& *vice versa*) he will certainly catch this disorder, but in every other respect it has nothing in common with the *lues venerea*.

2. There was also a disorder called the *scabies vera*, before the above-mentioned period, infecting the *cutis*, insinuating itself into the fat of the body, and affecting the *rete malpighii*; from whence proceed subcutaneous, sinuous ulcers, wasting the fat, and opening themselves on every side. It occupies also every part, not excepting the genitals: this is yet more contagious than the preceding, but differs exceedingly from the venereal disease, although many have thought it the same disorder.

3. The leprosy of the Jews was also known; a disease described by Moses in *Leviticus*, whose account ought to be read with the greatest attention, as we may there see with what care the ancients treated diseases: It has its seat in the *cuticula*, *cutis*, and *membrana adiposa*; is as white as snow, scaly, and, according to its degree, causes the hair to fall off, or otherwise.

This

This disease is so contagious, that Moses prohibited those who were infected from all commerce with others; nay, even commanded them, when they went out, to cover their nostrils and mouths with thin plates. It occupies all the parts, even those of generation: a whole army may be instantly affected by it; whence many have supposed it to be the foul disease, though without any foundation.

4. The *Elephantiasis* was also known and accurately described by Aretæus; it was called the *Lepra Arabum & Judæorum*, a most horrid disease, which arose from the eating of swine's flesh in Asia; and under the Line, by feeding on fat and gross meats, not only of swine, but also human flesh. It begins in the fat of the body, raising it into large tubercles of a dreadful colour, perfectly resembling the skin of an elephant: it wastes the body, induces an universal decay, causes suffocation, and dissolves the soft parts into a rancid lard; a *sphacelus* succeeds, which separates or falls off in large mortified portions, a particular circumstance that never happens in the *lues venerea*. It is a disease wholly incurable, infecting others with the greatest celerity, which is the only property it hath in common with the venereal disease. It first appears in spots, then tubercles; these becoming larger and larger, putrefy and penetrate even to the bones: at length the mortified parts drop off; pustules also arise on the *glans*, *penis* and *præputium*. This disease is so horrid, that our ancestors trading in ships to
India,

India, left (by public authority) those who were infected in a certain appointed island, there to end their miserable lives.

5. If we were to consider also the *phlegmon* *erisipelas*, and ulcers of these kinds in the parts of generation, they will be found to differ in nothing from those of other parts. Many affected with these have applied to me, supposing themselves infected with the venereal disorder, whilst a *phlegmon* or *erisipelas* only had occupied those places; and these diseases so clearly distinguish themselves from venereal, that it is almost impossible a skilful physician can be deceived. It is true these effects have been said to be contagious, and the antients have rightly pronounced, that there is some contagion in every acute disease. In these disorders an infection is communicated with the greatest facility in those warm places under the equator and between the tropics; for in that intense heat the humours are more quickly changed into a putrid state; as is observed by Bernoelius, of those elephants who are killed by falling from high mountains, in a very short time nothing but the skeleton remains: and the same thing is true of whales, who when dead are cast on the shore.

In Asia a natural *sordes* is collected on the genitals under the *præputium*, which becoming acrid, produces very bad effects. These, of all others, approach nearest the *Lues*: they have not, however, the least relation to it. All those nations

nations deprive themselves of the *præputium*, and are from necessity circumcised, that so they may be preserved from these disorders. Nay, even our own seamen experience thus much whilst in these countries, that unless they daily wash the inside of the *præpuce* with a saline or acetous lotion, they are speedily affected with this disease. It is therefore not to be wondered at, that physicians, who have not attended to these circumstances with great accuracy, have thought this to be the *lues venerea*.

Notwithstanding what has been hitherto urged, it is evident that the æra I have fixed is the very time the venereal disease was first seen in Europe: this is still more confirmed by the concurrent testimony of those authors who wrote at that time; nor do I know one of them of a different opinion. See, for example, Jacobus Carpus, Fracastorius, Fernelius, and all the Italians; whose works on this subject I lately collected and published, with a preface of my own.

Ye now understand with me, that there have been many ulcerous, scabious, and leprous diseases, all of them contagious, affecting all the parts of the body at the same time, and of consequence the genitals; therefore let no one imagine a disease cannot exist, which hath certain symptoms in common with the *lues venerea*, though at the same time it may be affirmed, that no one from thence can prove all the pathognomonic signs to have been the same

same, and so to be the same disease; nay, or that any one of the skilful antients, have given a single example of a disease partaking of the venereal poison, or that terminated in such effects as the *lues venerea* produces.

But that which has been urged most of all is, what is related by the most antient of all authors (I mean Moses). This great man, and legislator, gave such laws to his filthy and lascivious people, whilst wandering in a desert, as not only regarded their morals, but also the welfare of their bodies, which all other lawgivers have neglected: this wise leader took such caution, that in an army of 300000, no disease should arise. He has most accurately described the diseases which at that time prevailed in Asia and Egypt; and whenever there was danger of contagion, he prevented it by the utmost care and caution, as may be seen in *Leviticus*; which book, independent of sacred things, contains a natural history written with infinite wisdom. In the xvth chapter, Moses has given such a description, that from thence many eminent men have deduced an argument, that the venereal disease was known at that time in the Jewish army.

Ye well know, that in every kind of animal there are no parts so rank and fetid as those subservient to generation; and that by how much the more lascivious any animal is, by so much these parts are always more fetid; and this fætor is yet still more increased during the venereal orgasm. Besides, it is well known, that

that no parts are more naked, and therefore the more susceptible of inflammation, ulceration, and suppuration; for in them the solid *cutis* is wanting, as we find in the inside of the *præputium*, *urethra*, and superficies of the glans; and throughout the whole internal surface of the *vulva* in women, in all these parts the true skin terminates at the edges of their *labia*^a, and though the *epidermis* is still continued, it ^{271 Sept} then becomes a true *epithelion*. ^{the seraf skin}

In hot countries these parts are more particularly exposed to the three diseases above-mentioned; and are easily infected, especially in those men who have not been circumcised, and where the natural *fordes* prevails between the concavity of the *præputium* and the convexity of the glans. (See Piso on the excrement of those parts.) In Asia, Africa, and America, inflammations, ulcerations, and large suppurations arise from the putrescency of this *colluvies*, but never the true *lues venerea*; for a man with ulcers in these parts, having commerce with a woman, will infect her indeed, but not with the venereal disease.

I have seen an instance of these ulcers in this colder climate. A nobleman came to me, greatly afflicted in these parts, declaring at the same time he had never touched the body of a woman; on examination I discovered a fordid and deep ulcer upon the glans under the *præpuce*: at first indeed I thought it venereal, especially when I perceived the discharge to be apparently the same as in the *lues*. I thought

it

it proper however to suspend my judgment, and desired him to compose his mind, bathe the part, and wash it, *cum melle, sale ammoniaco & aqua stillatitia sambuci*, by which he was speedily cured. It was then evident, that this disorder arose from the *sordes* being collected, and retained in that part by the contraction of the orifice of the *præputium* during the warm weather *.

Afterwards I saw some eastern medical manuscripts, wherein I found that even some of our own countrymen, who had travelled thither, were affected with the worst kind of ulcers under the *præputium*, without any venereal contagion.

Hippocrates, in his epidemics, makes mention of some little serpentine ulcers on the genitals. Celsus and Pliny also give us an ac-

* Was it necessary, many other instances might be produced in confirmation of this truth. I shall mention only one that was very remarkable, of a married gentleman, thirty years of age, who had at first a small ulcer on the *corona penis*, of which little care being taken, it grew wider and deeper, with callous edges, exactly resembling a venereal chancre: these encreasing unequally, formed three schirrous knots the size of small nuts; a *phymosis* ensued, with a filthy *cadaverous* discharge: all which were removed and perfectly cured in three weeks, by an injection of the *pulvis Xancri*, published in the second volume of the Medical Essays of London.—That it could not be venereal, I was at first assured by his own declaration, and the experience of his wife, with whom he had commerce in the first stages of this ulcer—the truth of which was sufficiently evinced by the cure.

count of malignant ulcers arising from coition; but all this being duly considered, prove nothing more than that these parts are subject to common ulcerations.

From what has been said, it is evident how necessary circumcision is, to prevent the above-mentioned evils: Hence the Jews, who are extremely addicted to venery, continue that custom to this day; and they are thereby less affected with a *gonorrhœa* than others whose *præputium* is entire, because the natural *sordes* is not in them so easily retained.

We cannot read but with surprize what Moses says in the xvth chapter of *Levitus*, where he has described a fourfold masculine *gonorrhœa* in these words (verse 2.) *If any man hath a running issue out of his flesh (i. e. any genital liquor) because of his issue he shall be unclean.*—The first species is contained in the first part of the 3d verse, thus—*whether his flesh run with his issue.*—This discharge is with great propriety said to resemble the *saliva*, for, like it, this humour is distilled slowly and by degrees through the orifice of the *urethra*, and in this case he says the man shall be unclean, &c.

The second species of the *gonorrhœa*⁴ described by Moses in the latter part of the 3d verse; *or his flesh be stopped from his issue*: that is, if the matter shall be so viscid as to stick to the parts, and obstruct the discharge of the semen, *he shall be unclean.*

The

he errata The third species is in verse the 16th: *And if any man's seed of copulation go out from him, he shall be unclean.*

The fourth species is seen in the 33d verse, wherein a *gonorrhœa* peculiar to women is chiefly intended and described in these words, *of her that is sick of her flowers*, although a similar disease in men, is included herein: this is a flux of liquid matter arising from weakness.

According to the above arrangement, we may understand the first kind described by Moses, to be a discharge that comes away by drops, and is continued for a long time; even we ourselves, in this colder climate, are often affected in the same manner. *g. e.* When a young and healthful man has long abstained from venery, and then engages in amorous dalliances with the fair sex, he may observe, that in making water, after the discharge of the last drops of urine, something to be discharged slowly, and with an ungrateful sense, through his *urethra*, and of a viscid slimy nature; and on pressing the part, he will see a pellucid liquor, like *saliva*, to pass out of his *penis*; this I have frequently observed in practice*. If such men are costive, this symptom will return very often, especially when they strain in expelling the *fæces*, which seems to agree precisely with the account given by Moses, whence I suppose it to be the same disease; for in those hot coun-

* What is here described, appears evidently to be the liquor prostaticæ.

~~prostaticum~~
prostaticum

tries,

tries, this humour being collected in a place of so much warmth, presently becomes putrid to such a degree, that this legislator from thence forbade them all commerce with others.

I would not, however, absolutely assert this to be the same disorder I have above described. It is well known, that a small quantity of the limpid oil of turpentine will give a violet-smell to the urine. A certain empiric having given too large a doze for some trivial complaint, it not only caused his patient to discharge all his urine, but at the same time a great quantity of mucilaginous fluid, which was the effect of this hot medicine. Hence we see, that by heat these parts may be so much irritated and relaxed, that a kind of nutritious and chylous fluid may be discharged.

It may perhaps be thought, that so many cautions as Moses prescribes are unnecessary; but as we proceed you will see their importance, especially as when the *gonorrhœas* of women are mentioned, such restrictions are not there insisted on.

There is a certain celebrated Rabbi, who says, That nothing is more detestable to God than a man to remain unmarried, and that the law has taken care that no man shall be without a wife. Hence he says it is, that Moses endeavours to prevent all such occasions as might any ways hinder propagation: so that this writer seems indeed to have thought justly on the subject.

The

The second species of *gonorrhœa*, which frequently happens, is the emission of semen from men in their sleep; when they awake in the morning, and endeavour to make water, they cannot discharge it without difficulty, because the viscous semen obstructs the passage, which in those hot countries may produce many evils*.

The third sort is, that in venereal dreams, which Moses nevertheless severely forbids; and they who thus disburden themselves, he pronounces impure till the evening.

The fourth seems to be only a simple dilatation of the vessels. This (speaking of men) very rarely happens, nor do I remember to have seen one example of it, although the an-

* I apprehend, this being distinguished from the following, comprehends these circumstances omitted by our author, viz. that it is discharged during sleep, without erection, or any kind of venereal sensation whatever.— That it happens also in the day as well as in the night, then intimated to the patient by a sense of something trickling through the *urethra*, occurring more frequently in the intervals of stool and urine than at the time of those evacuations; for if it ever be then expelled, we cannot distinguish it from the liquor *prostatæ* otherwise than by its quantity. I have known this complaint continue so long as to reduce the patient to a great degree of weakness, accompanied with a remarkable depression of spirits. All these effects are generally the consequence of excessive venery, by which the ducts of the *vesiculæ seminales* lose their natural rigidity, and become relaxed, flaccid, and incapable of retaining the semen; such persons have seldom any venereal inclinations, but when they have, the possibility of gratifying them is commonly prevented by a premature emission.

tient Greeks had described it with great accuracy*: but in all these there is no venereal infection; nor is there any thing in all history that may be referred to the *lues venerea*, as we have demonstrated.

We will now consider the discharges more peculiar to women. And, first, that which is described in the 19th verse, &c. *And if a woman have an issue, and her issue in her flesh be blood, she shall be separated, &c.* The reasons for separation, &c. are obvious; for in such a climate, the menstrual blood retained in the warm *vagina* contracts the most rancorous putrescency, and acquires so great a degree of putrefaction, that a vigorous man lying with such a woman, would certainly receive an inflammation in the parts concerned, a thing not uncommon in those countries; and long since described by Hippocrates, Pliny, and Galen: nevertheless he will not be infected with that venereal poison, which sometimes penetrates into the bones, and produces the most terrible ulcers. Hence then it was that Moses took care, to exclude such women from all commerce with men, gave this affair the

* In its proper place I shall produce some instances of this complaint, which so much resembles the virulent *gonorrhœa*, that it would be impossible to distinguish the one from the other; but that this is neither received by a venereal infection, nor does it communicate any to others.

See note, pag. 28.

function of religion, and appointed the days of separation.

For the same reasons the women in Asia and America wash all the inferior parts of their bodies, more especially the genitals, at least twice a day. This custom prevails also among the Turks and Persians. On the same account it is that circumcision is practised by the men of those nations.

The second discharge of any continuance is said to be preternatural*; for which also he commands separation.

The third is what is mentioned in the 33d verse, as proceeding from weakness. This is a *gonorrhæa*; to which, at this time, women of sedentary lives, and lax bodies, are subject, called by Charlton, *rheumatismus uterinus*. It is similar to that observed in the nostrils of infants, where the dilated and relaxed vessels discharge abundance of *mucus*. These women are of a cold temperament, and little inclined to venery. When they enjoy better health, this discharge ceases; but they never communicate any infection. These arguments are a sufficient confutation of all that has been urged

* What this second discharge is, as it is not explained by our author, must remain a conjecture; perhaps it is a similar weakness to that of men, described page 16. For we know that in venereal dreams, women discharge their *ova*, &c. as well as in coition: an excess of venery may therefore in them produce a like weakness.

by physicians in favour of the antiquity of the venereal distemper.

In the writings of the antients these diseases are largely discussed. Hippocrates has given us a chapter concerning the *pudenda* of women, and their diseases. Celsus has described the disorders to which the *vulva* is subject. And Pliny gives an account of those to which the genitals of men are exposed; and in them you will find descriptions of inflammations, phlegmons, erisipelas's, carbuncles, and pustules, about these parts: but at the same time you will observe, that all the remedies they prescribe, are only water, vinegar, &c. as sufficient for their cure. Thus you see that large and inveterate ulcers were healed by common remedies, which is a full proof that they were not contagious; and the only difficulty attending their cure arose from venereal dispositions, by which those parts were so much swelled and distended, that the wounds almost cicatrized, were opened afresh.

The next person who writes upon disorders resembling the *lues* is Hippocrates; and he, in his book *De internis affectibus*, mentions certain epidemical distempers prevailing in Asia, Greece, and the Mediterranean islands; such as inflammations about the genitals, and fanious ulcers, very difficult of cure; but, upon mature consideration, we shall find them to be only epidemical complaints. For instance, in the plague, a bubo always rises on the groin,

yet it would be absurd to conclude it venereal, because this symptom is common to the *lues*: for as Hippocrates justly observes, such tumors appear in different epidemical disorders. So if you examine what Celsus has said in his chapters on the disease of the genitals of men and women, you will find he has described nothing but inflammations, ulcers, and a two-fold *gonorrhœa*, cured with simple and drying medicines only.

Pliny the elder writes, that, in the time of Tiberius, there arose a distemper, which first affected the lips, and afterwards the chin, with a foul and spurcous *balitus*, from whence it was called *mentagra*. This was difficult of cure: but as the same symptoms obtain in the itch, *apthæ*, and the like epidemical and endemical disorders, there appears nothing in it of a venereal nature.

Galen adds nothing to what Hippocrates, Celsus, and Pliny has observed before him; and the result is only, that all persons in hot countries, especially those who are given to venery, are subject to putrid diseases in every part of the body, particularly the genitals.

This truth is supported by two additional considerations.

I. The method of cure, which consisted merely in fomentations, baths, regimen, detarging,

terging, opening, drying, and such like medicines, which have no relation at all to the *lues*.

2. That there was no contagion: for certainly, at the time when every man lived according to his humour, if there had been a disease so contagious as the *lues*, which in a few days affected four hundred nobles in the camp of Charles VIII. king of France, what would have happened in these dissolute times? But in those times we have no memorial of this infection. From all that has been said, I will venture to assert, that it cannot be proved, even by one instance, that the venereal disease appeared either in Europe or Asia before the æra above-mentioned: Therefore this disorder first discovered itself in Spain and Portugal, according to the unanimous opinion of the most ancient writers on this subject. It nevertheless prevailed in other parts of the known world before those times, even when the Portuguese undertook their first unsuccessful expedition to Africa, where this disorder is endemical, and from whence it was conveyed into America and Spain.

For the Portuguese made it a practice to purchase slaves at the Guinea coast, to cultivate their American conquests.— So horrid a custom prevails in this country, especially amongst these who inhabit the coast of Guinea, that parents sell their children, and children their parents, to christians; and these slaves carried the disease with them.

~~That~~ the Americans, even to this day, have a tradition, that the disease was unknown amongst them before the arrival of the Portuguese and Spaniards; and that it was communicated to them by the negroes they brought in their ships.

Hence then we have reason to believe it originally African: and this opinion is the more probable, because the climate is very hot; the earth is parched up, and every autumn, near the coast, produces a general mortality. The manners of the inhabitants are so libidinous and depraved, says Bosman, in his description of Guinea, that it is customary for vagabond tribes, or bodies of men, whom he calls Maopales, to purchase a young girl, whom they convey to a hut, or some proper place, where each successively gratifies his desire. This they continue so long, without the least intermission, that the poor creature dies, almost putrid; and often they are concerned with her even after she is dead. From hence, this author says, a malignant and venereal contagion is common to this people.

This accounts in some measure for the origin of this disease; and the more, as their genitals only are affected. The slaves there purchased and embarked, are obliged to be cured in the voyage; whilst others, who are worse, are thrown overboard, lest they should infect the whole crew.

To those who consider these things, there is nothing surely more horrible than the practice

tice of this people: and perhaps the Jews, who are elevated with high notions concerning their own nation, will not acknowledge them to be the posterity of Ham; yet they were guilty of the same shameful practices themselves, as we may read in the history of the Levite and the Benjamite, *Judges*, chap. xix. This unhappy Levite, who had his concubine with him, was desirous of lodging in Gibeah, near Jerusalem; but there came those who would have him brought forth, that they might abuse him after the manner of Sodomy; but he representing the dreadful wickedness of such a design, desired they would rather take his concubine: with her they repeatedly lay all night; in consequence of which she was found dead in the porch the next morning.

To these shameful diseases something endemical seems to be added in Africa: for if it was contracted merely by such abuses, then the Benjamites would have been infected by it. Hence we may infer, that in Africa there is something endemical, which constitutes this *lues*. When these pleasures are indulged to a more than brutal excess, a filthy disease may affect the genitals; but unless the endemical circumstance be added, it will not be the venereal *lues*; yet if that exists at the time of such profuse venery, the true *lues* will arise. The same thing is true in the small pox, and the plague, which are also endemical diseases produced in Asia, and thence transported to other places.

But this will appear more evidently from a remarkable history related by Mons. de Blegny, who tells us, that a girl of fourteen years of age being chastised for some wantonness by her mother, left the house and fled into a monastery, where the monks seeing her unprotected, (not very consistent with their character) abused themselves with her for several days, till at length fearing lest the affair should be discovered, or perhaps having satiated themselves, they sent her into the church, and pretending to find her there by chance, they sent her home: It was not long before she perceived a violent heat of urine, which, after endeavouring to conceal, she was compelled by other symptoms to discover to her mother; who sending for a surgeon, was informed that her daughter had a *gonorrhœa* from distention. The girl at first denied it; but soon after some tumors appearing in each inguen, she confessed the whole affair. The public surgeons were sent to the monastery to examine those monks, whom, contrary to expectation, they found perfectly sound. From this history it appears, that some complaints may arise on the genitals from excessive coition, but without any thing of the venereal *lues*; for these men were not infected; there was only an inflammation and buboes, from a too great distention, and as it were laceration of the parts. Nor are there wanting many other instances of a similar kind, as we are informed by Du Cajus sancto Romanus, Vercellonius,

cellonius, and others. From hence then we may be assured, that to all these complaints something endemical must concur to render it the true venereal disease.

In Europe, this disease was first perceived at Valentia in Spain, 1493, where lived a noble courtezan, as much famed as the ancient Thais: there was in the same city a nobleman belonging to the army, labouring under the worst kind of the *elephantiasis* (described only by Aretæus Cappadox) who, notwithstanding this disease, by the influence of fifty pistoles, purchased one night's favour of this celebrated lady. Gold procured the same favour for others, according to the custom of her profession; and afterwards having frequent commerce with the young nobles, it is said that in a few days she infected four hundred men, most of which were in the army of king Charles: whence the *lues venerea* had an universal spread in a short time, as you may see in Dominicius Leo, from whom this history was adopted by Helmont the father. Hence many have thought, that the venereal disease first arose in Europe from the conjunction of a leper with a whore. However, such was the progress of this disorder, that soon after the times above specified, there was not a city in all Italy which was not infected by it.

We come now to the Disease itself.

C H A P. II.

Of the VENEREAL DISEASE.

I Shall here endeavour, with all sincerity, to communicate every thing that may tend to the true explication and perfect cure of this disorder. But previously let me observe,

1. This disease is never spontaneous. It is not a human disease ; that is, such as arises from the nature and fabric of the human body, as the pleurisy, peripneumony, and the like ; for these are produced promiscuously in all men, from the very nature of our frame ; which cannot be proved of the *lues venerea* ; for this disease never arises of its own accord in any one. And this I lay down as my first axiom.

2. Nothing is received by a clean man lying with a clean woman ; and therefore it is not the effect of libidinous venery. I am not a stranger to what fanciful persons have imagined : but, after the strictest enquiry, it must ever be attributed to something more than indiscretion. For instance, if a man abuse his wife by pure, but excessive concubinage, he will receive no injury ; whence the above suppositions fall to the ground. Ye will therefore allow me to place this as my second axiom, and as a sufficient refutation of such opinions.

3. This

3. This disease will not arise from a variety of sound persons having to do with one who is also sound. This is contradicted by Vercellonius: but the instances which this learned man urges in favour of his opinion, when brought to the light, prove nothing: v. gr. not even that of a certain nobleman who had married a young girl, with whom having used much violence in their first venereal congress, he tells us, the wife was affected with a *gonorrhæa*, but does not say of what species. We admit that there might be a rupture of the membranes, a discharge of blood, an inflammation, and a sanious *stillicidium*; but we deny this to be the *morbus gallicus*. Blegny, whom we have already refuted, mentions heat of urine, and the venereal bubo; but he does not say it is this disease. Hence I believe, that many complaints may arise from the multifarious congress of several pure men with one clean woman, but, if rightly distinguished, never the Gallic disorder. cited

Ye are not ignorant, that there are certain diseases, which happen to some parts of our bodies, bearing so great a resemblance to the *lues venerea*, that unless one is well skilled in practice, he may be easily deceived in the diagnosis. The *membrana schneideriana* of the nose, for instance, when we are in health, perspires a very little, and that only a thin, pellucid liquor; but if we have either a catarrh, or coryza, there ensues a truly painful inflammation, with heat, redness, and tumour, which,
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in a few hours, begins to distil a sharp, thin, corrosive fluid, and on the second or third day of the disease, a great quantity of thick, yellow and green *mucus*; all which ceases on the departure of the disorder. If some of this matter is received on linnen, and dried in the air, it seems to be the matter of a *gonorrhœa*; yet such a disease, we see, frequently arises from innocent and slight causes. And the like have been a long time since observed by Hippocrates in the genitals both of men and women, without any venereal contagion, and are now continually to be met with in practice, where we always perceive, in the first place, a like thin *mucus*, next a thicker, and at length a large discharge of mucous and yellow matter: whence it is plain, that there is a distinction, which none but the physician who has accurately observed both kinds is capable of making*.

Thus

* This complaint is much more common than is generally supposed, and could never be distinguished from the *gonorrhœa virulenta* by its symptoms, which are in all respects the same, viz. in the quantity and quality of discharge, heat of urine, cordee, &c. It will perhaps be alledged, that similar symptoms indicate the same disorder. In general they do: but in this instance there is an exception, established by the evidence of facts. I shall mention only two cases; the one of a gentleman between thirty and forty years of age, who has a wife and several fine children; but being of a tender constitution, and much afflicted by nervous complaints, is subject to a gleet from the *glandulæ lacunæ* of his *urethra*; which, if it does not quickly pass off of itself, or by two or three gentle purges, encreases

see page 14 & 87

Thus it appears, that this disorder never spontaneously rises from any of those causes which affect the circulation of the blood.

creases in quantity, and becomes yellow or green, with extreme pain in making water, accompanied with priapisms, and cordee: *sal Glauberi* & *prunellæ* are his constant remedies, and by these alone he is always cured. His character and veracity, the frequent returns of this complaint, the almost annual birth of a fine child, the perfect health, and constant spirits of his wife, are evidences beyond a doubt, that this disorder is entirely free from any venereal virus.

Some years ago, a man came to me with all the symptoms of a virulent *gonorrhœa*, assuring me at the same time that it was impossible it should be so, having never deserved it. I disregarded all his protestations, and treated him after the usual manner: the case proving more obstinate than ordinary, I was disposed to hear his own account of the disorder, which was as follows. About two months before his first coming to me, he perceived a little discharge of white liquor from his *urethra*; this gradually encreased, without pain, and did not prevent concubinage, till within a few days of his application to me: I therefore desired to see his wife, who must either have given or received it, if it had been infectious. After a careful examination, I could perceive neither swelling, inflammation, *verruce* ulcers, *verouæ*, or gleet; every part of the *vulva* appearing to be perfectly sound and well. I then gave some credit to his assertions, and cured him with manna and salts only, in about a month's time. I should have observed, that her narration of all that passed as to commerce, &c. corresponded exactly with his.

C H A P. III.

Of the Nature of the Venereal Disease.

TH E first property of this disease is, that the infection is so easily propagated, that, in spite of all precautions, the whole constitution may be quite subdued by it; nevertheless we are totally ignorant of the essential qualities of this disorder: we only know that it discovers itself by certain phœnomena, which being collected together, I shall present to you, so far at least as may distinguish it from any other.

A. When a man is infected, there is no part of his body, however sound, that can be said to be secure; nay, the whole may be contaminated: and such is its power, that it will render the whole body weak and feeble, in a manner incredible to those who are unexperienced. The momentary contact of warm bodies is sufficient for its propagation, as a small spark is capable of kindling a mighty flame.

B. The true contagion will destroy the most pure and healthful body it affects. I have seen a comely young gentleman, in whom a little ulcer so propagated itself, that not even a point of the body was left free.

C. It hath therefore the property of inverting all the good humours. I have seen a young
man

man who had only a little ulcer in his nostrils, which could not be cured by any of the physicians either in England, Germany, or France, where he had travelled, but was otherwise sound and clean; nevertheless his whole face, eyes, ears, nose, &c. were afterwards affected.

D. From hence, if I may so speak, there is in this contagion an innate power of propagation: on which account many suppose it to be of the animal kind, and produced from a congeries of *animalcula*, which being received into the body as a proper *nidus*, there propagate themselves with infinite velocity. This opinion they think the more probable, because it is cured by mercury, an antihelmentic remedy. I never saw any thing like this; notwithstanding I am sensible mercury has that property. If ulcers of this kind upon the skin are not well cured, they affect the whole body; and if their sanies is applied to any part of a sound person, he will be infected thereby. This infection dissolves the solid parts, the *viscera*, *cartilages*, and bones, even those of the thigh and cranium, reducing them to a *caput mortuum*, or friable substance; a quality which can be attributed to no disorder besides. Nay, the very corruption it produces, becomes the medium of its further propagation.

E. The matter is so very fine and volatile, that if it be applied outwardly to the surface of the skin, it will penetrate through it to the parts it covers. You know that the whole
body

body is defended by the solid dense resistable *cutis*, as with a coat of mail; nevertheless the warm venereal poison applied to this tegument, whilst in a state of warmth, will insinuate itself into its substance, dissolve its continuity, and melt it down to a venereal matter: it is therefore evident that the thin, volatile, and infectious particles, penetrate the skin, destroy its texture, and produce ulcers on its surface.

F. But let no one think, that what is visible in this disease is that very identical poison, since it is only the effects thereof thrown out on the surface of the skin; for as the thin, volatile, infectious particles at first insinuate themselves into this tunic, so from thence they are diffused throughout the body, which evidently appears from the following case: Two friends being at the Hague, happened to lie in the same bed, the one clean, the other infected by the *lues*: he that was sound was soon alarmed by some malignant ulcers on that side which lay next to his bed-fellow. Knowing himself to be free from that distemper, he goes to a physician, who, after enquiry, informed him, that he was infected by his close contact with a diseased body.

G. In this property it most exactly resembles the itch. *e. gr.* If a man labouring under this complaint touches the warm hand of another with his own, the other, without doubt, will receive the true itch; which being generated by so imperceptible a Cause, spreads

over the whole Body, where being cherished, it discovers itself by a small itching; and then, as I have frequently seen, produces ulcers; which penetrate even to the bones, rendering them carious.

H. The *lues venerea* propagates itself with equal facility, as we have already been informed by Leo's account of the courtesan's infecting four hundred men. Thus also it happened in Nobili Spanja; for so the inhabitants call the place where this disease had so perfectly infected them, that not one person was exempted from it.

I. It may be communicated by the Breath, in respiration. This I mention by way of caution, that you may be on your guard, whilst attending such cases. An instance of this kind occurred to me, of a young nobleman under my care, who had such malignant ulcers in his nostrils and fauces, that, at the distance of five or six feet, yielded such a nauseous and cadaverous smell, that I, who am not very fastidious, could not approach near enough to examine them without fainting; and afterwards I found such a dryness and rigidity in the parts serving to respiration, as to fear that I was myself infected; and I never approached this patient again, till after he had well washed and cleansed these parts with a gargle of vinegar and water. I saw a gentleman with such foul and sinuous ulcers on the *penis* and *perinæum*, that, when the dressings were removed, a deadly stink arose, as if from a

dead body putrefying in a hot place ; and this matter affected all those parts upon which it was discharged.

K. Hence I am convinced this poison is so volatile, that it may infect by being transported in the air. I assert this on the authority of my medical friend Philipeaux, who had travelled through all the habitable parts of the globe. While he was at Venice and Genoa, a hundred and fifty men sustained salivation in one place, by command of the magistrates ; and the putrid exhalations were so great, that a stranger, upon his first entrance, would be immediately affected with a violent inflammation.

L. When therefore this exhalation is received by a healthy, warm, and sweating body, from an infected person in the same circumstances, or in a salivation, the contagion is easily taken ; but more especially when the mercury has dissolved the humours of the patient ; on which account much care is necessary to prevent injury. Some physicians have said it is not so easily communicated ; but they have certainly been the cause of much mischief.

M. A clean infant, adult, or old person, may infect, or be infected by a kiss. An infant who had received this disorder from sucking the breast of an unclean woman, conveyed it by a kiss to another, who was first affected in her mouth, and afterwards in other parts,

parts: medical history abounds with such examples.

N. It is communicated by the *saliva* with the greatest facility. We know, that this liquor is endued with such a peculiar force, when assisted by quicksilver, as first to dilute, and then discharge, the venereal *virus*, by a perpetual stream. Hence we discern its singular quality, whereby it so soon assimilates those parts where it comes. There are many instances of dogs, who have licked the spittle discharged in salivation, dying soon afterwards, as you may read in the German *Ephemerides*.

O. A man is afflicted with the greatest malignancy, by a filthy and lascivious tongue. This and the preceding case constitute the worst degree of the disease that can happen. I have seen a handsome youth, lately returned from Paris, who had no other symptoms of the venereal disease but in his tongue and fauces. When I expressed my surprize at finding no other indications, he told me, it could only be attributed to the lascivious kisses of the Parisian ladies, who were so enraptured, as not to part with him, without the greatest reluctance. In such cases, the lips and gums are first affected, the body still remaining free; next it insinuates itself into the fauces, where it produces almost incurable ulcers, without any of the preceding signs, as *gonorrhæa*, heat of urine, &c. nor do any other

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symptoms

symptoms appear in this species than what are above noticed.

P. This disease is also often conveyed by the sucking of an infected infant. Two similar instances I have seen in this city; the nurse having left a little child, whose mother was sick, a neighbouring woman, to allay its crying, gave it suck, but afterwards she perceived several bad ulcers to break out upon the nipple of that breast which had been sucked. The child being examined, was found to labour under the foul disease, from whom this woman was infected.

Q. This disorder is also communicated to a clean child, by the nipple or milk of an impure woman. Thus it happened to the child of a principal Family at the Hague, whose parents were perfectly free from this contagion. The infant was delivered to a nurse of remarkable beauty, and, as appeared, clean: but it was soon afterwards seized with a strange disease, which corroded its flesh and bones, of which it died. Proper enquiry being made, this nurse, so healthful in appearance, was found to be in the last stage of the venereal disease.

R. A person may contract this disorder by close familiarities, and by lying in the same bed with another person who is tainted; or, he may receive an infection by sweat, or other humours, on the bed-cloaths, linen, &c. if he is sufficiently warm, and lies in the place from which another has just risen, but more especially in hot weather.

Many

Many have thought, and some are now of opinion, that this is not true; yet it was for such reasons that Moses took so much care to prevent the spreading of contagious diseases. I have seen the itch communicated merely by drawing on a warm glove; and the same effects have been produced by the passing of money from one hand to another, in a state of warmth. Such is its propagative power, that even metals convey its contagion.

S. The *lues* is most certainly communicated by the matter it discharges from ulcers, especially those of the genitals both of men and women. Of all the ways of infection, this is the most effectual of any: not that it is the only way of conveying the infection, as some have asserted; for all parts of the body are open to the contagion.

From the two last sections it appears, that many eminent men have thought this disease arose solely from the contaminating matter of the parts of generation, which sentiment has been embraced by many, whose works are to be seen in our Aphrodisiacus: on the contrary, you may there find a greater number of our own opinion.

T. This contagion does not propagate its poison with equal velocity in every body to which it is applied; but there are physical causes, by which its greater or lesser degree of malignity may be determined. We shall now endeavour to discover how this *virus* is rendered more active. Those authors who have

wrote on poisons, maintain, that when animals are dead the poison is extinguished: and they assure us, that if the virulent matter of this disease was perfectly cold, and in this state applied to a cold body, it is then innocent; but if the experiment is tried whilst both are warm, it then discovers its force. Therefore this contagion, passive in itself, is rendered active.

1. By the heat of the atmosphere; for the same cause acting on the same body in the midst of winter, will infect much less than in the heat of summer; and in proportion to the warmth of the season the disease will spread with more or less rapidity and malignancy. This is confirmed by experiments; and is the reason why, in hot climates, whole kingdoms have been depopulated in the beginning of this disorder: however, they have this advantage, that in those hot places, it is more easily and quickly cured.

2. By the temperament of the body; for if warm, the disorder is influenced by its heat; but a cold leucophlegmatic pituitous person is seldom or never affected violently; and when he is, can hardly ever be so perfectly cured but that some relicks shall remain. Hence in infants this disorder is known to be the most violent of all. Physicians have wondered, why Hippocrates has laid it down as a medical axiom, that infants are of a warm temperament, and on that account liable to certain disorders. They observe, on the contrary, that
no

no bodies are so full of fluids, and no fluids move so slow as theirs. This proves nothing: for we can demonstrate from Fahrenheit's thermometer, that if a man fifty years of age shall raise the liquor to 90 degrees, a healthful child will raise it two degrees higher.

It is therefore established by experiments, that if this disease is received from a nurse, and insinuates itself into such weak and tender bodies, it will act with the greatest violence, as appears from the case above-mentioned, where the nurse seemed to be very well, her disease not being conspicuous, while the child was affected in the most dreadful manner, suffering the most severe pains till it died: such symptoms are always to be observed in the cure of infants.

We may now infer, that such a degree of malignity as lies dormant in one person, will, in a warmer constitution, shew itself more plainly, and act with more vigour.

From hence we also understand the reason of that observation, made long since by Nicolas Massa, who was perfectly skilled in this disorder, *viz.* That a thin and refrigerating diet was of singular service in the cure of the *lues*; for if the heat of the body is encreased, by warm and acrimonious aliment, the poison is rendered more active.

Hence it is that the *lues* is so destructive to young persons, whose blood is warm, whilst old persons are less affected: in them the latent poison lies inactive, which, when received into

a youthful body, breaks out into a flame. Let it therefore be remarked, that the violence is ever proportioned to the degrees of heat; and those who are cold, either by age, temperament, or preceding disease, suffer no acute pains from this poison, but languish by slow degrees, never rightly enjoy their health, and are seldom cured by mercury. Hence we may infer the truth of what Hippocrates has laid down as a fundamental axiom concerning females, that their bodies are of a colder temperament than those of men.

Physicians have often wondered why prostitutes so long carry the infection, and that without any seeming inconvenience, notwithstanding they communicate it so easily to others. If the affair be well examined, we seldom find that common strumpets are so much exhausted thereby as men of warm, dry constitutions, and full of good juices. Women of a lax habit receive the disease more readily; but when received, it remains undiscovered a long time, and still longer without any material injury.

This disease is more or less increased in proportion to the *æstus venereus*, which the ancients called the inciting fire of Venus; for this reason the husband of Venus is called Mulciber, that is, Vulcan. Whence Virgil, in the 324th verse of his second Georgic, says,

Vere tument terræ, & genitalia semina poscunt.

In spring the swelling earth prolific seed requires.

And hence also the warm and fiery constitution is most prone to venery. The rage of lust is a true inflammation of the whole body; and the flames of Venus may be properly called a phlogosis or phlegmon.

This venereal impetus affects the whole body, but more especially the warmest parts; whence the genitals, by attrition, are instantly inflamed. In them the whole fire centers, which being continued too long, brings on a gangrene, as we have seen in a continued priapism; but this may be prevented by a section of the *vena penis*.

Hence, by how much higher this animal heat is raised in the infected person, the more active will the *virus* become, and that so precisely as to determine the degree of infection; and by how much greater the pleasure, so much the deeper it insinuates itself, and with proportionable facility and acrimony is propagated through the whole body. This has been always observed in practice.

But if the enjoyment is more moderate, all these effects are more slow and gentle; for the above mentioned symptoms are the consequence of the highest pleasure, as I have observed in a thousand instances. And this I have ever remarked, if a handsome youth, in the flower of his age, has commerce with a common strumpet, who perhaps was not capable of an increase of infection; yet if her passions were excited, by the aspect of his person,

person, with so much the greater malignity he will be contaminated: and I have always found, that if three or four of his gay associates are concerned with the same woman, the most agreeable have been the most severely affected. From whence it is clear, that nothing contributes more to the acrimony, contagion, and insinuation of this poison, than the mutual excess of passion in each other.

These things ought to be well considered by physicians; for none are so difficultly cured, as agreeable young men of sanguine constitutions.

4. All those things which render the body more warm, as air, motion, watchings, meat, drink, and medicine, have often proved the worst stimuli.

I have seen a thousand cases of young men, who, so long as they lived moderately and soberly, perceived no injury; but when they have indulged themselves in excesses of eating and drinking, the disease has discovered itself.

From which we may deduce this rule: If any one is cured of the disease, and remains free for a week or fortnight, and is nevertheless doubtful whether he is well or not, let him take the *theriaca diateffaron*, *philonium mesuæ*, *sal viperarum*, &c. In one word, let him take the most stimulating medicines, and then if any thing remains, it will immediately shew itself; and if nothing appears, there is
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the greater reason to believe the patient is cured.

You should be particularly cautious both in the heat of summer, and when the poison is in a state of dissolution by medicine, (for at that period the exhalation is greatest) lest, whilst you are serving others, ye yourselves are infected. I know many examples, where practitioners have justly bewailed their imprudence, who before thought it impossible to be affected in this manner: nevertheless there is nothing to be feared from such persons whose bodies, and the atmosphere, are both at the same time in a cool state; nor is there an instance of infection in such circumstances.

In the history of cures, it is evident that this contagion was never removed, except by a fever, by mercury, by anti-venereal decoctions, or violent sudorifics: and I have seen, and am convinced there is the greatest danger of infection when the disease is expelled.

I once cured an athletic gentleman, by the sweating, or Hottonian method, whose servant was infected in the most severe manner, on account of his strict attendance on his master. This was the more evident, because the disease first appeared in those places exposed to the air, as the nose, fauces, and external skin. Hence it may be easily conceived how much this contagion is then to be feared, and what
caution

caution we ought to use in the cure of such patients *.

I have now mentioned all those things that respect the causes of this disorder : It remains to treat of the places, which are first of all affected in the *lues venerea*.

* We may remark, that these were the reasons urged by the enemies of cardinal Wolsey, against his familiarity with king Henry VIII. left, by whispering in his ear, his majesty should be infected ; it being alledged he had the foul disease, at that time much more contagious than at present.

C H A P. IV.

Of the Parts first affected with the
LUES VENEREA.

ALL those parts which are exposed to the contact of external bodies, are covered by one common membrane, called *epidermis*. This is what is universally known and acknowledged, and also that it every where covers the true skin; but what this true skin is, physicians are not so well agreed about, as the *epidermis*, which is only a thin, solid, dense, and transparent pellicle, without any vessels.

This *cutis* is situated next under the *epidermis*. We first see the *papillæ* penetrating the *rete malphigii*: below this reticle there is a more nervous texture, from whence these *papillæ* rise; then follow vessels of every kind; and directly under the skin the cellular membrane, with its contents. The *campages* of the *cutis* is therefore made up of three different parts. *meat*

1. The dense reticular body, wherein is seated the black colour of the Ethiopian. This membrane is however very different from the *epidermis*.

2. Under this reticular texture there lies a series of nerves, whose ascending *papillæ* form the organ of touch: They are in such plenty, that the whole skin seems to be entirely composed of them.

3. Be-

3. Between the tegument of these nerves, there run vessels of every kind; and these three being wove together so compactly, anatomists have included the whole fabric under the denomination of *cutis*.

This skin may be infected, even where it is thickest. Nicolas Massa relates, that in his time, those midwives, who delivered infected women, received contagion in their hands. Vercellonius says, that a lascivious young fellow being in company with a prostitute, with whom he was afraid to be concerned for fear of infection, had soon afterwards some very malignant venereal ulcers and pustules on his hand. By neglect the disorder encreased, when he consulted a physician, who informed him it was venereal. The young man protested, he never had commerce with a woman, and that he had only touched her matrix with his fingers. By which we learn, that the skin is no where so impervious but that it will admit this disorder, as we have seen in the hands, though so remote from the heart: and even at this time midwives decline laying those women whom they know to be infected.

You are now fully convinced, there are no other parts of the skin less liable to infection than the hands. Arguments in support of this are needless. But those places where the skin is wanting, and covered only by the *epidermis*, are most of all exposed. The scarf-skin, as I have before observed, is extended over every part: the *cutis* leaves the *palpebræ* at their ciliary

ciliary edges; but Ruyfch has demonstrated, that their internal superficies is covered by the *epidermis* only, which is then reflected over the ball of the eye, contributing to its strength and connection. In the *nares* also, the *cutis* terminates, at two or three lines after its entrance, and then the whole schneyderian membrane is composed of the *epidermis*: so also in the lips, where the skin terminates, the cuticle proceeds, investing the *papillæ*: whence Ruyfch calls it *epithelion*, by which I understand the *epidermis* investing the *papillæ*, which is the case in the bronchia, fauces, stomach, intestines, under the *præputium*, in the *vagina*, &c.

Seeing this contagion is so subtle as to insinuate itself into every part, it is evident those are most exposed where the true skin is wanting, and at the same time accessible to external contact. An ulcer, for instance, on the *cutis* of the lip, will not make so speedy a progress as one on the *epithelium*; for there, the least will degenerate into an almost incurable ulcer: the blood-vessels running directly under the *cuticula* in these parts, gives them that red colour we see in the nose, lips, *præputium*, and *glans penis*; and therefore the poison insinuated into these parts, having penetrated the *epithelium*, is not received by the *rete malphigii*, but by the absorbing veins.

Another remark we meet with in Ruyfch, respecting venereal warts, which almost always arise in those places where the skin is wanting.

Many

Many years ago, Ruyfch filled all the arteries of an infant, by which the whole body appeared red: whilst this subject lay in maceration, the *epidermis* separated, but the *corpus reticulare* remained. In the lips, the *epidermis* was also elevated, but there nothing was seen but the erect nervous *papillæ*, resembling the quills of a porcupine, which were before retained in their situation by the incumbent *epithelion*: this is the reason why so many and bad disorders affect these parts; so that by the loss of a few particles of the *epithelium*, the most enormous *verrucae* are produced, and even the whole lip becomes cancerous.

The same is true of the *penis*: for when the *epithelion* is separated from the glans, its whole surface appears full of points: so that when its thin covering is by any accident removed in any part, there arises the most dreadful consequences.

There are then two places to which this infection may be outwardly applied: First, To those having the skin; and, secondly, To those covered by the *epithelium* only, under which are seated arteries and veins of every kind, with the sensible *papillæ*, most easily affected by the venereal poison, and by them the mass of blood is always contaminated; for the poison is most speedily conveyed through these passages.

1. The *nares*. Ruyfch has demonstrated, that the skin having entered the fixth of
an

an inch within the nostrils, there terminates, and from thence are lined by the epithelium only, whence its redness. If the venereal *tabes* affect these places, it is most difficultly cured; and it is here so easily received, that a man labouring under a simple virulent *gonorrhœa* receiving some of the venereal matter on his finger, and then unwarily scratching his nose, will thereby be infected.

2. The Lip, than which no part is more easily infected: if Fallopius and Nicolas Massa (which last has wrote most excellently on this subject) are to be credited, you will there see, that by a kiss only from an honest matron to her own child, who had sucked an infected woman, the mother received the disease, and was obliged to undergo the cure for the *lues*.

3. The inside of the mouth: for the worst kind of these complaints affect the tip of the tongue, fauces, cheeks, and gums. We also know that the palate, *velum pendulum*, *uvula*, and tonsils, are the seat of the most malignant ulcers. Vercellonius imputes these to a sympathy between the *fauces* and *uterus*: such causes are not to be admitted; but if the infected saliva is applied to these parts, it produces the very worst effects.

4. When the larynx and pharynx are infected, we may admit the possibility of a recovery; but if the cellular membranes and cartilages of the pharynx are penetrated by little venereal ulcers, I never saw an instance of such being cured: Paracelsus, who ever

speaks with an empirical positiveness, says, that he is able to heal this disorder in a few days ; but nevertheless, if they are cured, it must be the work of a long time.

5. The Nipples, with their *areolæ* : The breasts of the male as well as female foetus are full of milk, whilst they are contained in the *uterus* ; and men as well as women, on some particular occasions, have discharged milk from their breasts. Ruysch has demonstrated that the *papilla* is covered only by the epithelion, which being separated, its whole substance may be resolved into true nervous *papillæ* ; which is the reason why they may be as easily affected as the *glans penis* : the *papilla* in women is erected either by handling or giving suck : no part has canals more patulent than those of the nipple, according to Ruysch and Nuck, who have demonstrated that the arteries open into the lactiferous ducts, and these again into the veins.

6. The interior part of the *præputium*. This pendulous membrane deserves our consideration : it hath, 1. the *epidermis* ; 2. a moveable skin, which terminates at the first flexure inwards towards the *penis*. When the venereal *jordes* affixes itself on this part, and the *præputium* is again returned over the glans, the poison is thereby shut up in a warm place, and the *glans penis* will be infected : this is the reason why little ulcers so frequently arise here. If this part was well cleansed no such com-

complaints would succeed: but if the poison is there concealed, it is productive of the worst consequences.

7. The *corona penis*. This also is covered by the *epidermis* only, thro' which the patent orifices of the mucilaginous *cryptæ* open in a retrospect direction. If the *tabes* insinuates itself into these, they swell on all sides, and produce the *collare Hispanicum*.

8. The superficies of the *glans*. This is covered only by the *epidermis*, and furnished with a great number of veins, arteries, and nervous *papillæ*. The sanguiferous vessels, during the venereal orgasm, are greatly distended with blood, by the compression of the *venæ penis*: at which time the orifices of the epithelial glands are dilated, and almost naked; and the vessels lying directly under the epithelion absorb the poison when the *penis* becomes flaccid.

9. The *frenum* of the *glans* and *præputium*: a place the most easily infected of all others, as it is the very nearest to the interior superficies of the *urethra*. Directly above the superior insertion of the *frænum*, there are the largest *lacunæ* of that canal, where the *gonorrhæa* generally has its seat. From its vicinity with the *urethra*, it is evident this part may be easily infected in a *gonorrhæa*.

Besides these we scarcely find any other places in men where the *epithelium* alone covers the subjacent vessels. But in women,

Collare is Latin for a Collar or band, ^D ^{A.} The
not of same as *Corona Hispanica* p. 235, 282

A. The skin terminates at the lips of the *pudendum*; the *epidermis* however is still continued, and covers the internal parts; whence their structure much resembles that of the human *fauces*, and the genitals of men. It is not strange, therefore, that they are subject to the same diseases. Here, in the first place, we observe their *lacunæ*, viscous humours, and *viæ rugosæ*; all which are found no where in greater plenty than about the *urethra*, where it terminates in the *vagina*, behind the *clytoris*, near the *carunculæ myrtiformes*. Here it is every where surrounded by glands, such as we find in the *corona penis*, which pour out a smooth, oily, viscous juice, to defend these nervous parts from the acrimony of the urine. To these parts the venereal poison is chiefly applied, and from hence is commonly received by men. Besides,

B. This disease may arise also through the whole *vagina*, where it produces other complaints.

C. The internal orifice of the *uterus* may be infected. The *uterus* in women projects into the *vagina*; and that superficies of the *uterus* thus protruding itself from the internal orifice, as it proceeds forwards is covered with a great number of mucilaginous *lacunæ*, described by John Baptist Morgagni. This part however is but seldom affected with the *lues*; but when it is, it does not prevent child-bearing. In men this disorder is sufficiently apparent; but innocent women, infected by men,

com-

complain of heat of urine, &c. the causes of which they are ignorant of. We shall now treat of the Medical History of the *Lues Venerea*.

C H A P. V.

The MEDICAL HISTORY of the
VENEREAL DISEASE.

THAT part of the body which is first touched by the contagious matter is always first affected.

This is the opinion of the first writers on the subject, the truth of which hath never been questioned by any ; and may be adopted as a rule without an exception, and as a certain property of this disease. There is nevertheless one observation by which this rule seems to be somewhat limited, as to its universality ; but I believe, that in a thousand infected men, scarce one will be found, in whom the disease first discovers itself in any other place than that of contact.

Hence it is that this disorder appears in such various shapes, and that physicians are sometimes mistaken in such cases.

It is commonly thought that this distemper generally, if not always, affects the parts of

generation ; but this is not the case, unless they were the places of contact ; for there the disease first appears.

I have demonstrated that there is no place, whether covered by the skin, or *epithelium* only, but this disease may fix itself upon ; sometimes appearing on the exterior skin, as the hands, neck, &c. without any other apparent sign ; so multiform is this disorder : the knowledge of which is absolutely necessary to its judicious and proper treatment.

The very worst species of the *lues* is that which manifests itself without any preceding appearances on the genitals ; I mean that which propagates itself to the middle of the bones, and from thence to the *periosteum*, *membrana adiposa*, and throughout the whole body, although it never yet discovered itself in the skin. This was long since known, and remarked by Antonius Benivenius to be the most dangerous of all others : it is what I have had frequent opportunity of seeing, what I admit as a limitation of the general rule, and what is deservedly reckoned the very worst species of the venereal disease.

It is by no means true that this distemper always begins in the genitals, as many have asserted. Those who, upon examining these parts, and finding them free from venereal appearances, imagine their patients clear from infection, may be grossly deceived : for it sometimes happens that the poison, applied to a warm body, insinuates itself in such a manner,

as to leave no vestige in the place where it entered. This may seem improbable; but I have seen a thousand instances where a clean man, after being concerned with a prostitute, has at first discovered no bad symptom in the *penis* or skin; but in four or five days he perceives a kind of resistance in making water; at which being surprised, he presses the part with his fingers, and thus observes the first matter of the *gonorrhœa* oozing from the *urethra*.

Here we see the disease enters without any outward or apparent sign: it nevertheless proceeds inwardly, and produces a *gonorrhœa*, which, badly managed, degenerates into the worst ulcers, as we shall afterwards see.

It is therefore evident, from the nature of the disease, that the part first touched is first affected; but not so as to manifest itself always by external signs. The invisible poison pervades the minutest passages, mixes with the humours, and thus diffuses itself.

Herein physicians are frequently deceived, when consulted by those who strive to conceal this disorder. They ask if they have any complaint in the genitals, swelling of the testicles, groins, heat of urine, pustules, and such like. If they answer these questions in the negative, yet own themselves cold in the evening, and full of sharp nocturnal pains, which vanish in the morning, immediately it is concluded to be only the scurvy. Accordingly medicines for that disorder are prescribed,

but to no effect, as they can never cure the *lues venerea*.

I have seen many instances of this nature in men of warm constitutions, who laboured under the most malignant kind of this disease, without any external apparent sign.

One of the principal writers on this disease tells us, that some friends of his being at an inn, received the disorder from lying in a bed, which still retained the warmth of an infected person, who had just left it. Another celebrated author relates, that an acquaintance of his going too soon into a bed where a diseased man had been plentifully perspiring, caught the disorder, which broke out all over his skin in the most malignant ulcers. But however such remarkable effects are not always to be required as the proof of its existence in the place of contact.

The lips, fauces, and genitals, discover the infection by the most evident signs; yet it may not always visibly display itself in these places by outward symptoms, but penetrate farther, and choose the place from whence afterwards it may break out with more violence.

These things are testified by creditable authors, and I have seen them confirmed by many examples.

When I say that the place where the poison is applied first receives the infection, I mean not only the contagion conveyed by a prostitute, but any venereal contagion, and however received.

*I knew a gent at Cambridge get a Corona Venerea by
weaving for 1/2 a day, a wig sent him by Dr Parbot*

I saw an instance, in a gentleman of a delicate constitution, who laboured under a most malignant *gonorrhœa*, which could not be cured by the most eminent physicians. I had no sooner inspected the parts, than I saw the reason of its malignity : for the cloths, linen, &c. were full of the virulent matter, which lying in a warm place, continually reinfected those parts, producing fresh ulcers, &c. You remember that a little of the matter of a *gonorrhœa* applied to the nose on the finger produced the most terrible ulcers in that part.

Therefore where the poison is received, topical remedies must be immediately applied.

It is plain that this disorder spreads itself much farther than the places of contact or affinity ; for all the membranes of the glands are said to have such an affinity, that one being affected, the rest are affected also : and I believe that the *lues* has often been produced by a *gonorrhœa*, from the matter falling upon other parts, as we have seen in the example of the prostitute and young man, whose hand was infected by touching her *pudendum*.

In the cure of this disease, the remedy ought to be applied to the place first affected ; which corollary I deduce from a former proposition, as what will be attended with the most happy success. Others give internal medicines only, little solicitous about the affected part ; but we have learnt from experience to beware of such methods ; for thereby the disease is propagated. We ought therefore

fore to attack the part first injured, and by ablution draw it from thence.

From the preceding principles you see my method: but this will be further elucidated by what follows.

You know the parts usually affected; by what means; and when the *lues* first arises.

This disease was always known to be the most subtile of all others, mixing itself most intimately with the body. And you may see in Gabriel Fallopius, &c. who wrote at its first eruption, that it remained inveterately fixed in the body, without any apparent signs, for a considerable time, till at length it discovered itself by the very worst symptoms.

In America it broke out in pustules resembling the *scabies gallica*, there called *gans*, endowed with so subtile a contagion, that a sound person might be infected by its exhalation; such was its original subtilty. But when it was imported into Europe, the form it then assumed was very different from what it bore among the Americans, who were more easily cured.

1506 The first good writer, who has well described this disease, was Antonius Benivenius, a Florentine, who, in the Year 1506, published a tract *De abditis morborum causis & curationibus*. He there says, the symptoms, by which it first discovered itself, were pustules, which broke out on the genitals for the most part, tho' frequently all over the body, excepting the head, where they seldom appeared.

These

These eruptions, according to this author, resembled the small pox ; and because they first arose in Spain, were from thence called the *Spanish Pox*. These pustules now rarely occur, so that there is at present no reason why this disease should be compared with the small pox.

He then ranges this new disorder under six heads.

1. Pustules which were flat, and in no wise elevated above the surface of the skin, but scabrous in their superficies, of a whitish colour, and scaly, which scales being cast off, the subjacent parts were eroded. Such appear at this day, and are easily distinguished from every other ulcer.

2. The second species were small, round, squamous pustules, underneath which the flesh was very red ; from whence proceeded a stinking virulent discharge.

3. Plain extensive pustules, covered with large scales : under these was contained a considerable quantity of foetid matter ; and the ulcerated flesh was of a dark livid appearance.

4. Ulcers with whitish scales ; which being removed, a depression like a cicatrix appeared. Such we now see in the cure of a deep venereal ulcer, by which the skin and cellular membrane has been wasted ; for then the *epidermis* grows to the muscles, whence a foul and unseemly cicatrix. He further observes, if the ulcer discharges blood, it is then almost incurable ; that is, when an artery is eroded. This ulcer terminates at length in a dry

dry scab, and then the disorder is at its worst state.

5. Acute pains of the joints. I have seen, with great concern, a man perfectly well in the day, who, as soon as the evening advanced, was obliged to run about the house perpetually, on account of the most severe pains in those parts, which abated as the morning approached.

6. Deadly ulcers in the mouth and fauces. But why so fatal? Because the salutary effects of mercury were then unknown, by which alone these are curable. This was the state of the *lues* at its first eruption in these parts of the globe.

The next who wrote on this disorder was Leonicens, a most eminent physician: nevertheless, what he has said on the present subject is by far less accurate than the account of Benivenius. You cannot but observe, that in this period of the disease there is no mention of buboes, swelled testicles, *gonorrhæa*, &c. and that it was then very different from what it now is. This is the reason why those medicines, which cure in America, are here given without success. What is above related respects the first septenary of the venereal disease.

Ulricus Huttenius, a noble German, eminent for his skill in the military and civil arts, after giving a detail of his own miseries, hath remarked, that after the first period or septenary the genus of this disorder was amazingly changed; and that in the first seven years it

was

was propagated almost insensibly thro' Italy, France, Spain, Portugal, Germany, Hungary, &c. and even to the utmost borders of Scythia, where it was at length checked in its progress.

In the above description of Benivenius we see, that neither men or women were affected by a *gonorrhæa* during the first septenary; a symptom, of which they were then wholly strangers to; for the ancient *gonorrhæa* was quite another thing, and free from contagion: but had the infectious *gonorrhæa* existed at that time, it would without all doubt have been mentioned by our author; therefore that infection, which is now the almost certain messenger of the disease, had not appeared at that time. We now come to the second period of the *lues venerea*.

The Second Period of this Disease.

Nicolas Massa is an author who can never 1524
be held in too great estimation by physicians and anatomists, and whose works ought to have place in every medical library. This man wrote an epistle to a friend concerning the *lues venerea* in the year 1524, wherein he says, that he had with the greatest diligence and attention opened the bodies of those who died of this disease; by which he obtained a knowledge of what was peculiar to it. This was thirty years after its first appearance. He is a most accurate writer, and excels all those who wrote either before or after him, as we shall

shall presently see ; for whatsoever has been published as new discoveries, or medical *ar-cana's*, in the French academies of Paris or Montpellier, was known to him, even to the *unguentum therebinthinæ cum mercurio*.* In the year 1540 he wrote the history of the Venereal Disease, and twenty-four years afterwards he published an account of the method of cure, as practised at Venice and Padua ; which places he much frequented.

The last works of this capital author, on the present subject, were published forty-six years after the Origin of the *Lues* ; all which I have perused, and find they may be reduced to the six following heads :

1. He says, two different species of pustules broke out : these obtain at the present time ; for those which arise in the place of contact, soon after an infection is received, are very different from those, which are the consequence of that worst and deep-seated *lues*, which, tho' received outwardly, penetrates directly to the bones : for then, as Benivenius has remarked, it produces a kind of fermentation under the vessels, till at length it bursts forth in pustules from under the skin : from whence tumors, and other cutaneous affections, as phlegmons, ulcers, &c.

2. There arose pains in the limbs. At that time pains in these parts appeared very soon ;

* This was published by Dr. Cockburn as a discovery of his own ; at least he has omitted to acknowledge its proper author.

but now they are seldom felt in less than a year after the disorder was first received; nor even then, unless the patient has neglected himself intirely. Yet after such pains, pustules, abscesses, and ulcers, frequently appeared.

3. Many were destroyed by this disease, who never suffered any thing about the genitals, particularly infants. Then, he says, a friend of his lying in a bed, in which one with venereal ulcers had laid, contracted the *lues venerea* both inwardly and outwardly.

4. Pains in the head, and in the bones of the limbs: when these remitted, pustulous eruptions appeared. I have never seen such an instance; for at this time pustules do not succeed nocturnal pains, but nodes, tophi, and exostoses; and the larger and more eminent these are, the nocturnal pains are the more intolerable.

5. He describes serpentine, filthy, virulent, and deep ulcers, with callous and sordid edges, still remaining, nay proceeding in spite of the very best remedies: but in the palms of the hands, soles of the feet, and other callous parts of the body, there arose rhagades, or deep and dry fissures, or *fistulae*. I have seen some of these extremely troublesome, and incredibly deep in those places where the natural moisture has been dissipated by hard labour.

6. He says, besides the two pains before recited, there were nocturnal pains, which began in the evening and terminated in the morning. These were fixed in the bones, and caused
tophi,

tophi, nodi, exostoses, suppurations, corrosions, and at length a caries in the bones themselves.

In this author also we find no intimation of a *gonorrhœa*, tho' he wrote forty-six years after the first eruption of the disease; not a single word of that inflammation, or priapism, by which it is accompanied; or of a defluxion from the *pudenda* of women.

Therefore, in this stage we see that the disorder was received from external contact, and insinuated itself throughout the body, when the infected person perceived nothing at first but a melancholy dejection of spirits, &c.

But then there arose pustules, called pocks, and these terminating in ulcers, indicated the *lues venerea*. We come now to

The Third Period of the Lues Venerea.

Antonius Musa Brassavolus, the great commentator on Hippocrates and Galen, a man of consummate learning, and perfectly acquainted in the writings of the ancients, was the first who described the third stage of this disease: he was pupil to Leonicensus, the second who wrote on this subject, on which he is extremely concise and erroneous, deducing it from the *Lepra Arabum*; and all the symptoms he relates are taken from Benivenius. But his disciple Antonius Musa Brassavolus published a treatise on this disease at Ferrara, in the year 1534, where he says, that his præceptor, Leonicensus, had in his time wrote well on this disorder;

disorder; but that it now was very different, having for twenty-six years assumed other symptoms, so that from 1508 it was characterized by the following peculiarities:

1. He says, All those appearances remarked by former authors still continued, but that five more new symptoms were added to them.

A. Baldness, or a spontaneous falling off of the hair from the head, eye-brows, eye-lashes, beard, and other parts, accompanied with a horrid filthiness, particularly of the eye-brows.

B. Falling out of the teeth: This began with pain, and terminated in a caries. The first writers mention a corruption of the bones; but the teeth are of all others exposed most to the air and other injuries: they have not, however, said any thing of the above symptom. In reading the ancients, you will find they were not ignorant that *argentum vivum* impaired the teeth, and ejected them out of their sockets, as is remarked of those who work in mercurial mines: but this effect was first discovered in the time of Benivenius.

C. *Paronyxis*; or the falling off of the nails of the hands and feet.

D. A falling out of the eyes: This, he says, was in his time a most severe symptom. I have seen some instances of this kind, but it was always preceded by a malign affection of the *ossa spongiosa* of the nose; for these being corrupted, the sight perishes. When, for instance, the venereal poison insinuates itself into the *membrana schneyderiana*, then, as the os

spongiosum grows firmly to the *os unguis* and *planum*, both which compose part of the orbit; a caries of the spongy bone is easily communicated to, and as speedily destroys those very thin bones. The poison then always enters into the fat, which every where surrounds the eye, and there produces the worst venereal ulcer through the whole periphery of the globe: it appears first by a discharge of matter from the great angle and lachrymal gland; the *ductus ad nasum* is obstructed; and at length the whole eye is consumed, and falls out of the orbit.

E. He says, that in his time the *gonorrhæa* first made its appearance; which he describes precisely as it now is both in men and women. This symptom has continued ever since, only with this difference, that it was then accompanied with the *lues*; but in our age, where there is a *gonorrhæa*, there is no *lues*; and where there is a *lues*, there is no *gonorrhæa*. There are indeed some rare instances of both in one patient, but then such a one must have had the *lues* before the *gonorrhæa*. See the 159th page of our *Aphrodisiacus*.

The idea of this disease was therefore very different; for by the addition of a *gonorrhæa* it was greatly mitigated.

The cause of this disease at present is from the affected part in one person coming in contact with the uninfected part of another, by which it is received: to this there is but few
and

and rare exceptions ; for a man labouring under a *gonorrhœa*, if well cured, escapes free from the venereal disease. Gabriel Fallopius wrote most learnedly on the *lues* ; for at *Padua* and *Venice*, where he taught anatomy and practised physic, he had in those places the greatest advantages for knowing this disease : he says, that in the sixty-fifth year after its first eruption, the *gonorrhœa* was at length added to it. See *Aphrodisiacus*, pag. 780.

From what has been said, we ought to divide this disorder into two species.

1. The ancient *lues*, without a *gonorrhœa* either in men or women.

2. The modern *lues*, either with a *gonorrhœa*, or after one, that is, when a *gonorrhœa* degenerates into a *lues*.

The ancient *lues* without a *gonorrhœa* must be again divided into two sorts ; viz. that which discovers itself in those parts of the body which were the places of contact. This is the first species, and a most filthy *lues*, often arising without any apparent external sign : nevertheless, in a certain time afterwards it always manifests itself in the part where it was first received. The other is that which, without any intimation in the part where it was contracted, entered into the body, and then proceeded from internal symptoms to external effects. The first indications of the distemper were a melancholy sadness, pains, and at length pocky pustules, from an entire corruption and solu-

tion of the parts: these eruptions resembled the small pox, which is received, in our opinion, for the most part by the mouth, and swallowed with the *saliva*, exciting certain symptoms in the stomach; whence a fever, by which the poison is diffused throughout the whole body, and eruptions appear on the skin. This species of the *lues* in the same manner manifested itself from within outwardly, by which the internal pains were mitigated. This was always reckoned the most severe and terrible of every other, and in the highest degree consuming, wasting, and ulcerous.

The first Species of the Lues Venerea.

WE come now to the first species of the venereal disease, the knowledge of which is absolutely necessary to a sound and radical cure.

That I might give you a just idea of this disease, from the phænomena by which it is characterized, I have with all diligence reduced to order whatever I have either seen or read.

First, I shall speak of that species which arises on the external parts, evident to the sight and touch: and further, what are the primary and external effects of this local contagion.

A. *Pustules*: concerning which we observe,

a. That there is always a preceding change
in

in the affected place; from whence proceed these pustules, that is, small tubercles; which, however, seldom rise above the superficies of the skin.

b. These are at first exceeding small, resembling the sting of a bee; not always distinct, for oftentimes two or more are joined together.

c. They are constantly red at their first eruption: so that notwithstanding their smallness, they are true inflammatory tumors, or phlegmons, as Sydenham observes, where he says, that tho' he knew not the nature of the disease, all its effects might be referred to the *phlogosis*. This agrees with my own observations.

d. These pustules leave impressions like those of the small pox.

e. Hence an itching; which symptom succeeds here almost as soon as in the scabies.

f. The pustule then becomes scaly; that is, the *epidermis* is a little elevated above the red point, and thus forms the scales.

g. When the disease is of a milder kind, a humour is found underneath the scale; but when malignant, nothing is contained, and the spots are of a yellow colour.

h. After the elevation of the *cuticula*, the most lancinating and perpetual pains begin, like the biting of a dog.

i. It consumes the subjacent skin breadthwise, rarely in depth; which distinguishes it from all other pustules.

k. It then spreads into the *membrana adiposa*, having first eroded the skin. The margin of this ulcer in the *cutis* is then constricted, and a round perforation becomes apparent. This process is so regular and constant, that it may be esteemed a principal characteristic of the disease.

l. How far soever it spreads in the *membrana adiposa*, the ulcer always remains flat, and not in the least elevated; I mean in all those places covered by the skin, of which alone I am now treating.

m. As soon as the *epidermis* is elevated into a scale, if the part is destitute of large or oscillatory vessels, then crystallines, full of clear lymph, arise; so called by surgeons, on the account of transparency: but where the skin is wanting these never appear, as in the *glans penis*, lips, &c.

B. The matter discharged from the eroded skin,

1. Is always thick, and like the cream of new milk.

2. If the ulcer is of the worst kind, it becomes sanious: if it discharges blood, the ancients thought it was incurable; and Sydenham also pronounces such a case to be desperate.

3. This matter will not easily mix with water: it is wholly soft, and appears fatty, that is, it cannot be drawn out into filaments, like our natural nutritious humours, but flows like oil, tallow, or suet, when half melted.

4. It

4. It is always white. This whiteness is of a peculiar kind, and ever tinged with yellow, tho' in a very small proportion, but enough to be distinguished by the skilful.

5. It grows yellow when exposed to the air: which *pus*, chyle, or milk, never do naturally: when thoroughly dried, it becomes more yellow, or green, and gives a stiffness to the linen.

6. The first writers tell us, that this matter was always fætid: it is not so, however, at this time.

C. Pustulous Lines. These lines, zones, or margins, after the skin is destroyed, are, for the most part,

a. White, and but little inflamed.

b. They are always constricted, or condensed, that is, they do not swell, or appear spongy, but plain and smooth, as if they had been pressed on the body.

c. They appear as if they had been cut or scoop'd by a sharp instrument, applied in a central manner. In common ulcers the matter is expelled from the center to the surface, but in these it is determined from the center downwards into the *membrana adiposa*.

d. These *limbi*, or margins, are not immoveably fixed; for if the zone or circle they form is impressed by the finger, it gives way, and the skin, at that time, seems as it were to slide over a subjacent cavity. This is caused by a greater exsion of the *membrana adiposa* than of the skin itself.

e. They are without that vivid or lively colour, caused by inflammation, in every other species of ulcers.

D. The bottom of a venereal ulcer is

a. Always red, without either corrosion or foulness; because it hath already destroyed those parts investing the muscles; but these they leave untouched, possessing their natural colour. This is a circumstance observed in the most ancient times, and was noticed by Benivenius, Leonicensus, Massa, and Fallopius; and where this is, there is always the *lues venerea*. I remember an instance of a gentleman, whose whole leg, from the knee to the *astragalus*, was totally dissected by a bad ulcer of this kind: the circumjacent parts were so perfectly consumed, that the muscles appeared in their genuine vivid colour to the eye, altho' the disease had been years in producing this effect.

b. It is for the most part plain, and never unequal, unless its natural tendency is altered by the position of the muscles.

c. It is never deep, proceeding no farther than the superficies of the muscles.

This is as far as I am able to discover the genuine idea and description of this species, the origin of which is above related.

They are most difficult of cure; that is, so long as any infection remains in the *membrana pinguetudinosa*: but if, in the beginning of the disorder, that part of the membrane, with its fat, together with the retracted edges of the ulcer,

ulcer, are wholly consumed by an external application, the cure is then easily and almost instantly performed: yet if the least particle of the tainted fat remains, the disorder creeps laterally, and will again produce the same effects. To this alone that obstinacy must be attributed, which some think can never be removed but by mercury, or medicines prepared from that mineral: this however is not the case; for if the actual cautery *oleum vitrioli*, *lapis infernalis*, *spiritus nitri*, *spiritus salis*, &c. are properly applied to the part, it will be certainly cured. Such happy effects are not to be obtained by the use of mercury alone. If the white or red precipitate is thus applied, the cure will be perfectly accomplished: nevertheless, this is not the effect of the mercury, but of the nitrous spirit adhering to it, which is a species of *lapis infernalis*, and very corrosive; a property which does not belong to mercury. The very best deterging medicines, as Aloes, Myrrh, Unguentum Ægyptiacum, &c. however famous, are of no use in the cure of this disorder.

In this stage we see the observations of the ancients verified, that when the disease is once begun, it never penetrates into the body, but propagates itself through the *membrana adiposa*, under the part where the skin is perforated. In such a case, if the physician is not careful to extract all the matter of the ulcer, it will spread in the subjacent fat, and new pustules
arise,

arise, which may be diffused all over the body. Such instances are now to be seen.

p: 293 When the *membrana adiposa* and skin are thus consumed, they are never afterwards restored (tho' the cure is performed in the best manner possible), but a sort of cavity remains, from the loss of substance. For the skin consists of nerves, arteries, and veins, which once lost, are never regenerated, but form a cicatrix, by the fortuitous coalition of the lateral vessels; which place never afterwards sweats or perspires. Hence you see, that when the skin and *membrana adiposa* have been wasted by this disorder, the cicatrices are always concave, and induce a solidity and rigidity on those parts. I have seen a man, after having been many years afflicted with such ulcers, whose whole body was full of cicatrices, to the great deformity of his person; but the disease had never reached the bones.

The cure of this disorder consists in the thorough separation of the *virus* from the body.

There is no part inaccessible to this poison: I have seen a man, in whom the whole cellular membrane, and skin of the face, were so much eroded, that only a thin pellicle cover'd the muscles; from whence the whole face was drawn into wrinkles whenever he laugh'd or spoke.

This is the appearance of the *lues venerea* from an external cause, when received into the *membrana adiposa*, covered by the *cutis*.

If

If such an ulcer arises, and is constricted by *lapis infernalis*, or *mercurius præcipitatus*, yet if the smallest particle of contagion is left in the fat, the disorder, then concealed by a scab, will become abundantly more severe than if the ulcer had continued.

And if such a venereal pustule occupies a part destitute of muscles and *membrana adiposa*, something of a very different nature will arise, which is the second species of the ancient *lues*. It nevertheless demands our consideration, as it is also a modern disease.

The Second Species of the Lues Venerea.

Wherever there are strong and active muscles, there is likewise the *membrana adiposa*, endued with a considerable quantity of oil: but where there are no such muscles, or only a few, and those weak, a less quantity of the *oleum adiposum* is found; and in all those places, where there is only muscular fibres, the adipose membrane is totally deficient, or at least only its shadow is to be seen; and where there are no muscular fibres, not the least fat can be perceived, but a humour much more thin and subtile. The bones indeed are to be excepted, as they have their peculiar oil, or *medulla*.

All the muscles lie next under the exterior teguments, composed of the *epidermis*, *cutis*, and *membrana adiposa*; so that in whatever part of the body the muscles are in considerable numbers,

numbers, as in the *thorax*, *abdomen*, *nates*, &c. there the fat is accumulated in great abundance; and where there are no muscles, as in the *penis*, there is no fat, but only the flaccid cellular membrane.

This membrane receives different appellations: 1. Adipous; 2. Mucilaginous, where it surrounds the tendons; 3. The cellular, of Ruysch.

Where muscles are wanting, there is no fat; and in such parts the membrane is either cellular or mucilaginous; but when fill'd with fat, is then called adipous, when it appears like one uniform dense body. The mucilaginous membrane seems to contain nothing, except when it is inflamed; then indeed it is greatly inflated, as we see in the *scrotum*, and between the two *corpora cavernosa penis*.

The venereal poison is different when it affects those places which are destitute of muscles and *cutis*; first, because there is only the cellular membrane, which has indeed a liquor somewhat oily, but without any visible solid consistence, is easily dilated, and when inflamed incredibly distended. Thus when an ulcer has eroded the *epithelion* of the *penis*, we sometimes see the worst consequences arise, as appears in the priapism; but where the *cutis* is, no such effects follow. The matter in this membrane is soon converted into a thin fluid, like lymph or water: for which reason the disorder seldom continues long in that place.

The second difference is, that this membrane does not admit of the ulcer's spreading under the teguments, but restrains it within certain limits. If a little ulcer arises on the *penis*, on a part uncovered by the *cutis*, you may observe it never spreads, because there is neither *membrana adiposa* or skin; but such an ulcer on the *dorsum penis*, or any other part envelop'd by the *cutis*, will be seen to increase; for in all such places these ulcers are surrounded by callous edges.

The third peculiarity is, that these ulcers are both deep and spongy. The cellular membrane of Ruyfch surrounds all the vessels, nerves, and tendons: if an erosion commences here, it insinuates itself between the vessels, and thus penetrates still farther. This is evident in ulcers of the *penis*, which are always spongy, and produce *fungi*. The vessels in that part are infinite, every one of which is covered by the *tunica cellulosa*: the poison therefore may easily pass between them from vessel to vessel, and so the whole part may become spongy, as appears in the *glans penis*. But in other places, covered by the skin, the ulcers are restrained between the skin and muscles: hence it is they never swell, but, by perforating the skin, discharge great part of the infection.

In the fourth place, these parts are full of *papillæ*, or extreme points of the nerves. You know that after a successful injection, all the subcutaneous arteries are filled with wax: the
subject

subject being afterwards macerated for a few days in tepid water, the *epidermis* then begins to putrefy and separate; when the nerves, being thereby delivered from their confinement, become apparent, especially in the lips, nipples, tongue, fauces, &c. A great anatomist of the present age denies the existence of these *papillæ*; and that because, when he examined such a preparation with a microscope, he found the *septa* between the minute vessels injected, and white in the inside. But if these are not nerves, there are no nerves in the body; for we know they are all wrapt up and conveyed in their *vaginæ*, as evidently appears by tracing them to their origin in the brain.

The preceding fact being established, from thence I deduce a fourth reason why different disorders may occupy such parts: for these *papillæ* being composed of the extremities of the nerves, are all included or covered by thin expansions of the cellular membrane, called *thecæ*, which are excessively tender: through these a very subtil liquor continually transpires, and never becomes visible, unless in a diseased state. Hence it happens, that if a disorder arises in these parts, the poison insinuates itself into the interstices of the membranes, so that the nerves are left bare and exposed: the ulcers arising from thence are of a different genus, and of all others the most painful.

It has often been asked, What difference there is betwixt a cancre and common ulcers?

I ans-

I answer, A cancre is an ulcer of the nerves ; others arise either in the glands or the *membrana adiposa* : therefore these ulcers are most painful and verrucous. View every species of venereal ulcers, and you will then see, that verrucous excrescences never arise, but where there is a great number of nerves, as the *glans penis*, lips, nipples, &c. But it will be asked, What are these warts? Where the *papillæ* emerge, there their *vaginæ* are separated from them ; and when these are macerated by an extravasation, they degenerate into a cancerous ulcer. When this happens at the *corona glandis penis*, the whole *corona* is thereby so much affected, as not to permit a retraction of the *præputium* ; then *verrucae* arise, with sharp ulcers : but these are smaller, deeper, more spongy and penetrating than those of other parts.

Fifthly, All those parts wanting the skin, and *membrana adiposa*, are also destitute of active muscles.

Muscles, by their perpetual contraction and relaxation, have a kind of repulsive power, by which they expel the humours from themselves into their investing tunics. This is the reason why diseases proceed no farther. I have seen a young man, who was affected by the worst degree of the *lues*, whereby the whole exterior fat of his body was consumed, so that I could distinguish the fleshy bodies of the muscles of his back ; all which were perfect and intire, being only deprived of their fat.

When

When I was speaking of the first period of this disorder, as described by ancient writers, I mentioned it as a common observation, that the muscles were always found red and intire. But as the parts under our present consideration have no muscles, and consequently make no resistance to the venereal poison, the symptoms must be different. Muscles, then, may be considered as the natural barrier to this disorder.

The Third Species of the Venereal Disease.

THERE is a remarkable difference in the cure of a muscular part, where the disorder may be repelled or stopt by external pressure; and of a part destitute of muscles, where there are no restraints to its progress.

All those parts having neither skin, adipous membrane, or subjacent muscles, are almost contiguous to the *periosteum*: these being affected, produce a third species of this disorder.

Those who have wrote on this disorder, and omitted the above distinction, are not only deficient, but at the same time the cause of great mischief.

These parts are contiguous to the *periosteum*; as in the nose, where there is no muscle, except the *musculi minutæ* of Eustachius and Sanctorius; but the whole internal membrane of the nose is almost wholly vascular, consisting of arteries, veins, and mucilaginous *cryptæ*.

In the mucous sinusses the membrane is also of a similar construction, and lies upon the bones without any intermediate skin; so that the disease is no where more terrible than here: for when it once comes to these parts, and erodes only the thickness of a finger nail, the bone is immediately denudated; and as it is furnished with vessels from its membrane, and is also very thin, the vessels being once eroded, it becomes carious. The same thing obtains in the *fauces*: you know that the *velum pendulum palati* adheres to the posterior part of the palate, covered only by a simple membrane, with six or seven muscles inserted into it: in other respects it is nothing more than a congeries of mucilaginous *cryptæ*, with a little thin fat, and is connected with the *periosteum* of the palate, without a single muscle for its defence. I have often seen the *os palati* diseased in the very worst manner, from its vicinity with the *velum*. Anatomists have demonstrated that this membrane is intirely composed of the superior and inferior *periosteum* of the palate: it is therefore a production of the *periosteum palati*; of consequence the palate may be easily infected from a disorder of the *velum*.

The other part of the *fauces* consists of the tonsils, one on each side: But what are these? They are commonly called glands: nevertheless there is not in the whole body a structure more admirable than here; for its membrane is convoluted over cells and *papillæ*; the cells

are filled with *mucus*, which is discharged when the *fauces* are compressed: these are often greatly inflamed in other disorders as well as the *lues*. Aretæus Cappadox says, in his book *de morbis faucium*, such a fætor arises in these parts, as sometimes proves mortal. If such is the case in common diseases, what may not happen in the *lues*? I have seen a gentleman, who from this complaint had such a foulness in these parts, that he declared, if it was lawful, he had rather destroy himself, than endure it any longer.

This membrane of the *fauces* adheres by its posterior part to the bodies of the cervical *vertebræ*, and is of a most curious texture. See the figures of Valsalva and Morgagni. It is wholly filled with mucilaginous *cryptæ*, and coheres by its posterior superficies to the *periosteum* of the *vertebræ*, without any intervening muscles, which are found only on the sides. When I attend those afflicted by ulcers in this part, I consider a cure as the most fortunate and unexpected event: for I remember a young gentleman in whom these parts were so much eroded, that the bones of the *vertebræ* appeared naked, of which he afterwards died. It is now evident, that not only the situation of these parts is to be considered, as they respect the *lues venerea*, but also their structure, which is affected by that disease; for the *lues*, when seated in the arm, is of small prejudice; but in the *fauces*, of the most injurious consequence.

The Fourth Species of the Lues Venerea.

NOW follows the second class of those parts which lie on the cellular or mucilaginous membrane. And, first, as they are in women. You know that the *cutis* terminates at about half a thumb's breadth within the orifice of the *vagina*, where it appears as if cut off; and there a membrane like the *epidermis* leaving it, proceeds inwardly, investing all the parts. Directly under this there lies another membrane, which, as Valsalva, Morgagni, Ruysch, and Sanctörinus remark, is furnished with a very small muscle: the *clitoris* also has a muscle: the remaining parts are wholly membranous, and like the *velum pendulum palati*, consisting of arteries and veins: betwixt these are arterious and venous emissaries, with the excretory ducts of the mucilaginous *cryptæ*; and near the *urethra* there are more than twenty-four little glands, called also *cryptæ*, which emit a liquor like the *mucus* of the nose: its use is to defend the circumjacent parts from the acrimony of the urine; for women do not discharge the urine in a strait line, but thro' the fissure of the *nymphæ*: these are also furnished with *lacunæ*, which eject a smooth liquor for their defence against the heat and friction of the water.

Here is neither bone nor fat; which ought to be considered, that we may form a right judgment of the *gonorrhæa* in women.

All these parts, both in men and women, are extremely dilatable, sometimes flaccid and sometimes tense.

The whole *uterus*, with its appendages, is of a fungous and spongy texture; for if you separate it carefully from the muscles, cleanse it from all its blood, and then inflate and dry the preparation, you will find it to have no weight, being a mere airy *flatus* composed of membranes and vessels: and even in the living body, when destitute of flowing humours, it has little substance, as in old women and young girls. No part, therefore, is capable of being more materially injured: and when a *gonorrhœa* is received in this part, it continues distinct, or uncompounded with a prior disorder. For instance, if a person already infected with the *lues* imprudently catches a fresh *gonorrhœa*, her *lues*, though of some time standing, may be cured by mercury; whilst the *gonorrhœa*, which is nothing else but an ulcer seated in this spongy part, will remain. The same difficulty of cure attends the nipples, &c. when ulcerated; for in such places the same changes are produced by a venereal stimulus as in the masculine *penis*. Vercellonius tells us, he saw a foul woman in one of the stews, with an ulcer near the *clytoris*, that had spread itself over the *os pubis*, and destroyed the whole fat of the *mons veneris*.

Similar disorders prevail in all parts whose structure is similar to the *penis*.

When

When an ulcer is found in other places, where the contexture is more firm and compact, a separation follows: but that is not the case here. If it should be asked, what surgeons mean by *separation*? I answer, It is when the arterial juices are vigorously impelled by the *vis vitæ*, and produce such a degree of motion and extravasation, as to separate the living vessels from the dead, which afterwards dissolve by suppuration. No art can produce such effects in the dead body.

If the venereal infection gets admittance into these spongy interstices, there it lurks, as if it was in a part quite void of sensation, till the blood, agitated by venereal passion, fills and distends these parts, and sometimes lacerates them. This circumstance renders the cure so difficult.

You must now see why the strong *tunica cellulosa* of Ruysch, which surrounds the *corpora spongiosa*, is very rarely affected: it is this membrane that with so great a force restrains the extention of the *penis* in a priapism. If this coat is injured, a *hernia* of the *penis* follows; for the spongy substance then becomes luxuriant: but so great is the solidity and strength of this tunic, that it is seldom penetrated by the *lues venerea* *. Hence also
arises

* At first, when the *tunica Ruyschiana* is by any means destroyed, the *penis*, especially if erected, will bend in an opposite direction to the injury; but if that member is kept in a flaccid state, without which the wound can hardly ever be healed, and so cured, then it will be in-

arises the disorder called *chorda tensa*; which is when the cavernous substance of the *penis* is extended and swelled: this most commonly happens in bed, as soon as the patient is warm: he cries out with pain, which he describes as tho' his *penis* was violently squeezed in a press. If this membrane is destroyed, the disorder, proceeding to the great vessels, produces a fatal hæmorrhage, which can never be stopped, unless a catheter is introduced into the *urethra*, and the orifice of the bleeding artery is constricted upon it by a ligature.

Having now discussed the necessary preliminaries, we proceed to the disease itself. You are convinced, that a difference of place produces a difference of disorder, according to the nature of the part affected. You are also satisfied, that the *lues* is of a most subtle nature, a property, which it hath retained from its origin to this time. We denominate that to be a poison, which, when applied to a living human body, changes the humours, induces diseases, or causes death. The matter of the venereal disease may justly be called a *subtile poison*, capable of being propagated by coition, concubition, or exhalation. This poison, however, does not affect the blood, or at least such an effect is not perceivable: for in the ancient

flected on the side where the cicatrix is formed. This effect, however, may be prevented in a great measure, by prudently counteracting that disposition. I have seen many instances, where the *penis* has been amazingly distorted, deformed, and disabled; all which, I believe, might have been avoided by care.

lues

lues the ulcers broke out, when the pains abated; but there was no change in the blood. The possibility, however, of its being again discharged by *diaphoresis* must be admitted, especially in those warm countries; but when communicated to less perspirable places, it is always obstinate in proportion to the tenaciousness of the part.

C H A P. VI.

Of the Virulent Gonorrhæa in Men.

I SHALL here speak of the first stage of the *gonorrhæa* in men; I mean that which appears immediately, or soon after infection. This distinction is also absolutely necessary to prevent confusion, since patients are apt to think, that the second, third, &c. *gonorrhæa* are the same as the first. By observations, however, an essential difference may be discovered; for that which arises at first in a sound body differs greatly from a sixth, seventh, &c. For instance; a man in perfect health for the first time of his life receives a *gonorrhæa*: such, of all others, will be the most simple; but if other parts are thereby affected, it then becomes more complex.

This *gonorrhæa* is called virulent, in opposition to the *gonorrhæa mitis*, whose symptoms

F 4 *It being simplex is a better word*

88 *Of the Virulent Gonorrhæa in Men.*

are in all respects the same, only without infection *; but when the virulent matter is applied to another, it excites the most violent inflammations, ulcerations, excoriations, and pains: this therefore demands a prior attention, because it is now the first symptom of the *lues venerea*; for in a hundred cases, ninety-six at least are thus originally affected. I admit indeed there are some very rare instances, where the body may be internally affected without any preceding external sign.

The *gonorrhæa* is a disease evident to the senses. By diligent attention I have long since discovered the true seat of this disorder to be never above an inch within the *urethra*: its whole matter may be examined; and an external ulcer appearing in the skin is precisely the same as one seated inwardly.

It is a preservative against the *lues*. It was observed by those who wrote at the first eruption of this symptom, that the *lues venerea* was greatly mitigated, and even cured, by this discharge †: and it is certain, whoever

* See Note, p. 26. *Surgeon page 28*

† I doubt not but many, who have made accurate observations on the *lues*, have seen some modern instances of such cures. I have lately had under my care a man who was twice salivated for a true chronic and deep seated *lues* without success, his nocturnal pains still continuing: at length a stricture of the *urethra* gradually came on, which the bougie removed, but excited a plentiful discharge, which continued for some time. A large abscess formed itself on the *dorsum penis*, near the *os pubis*, and discharged a great quantity of matter: the internal symptoms abated when the running came on, and went off entirely

ever cures this symptom, cures (or at least prevents) the foul disease. Many, I know, are of a different opinion: but for my part, I have never seen an instance, where the body was first affected with a true *gonorrhæa*, in which one symptom of the *lues venerea* arose afterwards, if the former was well cured. But this cure is performed by a peculiar method, and singular remedies: for tho' the *lues* has such a variety of symptoms, not one of them is to be treated in the same manner as a *gonorrhæa*.

It is called *gonorrhæa* from *γονη*, *genitura*, seed, and *γονή*, *fluxus*, flowing. The ancients thought it was discharged from seminal vessels lying in the *urethra*, and thence called it a *genital flux*: but nothing is more false; for no man, however prolific, could generate so much seed as is discharged in a *gonorrhæa*: for I have seen, in the space of twenty-four hours, whole cloths filled with that liquor: therefore it does not come from the seminal vessels, but from the anterior part of the *penis*: for if a man under this complaint presses his *penis* a little above the *corona*, before he emits his urine in the morning, it will then be seen to flow most copiously; if again he presses the *urethra* as high as the *os pubis* or *perinæum*, still nothing more is discharged; but if matter

tirely when the abscess was formed. Might not therefore the bougie, or a stimulating injection, be sometimes used as a probable means of deriving the poison from the body into the *urethra*? a canal which nature seems to have elected from the earliest time for the discharge of this disorder.

flows

flows from the last-mentioned compression, it is not then the *gonorrhæa* of which we are now speaking, but another species. From hence we may be assured, that the matter discharged in a simple *gonorrhæa* does not proceed from the prostate gland, or seminal vesicles.

Some persons in this state have strong erections, and are full of good semen, so that they can hardly restrain from venery; and therefore this discharge hath nothing in common with the seminal fluid. The ancient *gonorrhæa* indeed was attended with a venereal impotency, but that is not the case here.

The matter likewise shews this flux not to be seminal: for the semen has a certain colour and spissitude; and appears different from the matter discharged in a *gonorrhæa*, which hath the consistence and oiliness of soap or tallow, and when dry grows yellow or green, giving a rigidity and dryness to the linen: hence I would wish no longer to call it a *gonorrhæa*, but a virulent venereal suppuration of the inferior part of the *penis*.

Such is the *gonorrhæa*; which, according to Fallopius, Massa, and others, never appeared till sixty-five years after the eruption of the *lues*, which from that time greatly abated in malignity. It must be confessed however, that the *gonorrhæa* is sometimes attended with very bad symptoms; yet these arise from neglect, especially in young men, who are apt to be guilty of excesses: then indeed the worst consequences may arise.

The first property of the *gonorrhæa* is,

A. That it never arises but by contagion from an impure woman, I have cured many persons who have alledged a different reason; but, after a strict enquiry, I always found it owing to that cause. Married men attribute it to a commerce with their wives during the *menstrua*; but physicians are not to be imposed upon by such pretences. In the summer, indeed, when the *menstrua* are rendered more acrimonious by heat, a man may receive an inflammation, but not a *gonorrhæa*.

B. A woman not infected herself may communicate a virulent *gonorrhæa*: for it is well known that a prostitute, who is not diseased, may receive and retain the *virus* in her *vagina*; with whom if a man has commerce, he will be infected, tho' the woman is perfectly sound. The same thing obtains in the catarrh: in a healthy man the Shneyderian membrane is almost dry; yet in this disease it yields a profuse discharge of liquor. If therefore any poison is then applied to it, it will be expelled by the current humour. So in the *fluxus albus* of the *vagina*, the poison is carried outwards with that discharge*.

2. This

* To gratify the desire of some patients, who have been infected with a *gonorrhæa* from women who have positively persisted they were clean (as well as my own curiosity), I have several times examined the *vagina*, &c. of those women; when I found those parts in some perfectly dry, and of a natural aspect; in others soft, relaxed, and moist, with more or less discharge, such as we see in the *fluor albus*;

2. This disorder manifests itself after coition ; but at uncertain and unequal periods. I once saw an instance in a friend of mine, who contracted a *gonorrhæa* by contact only, without compleat coition, which broke out the second day afterwards : at other times it is three, four, five, or fourteen days, and even several weeks, before it appears ; but the later it is discovered, the more malignant are its effects.

A 3. The first sensation in the *penis* is rather troublesome than painful : this is universally experienced. If you ask what they feel, they answer, a stricture or compression of the part ; a symptom that has always attended the *gonorrhæa*, from its first eruption to this time.

4. A greater degree of pain succeeds : this is accompanied by a sensation, as if the testicles were distended, and as if they were impeded in their distension. This the patient calls a rolling of the testicles, which are also swelled a little, more or less.

B. 5. Little spots arise on the superficies of the glands : these are of a deep red, small,

bus ; the *lacunæ* about the *urethra* neither ulcerated or callos. From whence I concluded those women were not themselves diseased, altho' they communicated the infection to others. The reason for this is assigned by our Author, *viz.* the flux of humours in that part : but as the same effects arise from a commerce with others, whose *vagina*, &c. is perfectly dry, I impute the freedom of the latter from such diseases to a kind of callosity induced by frequent attrition, by which those parts are rendered impervious to a venereal *virus*, tho' retained for some time ; during which a man having commerce, may receive the infection, the woman still remaining free.

plain,

plain, and exactly like the bite of a flea. It resembles also the measles, or small pox at their first appearance. This happens only to persons in the ardor of youth, and not to those who have been several times infected. Old men, and persons whose *præputium* is either taken away or rendered callous by attrition, are not thus affected.

A *gonorrhæa* in a man who has often had this disorder, is worse than in a young person whose *præputium* is entire; for in proportion as the part resists, and yet is overcome, the more violent is the disease. Young persons are soon well of the first infection, whilst old men are almost incurable.

C. 6. When the above-mentioned pustule appears, the sense of distention is greater, and more tedious and fixed than before. Those who have not this symptom, feel as it were a worm creeping thro' the *urethra*: at this time the orifices of the *lacunæ* are opening, which is immediately followed by a discharge. †

7. As soon as this arises, they cannot help compressing the *penis*; by which

D. 8. A liquor is emitted, which is the first true degree in the course of the disease.

1. This liquor is at first as white as cream, very little in quantity, and discharged so slowly that it produces hardly a drop in an hour. Its flux is increased by pressure: so that by how much more the *penis* is compressed on account of uneasiness, by so much the disease is increased. Helmont the father has justly remarked, that
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those who frequently blow their nose in a catarrh, are cured with great difficulty : the same effects are produced by frequent compression in a *gonorrhæa*.

This liquor always proceeds from the anterior part of the *urethra* : for in the first degree it can never be expressed farther than from the posterior circumference of the *glans* ; and you will find, that much the greater quantity of what is then squeezed out, comes from that part of the *urethra* into which the *frænum præputii* is inserted ; for there the *glans* is wanting, and nothing is interposed between the *frænum* and *urethra*, except a membrane hardly equal to the thickness of a finger nail.

This liquor is thick : its spissitude is greater than that of cream ; and it is pinguous, like a fat oil, or melted tallow.

Its quantity increases every day successively, if it follows its own course. I am not ignorant that this natural course is sometimes interrupted, and that when the flux is suddenly very great, it again as suddenly ceases ; but then there is some change in the disease, by violent exercise, excessive drinking, &c.

At length it arrives at its greatest quantity ; after which it does not increase. In this state it frequently fills several cloths in twenty-four hours time.

2. This liquor, by degrees, changes from white to a yellowish hue, or, as the Greeks call it, *ὠχρολὸν ἢ χον* vel *ξάνιδινον*.

3. From yellowish it becomes greenish, and so on gradually to a real green. Herein it much resembles a catarrh of the nose, where there is first a tumor of the membranes, and then a white *mucus*, which in the morning becomes yellow: if the disorder increases, it turns green, which is its worst state. So also the green denotes the worst *gonorrhæa*; but when it again returns to a yellowish, and then to a white colour, the patient is soon cured.

This liquor by degrees becomes amurcous, sanious, and brown. *Amurca* is the gross residuum of oil adhering to the bottom of the vessel, appearing like sand mixed with the thickest oil. So also in a *gonorrhæa*, when something is perceived of this kind, it is then amurcous: at the same time a sanies is discharged, more or less thin and acrimonious, distinguished by its colour, which is either watery, yellowish, green, or brown: this last colour always indicates the greatest malignancy; and if the physician should be as fortunate in the cure as he can expect, a constant gleet will ensue, the consequence of a brown discharge: for the cellular fabric of the spongy bodies being eroded, *fistulæ* are formed in them, which in length of time utterly waste and destroy them.

5. This liquor is sometimes thin and bloody. This is the extreme point, or last symptom of the *gonorrhæa simplex*. At its first appearance, Benivenius and Nicolas Massa have described one species of the *gonorrhæa*, where blood was dis-

discharged, as incurable. At this time there are two kinds to be noted; one where blood alone is discharged, the other where *pus* also appears, which is of bad consequence; for this last not only shews that the cellular tunic is eroded, but that the strong and tough membranes of the *urethra* are penetrated; after which callosities always remain, and the structure of the arteries is dissolved, so as not to unite again, on account of the constant irritation.

6. This discharge stiffens the linen when dry, which feed seldom does, and has a peculiar colour, by which it is always distinguishable.

This is all that relates to the *Matter* of a true simple virulent *gonorrhæa*, from its first beginning to the end of that disorder.

E. a. The parts thro' which this liquor is conveyed, are generally inflamed, in a manner exactly similar to that we see happens on the *glans*, when the *morbillum* before-mentioned arises on its surface.

During sleep this matter, viscous in itself, is sometimes inspissated or dried, and by it the sides of the *urethra* are glewed together. When this cohesion extends to the *sphincter vesicæ*, it there excites a stimulus, followed by expulsion, with a sense of pain in the *urethra*: but this effect is never so troublesome as when the matter is retained betwixt the *glans* and *præputium*. Where cherished by the nocturnal heat, it produces pains and inflammations,
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by which a good may degenerate into a bad *gonorrhæa*. These effects may be prevented by proper caution.

b. It excoriates the parts on which it lies. The membranes covering these places are so extremely thin that they scarcely deserve that name, being only a contexture of vessels; and this *gonorrhæa* is seated only in the anterior portion of the *urethra*, where they are the thinnest of all: for the more nearly they approach to the *vesica*, they are proportionably thicker: the fore part of the *urethra* is therefore easily excoriated by a retention of the matter, especially in that place where it lies on the *frænum*, as it is the thinnest part, and where also the great concavity observed by Morgagni is to be seen; where, if a *gonorrhæa* of the first species is not well cured, some remains is frequently to be found.

The superficies of the *glans* is liable to the same excoriation, whose fine arachnoid tunic invests the most sensible nervous *papillæ*.

A third excoriation may affect the thin membrane lining the interior superficies of the *præputium*: this affords a covering to the most subtle vessels, which being excoriated, discharge blood.

c. This matter erodes. Erosion is an excision of the very substance of the parts, accompanied by pain, but more especially where there is the greatest abundance of nerves. Pain renders such parts more tense and rigid, as in the priapism; and the greater the priapism,

the greater is the tension and inflammation. In making water the naked nerves are burnt with great pain by the hot and acrid urine, as it passes over them.

F. The *glans*, and *corpus fungosum urethræ*, are generally swelled: these two constitute one continued and communicating body; so that one being distended, the other is distended also: but when the fungous body of the *urethra* swells, it is then strongly compressed in every part; because that canal is composed of those fungous substances which lie between two membranes, the one exterior, the other interior: the former of these is by much the thickest, and hardly capable of distention, whilst the latter is more yielding; whence that stricture and hardness of the *urethra* called *chordee*, experienced chiefly in the night, and when the patient makes water.

All the symptoms above described belong to the first species of the simple virulent gonorrhæa. When the parts are eroded and ulcerated, it is no longer simple but complex; of which hereafter.

We come now to explain the pathognomic signs of this species.

I. The anterior part of the *penis* only is affected. To determine this, let the experiment before-mentioned, *viz.* a compression of the fore part of the *urethra*, be made in the morning before the patient makes water, the matter contained so far will be discharged; then let
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the pressure extend higher; if nothing more appears, it is only a simple virulent *gonorrhæa*.

2. The first infection. I never venture to pronounce a person to have a simple *gonorrhæa*, unless it was the first time of his being infected, altho' the appearances correspond with the above-mentioned experiment.

3. Good matter. This hath been already described in all its qualities: by how much more it degenerates, by so much the more reason we suspect its approach towards the compound.

4. The absence of all other venereal complaints; as ulcers of the nose, fauces, &c. we may then be certain the *gonorrhæa* is simple.

What is the part affected? I answer, The whole substance of the *glans*, even to the cavity of the *urethra*. This was first observed by Sydenham, who says, that when a man of a tender constitution is for the first time infected with a slight *gonorrhæa*, a little pock appears on the *glans*. If that part is then well washed with some *lixivium*, soon afterwards you may perceive a white yellowish matter transude the pores on its surface: this circumstance is peculiar to a weak lax body; for in a more robust person, the discharge proceeds from the orifice of the *urethra*.

What is the structure of the *glans*? Ruysch tells us, that the two fungous bodies of the *penis* terminate under the *glans*, constituting, as it were, a third body betwixt it and the *urethra*: the *corpus spongiosum* of the *urethra*,

reflected outwards, and backwards upon and over their extremities, forms the *glans*, which may be considered as a continuation of the *urethra*. It is therefore evident that the morbid matter is generated in the *glans*, and passes from thence into the *urethra*.

It is necessary to a perfect understanding the history of this complaint, to be acquainted with the fabric of the part affected. To the celebrated Ruysch we are indebted for an accurate knowledge of its structure, with which the ancients were intirely unacquainted.

We shall find it composed of a cellular structure, papillæ, membranes, and cryptæ.

The *penis* is designed by nature to conduct the urine out of the body, and to expel the semen in the act of generation.

We are therefore to consider this organ in both these respects; the *urethra* as a continuation or production of the bladder, and the *penis* as capable of erection, &c.

A. Let us view the *urethra*, so far as it is the emissory of urine. The whole *penis*, considered in this character, was anciently called *urethra*; that is, a canal, thro' which the urine was carried out of the body; for where it first proceeds from the bladder it is not *penis*, but a mere simple cylindrical production of that *viscus*: it is afterwards joined on each side by the *corpora cavernosa*, of which the *penis* is constructed.

In this sense the *urethra* is an elongation of the bladder into a small membranous duct.

We justly observed, that the interior membrane of the *urethra* is intirely mucilaginous, lest its substance should be irritated and exco-riated by the acrimony of the urine. This mucilaginous tunic is a production of the interior membrane of the *vesica*, as the following experiments evince. 1. If a little stone is lodged in the neck of the bladder, an itching is perceived in the *glans*: this is a certain indication that the membrane of the *vesica*, on which the stone lies, is produced even to that part, because indued with the same sensation as is felt in the bladder. 2. Those who labour under the strangury have the same perceptions in the *urethra* and *glans* as in the bladder.

This membrane is as dilatable as the bladder itself: which, tho' when emptied of all its urine contracts to the size of a walnut, is nevertheless capable of containing a great many ounces of water when extended.

It is also as capable of contraction: for tho' stones as large as filberds are with great force expelled thro' the *urethra* of men, no laceration follows; and the parts collapse again, unless prevented by the accumulation of con-creted *mucus*. The Egyptians, in order to extract *calculi* from this canal, strongly inflate the *urethra* as far as the stone, compressing the passage behind it: they then squeeze the stone forward thro' the dilated *urethra*, and thus extract it.

The *urethra* is also capable of elongation. This appears evidently in erections. It therefore much resembles the *vesica* in dilatibility, of which it is an apophysis.

The *urethra*, at its egress from the bladder, runs parallel with the *rectum*; and in about the space of a thumb's breadth from its origin is joined by the two *corpora spongiosa*.

It then proceeds in a curved direction: 1. receding downwards for a thumb's breadth, according to the observation of Morgagni, who says, if the bladder is divided in its posterior part, so that a probe may be introduced into the *urethra*, it then appears to descend perpendicularly. 2. It next ascends obliquely from the anterior part of the *rectum*, to which it is connected towards the *os pubis*: here being joined by the fungous bodies, it forms that curvature where it is connected to the *os pubis* by the *ligamentum suspensorum*. 3. It then descends directly to the *glans*.

To the serpentine course of this canal is owing that difference we perceive in the virulent *gonorrhæa*: and from hence it appears how very rarely the venereal poison ascends to the first flexure; and when it proceeds so high, how much more dangerous it becomes.

Its breadth varies, being very small at the *sphincter vesicæ*, so as not to admit a catheter without great resistance; nor can we by a syringe impel any fluid into the bladder*.

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* With all deference to the opinion of our excellent Author, I must dissent from him in this particular, having several

From hence it is obvious the venereal poison can never find access to the bladder.

Afterwards the cavity enlarges, called its membranous part, which is the largest of all several times thrown up into the bladder oil, broth, &c. to the quantity of three or four ounces; which has been retained for some hours, and then discharged with the urine. It is an operation not only practicable, but of the greatest utility, in the dysury, strangury, and ischury, giving relief when nothing else will: by it a soft, oily, or mucilaginous fluid is conveyed to those parts, which blunts the acrimony of the urine, and soothes the inflammation. But in the ischury, when neither the catheter nor bougie can be introduced, in short, when every thing has been tried in vain, injections will frequently succeed, as I have happily experienced in divers cases. A young officer, who had been long troubled with a stricture in the membranous part of the *urethra*, had at length a total suppression, attended with those severe symptoms peculiar to that disorder. The catheter, bougie, semicupium, &c. yielding no relief, I then forcibly injected, by means of a large pyramidal pointed ivory syringe, two ounces of sweet oil: by this the resistance of the stricture, and strength of the sphincter, were overcome, and found access into the bladder; which being stimulated by an increase of quantity, joined to the voluntary efforts of nature, expelled the whole urine it contained. As the bladder filled, the same complaints followed, and were relieved in the same manner. I then, with a view to more substantial relief, injected four ounces soon after the urine was discharged: this he retained in his bladder, and found thereby great service: it took off the pain, and the urine again collected was discharged without farther assistance. I repeated this method twice a day, till the bougies could be introduced; which, for the short time he used them, removed all impediment to the discharge of urine; but being neglected, and obliged to go with his company, he died about a year after, from a total suppression, at Belleisle; when I doubt not but the same means would have relieved him. This way of filling the bladder was always practised in the high operation for the stone.

others, and wholly unconnected; so that when a stone is expelled by the violent contraction of the bladder, it easily finds admittance into this space; but is usually stopped by the accession of the *corpora cavernosa*, where the passage is much more narrow: from whence it happens, that if the infection reaches the prostate gland, the matter is retained between the *vesica* and spongy bodies, producing *fistulæ* of the most fatal consequences, owing merely to a cavity terminating at each end in constricted orifices; by which a sack is formed, whose contents make their way outwardly more readily than into the bladder*. Where the *corpora spongiosa* approach the *os pubis*, the *urethra* becomes smaller, and as it proceeds is again en-

* There is not a disease more to be dreaded than fistulous abscesses of this part, by which not only the *urethra* and *perinæum* is perforated, but as they sometimes extend to the *rectum*, adjacent muscles, &c. A young man, whom I have seen frequently, lately died, after three years misery, of this disorder, which extended, by numberless sinusses, to the *rectum*, *scrotum*, and at length to the bladder itself. The person, whose skeleton I now possess, died in the most deplorable manner in St. Thomas's Hospital. The urine passing through the perforated *urethra*, insinuated itself between the glutei muscles, which were thereby macerated and consumed with the most exquisite torture. At length it eroded the ligaments of the *os femoris* and *ischium*, both which bones, with the *ileum*, became carious; and the discharge from these parts defiled an incredible quantity of linen and bedding. Other cases of this kind are less destructive; for I know a person who has borne one several years without much increase: a little urine passes that way every time he makes water, with a constant but unequal discharge of matter. See p. 270 2,

larged,

larged, as appears by the passage of stones thro' this canal.

It is the narrowest of all at the *glans*. At this place the *gonorrhæa* of the first species has its seat, and which, the antecedent orifice being large, is thereby easily discharged, and cured.

The lips of the external contracted orifice lie together in the closest contact: a *gonorrhæa* of the first species always has its seat between the *os pubis* and the apex of the *glans*, where the matter has sufficient space for fluxibility, till stoppt at the aperture of the *penis*, where being retained, it produces fistula's, from the acrimony it acquires by such retention.

B. We must now speak of the *urethra*, considered as an excretory duct to the semen. As soon as the *urethra* arrives at the bulb, it changes its original texture for another, consisting of two membranes and an intermediate *corpus fungosum*.

The first is a continuation of the interior membrane of the bladder, terminating at the *glans*.

The second is two or three lines distant from the former, when the *penis* is erected: their situation is however parallel to each other.

The third is denominated the fungous, cellulous, nervous, or spongy substance of the *urethra*, arising soon after the *urethra* emerges from the bladder, proceeding to and terminating in the *glans*. This body arises under
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the *vesica*, and presently appears in the *urethra*: it then runs between those two membranes nearly the length of the *penis*, till approaching the *glans*, is there reflected upwards and outwards, forming that superextended eminence, the posterior part of which is called the *corona glandis*, where it terminates: so that the *glans penis* is the substance of the *corpora cavernosa* turned outwards.

This is confirmed by experiments. It is now thirty years since the celebrated Ruysch intirely filled the arteries of the *penis* with tepid water, cleansing them from all their blood; which being done, he afterwards injected those vessels with a red ceraceous fluid. When the wax became hard, he then dissected the *penis*, and found that it had been transmitted thro' the arteries into the spongy bodies, which, together with the *glans*, were intirely filled with the injection. Hence he supposed the *glans* to be a kind of fleshy substance, similar to that of the spleen. He then made a wound where the *corpora cavernosa penis* unite themselves with the *urethra*: thro' the orifice he inflated the part, and saw that the whole *penis* was erected, except the *urethra* and *glans*, which remained flaccid. Here he first discovered that the fungous bodies of the *penis* and *urethra* had no communication with each other whilst intire. When freed from their integuments, he found that air, inflated thro' a small wound into the *corpora cavernosa penis*, and there retained: whilst another was made in the bulb
of

of the *urethra*, and also inflated : that the *glans*, *urethra*, and whole *penis* became rigidly turgid. This preparation, when dried, plainly discovered the spongy substance of the *urethra* to have a different situation and texture from that of the *penis*.

It is plain from such experiments, that diseases occupying these parts, may affect the spongy bodies of the *urethra*, but not those of the *penis*.

Where the *urethra* escapes from the bladder, there the prostate arises, affording a passage to the membranous part of the *urethra* thro' the middle of its substance, where it descends from the bladder : soon after it leaves this gland, it is joined by the cavernous substance, whose origin forms that prominence called the bulb of the *urethra*.

But what is the *glans penis* ? The spongy part of the *urethra* runs between two membranes to the extremity of the *penis*, where the whole substance of the interior membrane is annihilated, except its most thin and internal *lamella*, which is expanded over the *glans*, whilst the thicker and more external covers its posterior part : the *glans* then is a continuation of the spongy substance of the *urethra*, still covered by its proper membranes.

Between the interior fabric of the *glans*, and the exterior surface of the extremity of the *corpora cavernosa penis*, there is a certain intermediate cellular substance, from whence a gangrene of the *penis* often arises, in which
nothing

nothing perishes but the *glans* itself, the rest remaining sound.

If the fungous substance of the *urethra* is inflamed at its origin, near the prostate, then the whole *urethra* and superficies of the gland swell, as in a priapism: in such a case, the *penis* is incurvated, and drawn downward, the other parts remaining flaccid: this, for the most part, happens in a *gonorrhæa*, where the *urethra* is in a state of tension, and accompanied with great pain, whilst the *corpora spongiosa penis* are flaccid, and free from disorder; but when both are equally affected, then the whole *penis* is equally distended, and inflected in erections towards the belly. This is well described by Ruysch, in his *Observ. Chirurg.*

The *penis* is supplied with arteries from the internal iliacs, divided into many branches, which penetrating the *corpora cavernosa*, supply them plentifully with blood: if these are well washed, and afterwards inflated, the whole *penis* is thereby distended, even to the superficies of the *glans*. It is from hence plain the cellular substance is filled with pure arterial blood in erections.

The veins of the *penis*, which again absorb the blood, are situated more externally than the arteries: 1. The *vena præputii*, or rather that of the whole *penis*: this runs along the superior *dorsum*, and is compressed by the *os pubis* when the *penis* is erected. The 2. and 3. run in a lateral direction, till they meet with the *musculi erectores*, by whose action they are also com-

compressed; and thus the venous blood is stopt thro' the whole *penis*. This hath been demonstrated by Ruyſch, who, after making a ligature at a proper place, inflated those veins, by which the whole *penis* became turgid. When the preparation was dry, he then found, that the veins distributed on the *dorsum* and sides were preserved pervious and consistent, and that their extremities terminated in the inflated *corpora cavernosa*, by open *foramina*, thro' which the air entered. The veins of the *penis* are of two kinds; either those which receive the blood directly out of these cavities, or directly from the arteries by inosculation. The arteries have the same division; either those terminating immediately in the veins, or in the cells of the spongy bodies. From hence the substance of these parts may be understood. The fungous texture of the *urethra* is most commonly affected in diseases of the *penis*; but when its outward and strong membrane is eroded, very different complaints and consequences are produced. See *Ruyſchii Observ. Chirurg.*

Moreover there is a kind of cellular substance, seated directly under the membrane covering the exterior surface of the *glans*, which, tho' very fine and thin, yet when inflated seems to pervade the whole *penis*. In this disorder the *penis* appears turgid, pellucid, or hydropical, but not inflamed; and is always incurvated. Nothing cures this complaint but the application of cloths dipt in cold

cold water, and continued for several hours. If emollients are used, the part becomes flaccid, and wastes by suppuration. We now come to consider the fabric of the *penis*, by which pleasure is generated.

We are told by Tyson, and many other celebrated anatomists, that the external surface of the *glans* is filled with glands, which I believe were never seen. Ruysch has confuted this opinion, and demonstrated that those seemingly apparent glands, when viewed with a microscope, are sensible *papillæ*: at the *corona* they are very numerous: if the thin membrane by which they are covered is abraded, they then look rough, and filled with points like porcupines quills. Where these are first infected by the *lues*, you might very easily suppose them glands; but they are little *verrucae*. There is one thing more to be observed, that the arteries distributed to the body of the *penis* terminate at the *glans*: if therefore a wound is inflicted whilst the *penis* is erected, in a place where the blood is so violently resisted, six pounds of that fluid may be discharged in an hour's time, and a man must inevitably die, if it is not speedily stopt.

So if *verrucae* arise, and the Surgeon consumes the part as deep as the extremities of the arteries, the patient will be subject to a hæmorrhage whenever the *penis* is erected.

We ought further to observe, that the exterior membrane of the *urethra* not only lies under the *corpora cavernosa penis*, but affords them

them an external covering. It is very necessary to be remembered, that I have called the membrane conveying the urine, *interior*: this is covered by a fungous substance, on which another membrane lies, which I call the *exterior*: this membrane not only surrounds the *urethra* under the spongy bodies of the *penis*, but also the whole body of the *penis*; by which means there is a communication between the external *penis* and this membrane.

From whence it appears, that the *lues* may affect the *dorsum penis*, whilst the fungous bodies remain untouch'd: these bodies are covered by a common subcutaneous membrane, and that membrane by the skin.

The interior membrane of the *urethra* demands our further consideration: this may be divided into two very thin *lamella's*, adhering very strictly together, so as not to be separated but by a long maceration: between this duplicature there run vessels, of which I shall now remark, that the course of these vessels is like that of the ureters into the bladder, running a considerable way between the membranes before they open into its cavity; and like them these emissaries are placed obliquely. Consult *Morgagni Observ. Anat. part. i. tab. 4. Terraneum de vasis urethræ. Guil. Cowperum in descriptionem partium genitalium in viris post Myotomiam edita. Cockburn in tractatu de gonorrhæa*; in which these things are made clear.

This

This membrane is penetrated with these pores, which are the orifices of canals, or *lacunæ*, placed obliquely between these *lamellæ*'s; and in these canals is lodged a soft mucilaginous matter, of the same nature with the *mucus* of the nose, only in lesser quantity.

This humour may be exceedingly increased in a preternatural state.

These *lacunæ*, different in size, occupy all the space between the external orifice and the curvature of the *urethra*, where it is connected to the *os pubis*; from whence to the bulb there are no *lacunæ*; and from the bulb to the neck of the bladder, only the *glandulæ litrii*.

The largest *lacuna* is situated about an inch upwards from the aperture of the *penis*, and is three eighths of an inch in length, forming a hollow cavity, into which a hog's bristle may be introduced: if this cavernous space is filled with ceraceous matter, it is thereby extended into a sack; and when divided by incision, according to its length, you will find it runs parallel with the *urethra*.

The other *lacunæ* are large or small, in proportion to their nearness to the *glans*: they are all the seat of a *gonorrhæa*, but more especially the *lacuna magna*.

In the sides of the greater *cryptæ* of these *lacunæ* there are innumerable orifices, continually discharging a liquor into the *urethra*, to lubricate the passage. The more viscid part of this liquor adheres to the sides of the *urethra*, and is collected in the form of white pellucid

pellucid matter about the *glans*, and produces bad disorders in young persons.

This matter has deceived almost all anatomists, as you may read in the Acts of the Royal Academy of Paris, A. 1700, where Duverny, Littre, Mery, &c. have made enquiry concerning this liquor of the *præputium*. Duverny, after the most diligent search, was not able to find any glands. Littre tells us, he had discovered glands; but he was deceived by this liquor, which he concluded to be a glandular secretion. Tyson, indeed, observed certain little *sacculi* under the *præputium* of the stone-horse and other animals, that excreted a linimentous fluid, by which those more exposed and more extended parts are mollified, and preserved from dryness.

The *sordes* therefore collected upon the *glans*, is the mucous liquor of the *urethra*, receding backwards, and deposited under the *præputium*.

Where this fluid stagnates, it soon becomes foetid and acrimonious when exposed to the air; and if a man receives the *lues*, or a *gonorrhæa*, in such a state, he is scarcely curable, as I have learnt by many experiments.

The next glands that come under our consideration are those of Cowper, which he himself describes in the Philosophical Transactions: where he says, that about a quarter of an inch below the prostate gland, he found two other small glands placed on the side of the *urethra*, a little above the bulb of the caver-

nous body. These glands are of a depressed oval figure, not exceeding the magnitude of a French bean. After those parts of the *musculus accelerator* are removed, which pass over these glands, you may feel them placed like two hard bodies on each side the *urethra*. They incline to a yellowish colour, like that of the *prostates*. Their excretory ducts appear on their internal surface, next the inner membrane of the *urethra*, whence they descend about half an inch in length, before they grow less, and pierce that membrane obliquely at their opening into the *urethra*, in which they discharge their separated liquor. These two orifices open into the *urethra* just below its bending under the *ossa pubis*, in the *perinæum*. See Philosophical Transactions abridged, Vol. III. p. 197.

Their use is to secrete a liquor, which, by means of their ducts, is conveyed into the *urethra*; and though they are seated in the *corpus fungosum*, they are no part of its structure, like those of Morgagni, which have no muscles placed upon them. The *glandulæ Cowperianæ* do not discharge their liquor into the *urethra*, but when compressed by the actions of the *accelerator* muscles. 1. In the last act of seminal emission. 2. During the discharge of urine. This is the second region of the *gonorrhæa*; and when its matter ascends so high, and passes thro' the emissaries into these glands, there arises a very bad disease,

ease, with tumors on the side of the *urethra*, and almost incurable fistulas.

We come now to the third region of the *gonorrhæa*. Very few have right ideas of this part of the *urethra*, where the *prostatæ* grow together. De Graaff is the only author, who has well described and given a just figure of these parts. Where the bladder contracts itself, in order to form its neck, according to Graaff, there is a thick part, of a soft slippery texture, surrounded by the sphincter of the bladder. This portion descending, perpendicularly in men, is received into, and covered by, the prostate gland, for more than a thumb's breadth, still tending downwards: this is a firm, compact, glandular body, transmitting the *urethra* thro' its substance.

As soon as the *urethra* emerges from this gland, it is inflected upwards, in an acute angle.

Precisely in the middle of this gland there are twelve emissaries, having very conspicuous orifices, which easily admit a hog-bristle. These come from twelve sacks, of which the prostate is composed. When these are compressed, a liquor is discharged thro' these ducts apparent to the eye. In the centre of these there are three other emissaries, two larger from the *vesiculæ seminales*, with a small one between them: these three are circumscribed by the twelve; and when the semen is discharged, a liquor flows, at the same time

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through the twelve smaller orifices, with which liquor of the prostate, the semen is mixed.

When the *urethra* leaves this part, it is joined by the *corpora cavernosa*, soon after the bulb is formed.

A *gonorrhæa* situated in this third region, or prostate gland, is of the very worst consequence.

This then is the foundation, on which the history, knowledge, and cure of the *gonorrhæa* depends.

Ye know the fabric of the interior membrane, on which the fungous body of the *urethra* lies, and that this body arises from under the prostate, growing upon and surrounding the *urethra* at its origin, called the bulb of the *urethra* : next the nervous or spongy bodies of the *penis* are added : these do not reach either to the neck of the bladder, prostate, or fungous substance of the *urethra*, till after the *urethra* has proceeded two thumbs breadth out of the prostate : terminating last of all at the *glans*.

I say nothing of Littre's glands, whose existence is doubtful. They are thought by some to be an appendix to the prostate, which is contradicted by Morgagni, in his *Advers. Anat.* 4. *Animad.* 14.

It is now time to proceed to the venereal disorder by which these parts are affected.

The first Species of the Gonorrhæa.

1. **T**HE *gonorrhæa simplex* is always seated in the anterior part of the *urethra*, about half an inch above the external orifice.

2. The precise situation may be ascertained by the experiment before mentioned, page 98. If this matter is retained, the disorder will degenerate into the 2d or 3d species; but, if well cleansed, is soon and easily cured.

3. When the matter is entirely expressed, the urine will then be clear; but if the urine is first made, it is then voided in the form of *anguillæ*, the certain sign of a *gonorrhæa*.

4. We considered this matter in a former part, where we proved beyond doubt, that it is not purulent; so that it cannot with any propriety be called *pus*.

Neither is it a natural secretion, but a preternatural discharge of a singular kind, at first neither excoriating or eroding the parts; for in men who have died suddenly during this disorder, no ulcers were perceived on dissection.

From the spongy substance of the *glans* a fluid frequently transudes through the pores, according to the observation of Sydenham, before mentioned.

Is this discharge of the rheumatic kind? This is not easily determined. The human body is so constituted, that when a part endued

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with nerves is painfully affected, there always flows a large quantity of fluid, according to a law of nature unknown to us. For instance, if any thing acrid stimulates the lungs, a cough is immediately excited, and a copious discharge succeeds, by which nature endeavours to expel the cause. The same may be observed in the eye. Or if any other part of the body is cut or burnt, a fluid is derived in great plenty to the place affected. So also, if the Schneyderian membrane is inflamed by cold, and rendered imperspirable, a flux of humour succeeds, with a sneezing, in order to give vent to the acrid stimulus. From hence some judgment may be formed with respect to the matter of a *gonorrhæa*, viz.

As soon as the venereal poison is applied to and received in the part, nature taking the alarm, enlarges every aperture, thro' which it discharges a thick liquid, to wash away and expell the poisonous matter. This is a true rheum, as appears from the observation of Sydenham. 1. Because there is no great pain. 2. Because there is no erosion or ulceration in the *urethra*, when opened. 3. Because the patient in making water finds a great resistance in the part.

The places affected are the mucilaginous vessels, but especially the great *lacuna*, in the back of the *urethra*, at the root of the *glans*. This is made evident by various experiments; for this *lacuna* is situated in the very place where the first distention is felt in a simple

gonor-

gonorrhæa ; and if the disorder is severe, the patient suffers exquisite torment, as if that part was ruptured ; whence I am inclined to think this liquor is excreted by arterious pores, endeavouring thereby to remove the exciting stimulus. There are yet other more anterior *lacunæ*, one of which is situated under the *glans*, where the *frænum* is inserted. This is the widest part of the *urethra*, excepting that covered by the prostate ; hence the matter easily settles here ; for the *glans* having receded, nothing remains in the place but the *urethra* only, with its two *corpora spongiosa*. So much for the seat of the first *gonorrhæa*.

The effect produced by this cause is an inflammation ; for the venereal taint, to whatever part of the body it is applied, is soon followed by an inflammatory spot ; and when it affects the internal part of the *urethra*, a heat, distention, and burning acrimony are always perceived, accompanied, if very severe, with a discharge of blood ; from all which it is plain, that the beginning is a true inflammation, of the most obstinate kind, owing to the great quantity of matter secreted by, and adhering to the *lacunæ*. So long as the discharge is white and thick, there is no great malignancy ; but if the *gonorrhæa* is of a bad sort, a suppuration succeeds, and the matter becomes more thin, yellow, and mixed with blood ; all which shews, that the first inflammation excites a rheum, and that a worse induces a suppuration.

Hence follows a *stillicidium*, which may be discharged from all the pores: from one cavity only, or from all the *lacunæ* of the *urethra*.

This transfudation is made by the glandulous substance of the *urethra*; but the ulceration hereby occasioned is so mild, that it may be sometimes neglected for six, nay, for twelve months, with tolerable regularity of life, without much detriment to the patient; so that it appears to be rather a preternatural distention, than a consumptive suppuration.

What is the *diagnosis*? or, in other words, how shall the practitioner distinguish the *gonorrhæa* with certainty, with respect to its situation and matter? I answer,

1. From the time when the infection was received; a circumstance that well deserves our attention; for I have ever seen, that if the above-mentioned signs appear on a man the very day in which he received infection, such a one is easily cured; but if fourteen days intervene, during which time he had perhaps indulged himself in hard drinking, and then at length the symptoms discover themselves, the disease will then be of the worst kind. Some, indeed, are of different sentiments, though without the least reason.

2. From the place affected not being far up the *urethra*. This is easily determined by the experiment recommended, page 98.

3. From the matter: for if the quantity is not more than might be expected from

+ I have known a mild clap break out after 3 months & to be easily cured in 4 or 5 weeks, but in general the observation true

the anterior *lacunæ*, is of a white colour, somewhat more consistent than cream, and the urine discharged without great pain, it is then a *gonorrhæa simplex*.

4. If other symptoms are absent, as pain, heat, tumors and ulcers, especially in the genitals, it is then a simple *gonorrhæa*. But this poison is so subtle, that if it only touches the *scrotum*, or other parts, it there produces a spot, by which it is exempted from this distinction; for then so far it becomes the *lues venerea*; and we may be assured, that from such a simple *gonorrhæa* the *lues* never does arise, but from neglect either of the physician or the patient.

From hence we deduce a prognosis.

A. That this first *gonorrhæa* is easily cured.

1. If proper methods are taken soon after the infection is received.

2. If the patient carefully avoids all those things repugnant, and complies with what are necessary to his recovery.

3. If care is taken to prevent an erection of the *penis*; this is the greatest impediment: and almost impossible to be prevented, on account of the perpetual stimulation, to which the patient is subject, especially in the first sleep. This causes an elongation and turgescency, by which the parts are lacerated: whence erosion and ulcers, that greatly protract the cure. Much then depends on the flaccidity of the *penis*, with respect to the prognosis.

riding, walking &c

4. If

4. If the patient is of a thin spare habit, he will sooner be cured, than those who are loaded with fat, oil, and other humours.

B. This is the prognosis respecting the cure: which, badly managed, may degenerate into the second species; for a simple *gonorrhæa* is only a rheumatic dilation, without any ulcerous diathesis of the ^{small} mucilaginous orifices; but those, by degrees, are more and more dilated, and then conceive a slight corruption, degenerating into little ulcers, which nevertheless do not at first affect the interior membrane, being double. But if the matter is retained long, or the *gonorrhæa* increases, the membrane is thereby eroded; and, when penetrated, the corroding matter does not diffuse itself between its duplicature, but into the fungous substance of the *urethra*: which, from its great dilatibility, renders the extraction of the poison very difficult.

When the disorder arrives at this state, we may pronounce,

1. That these little orifices will become callosus. When the edges of these small apertures are tainted by the infectious matter, they degenerate into callosities, which ascending towards the cavity of the *urethra*, make a little resistance to the emission of urine.

2. From whence its propagation; successively to other parts, and first,

a. Towards the *lacunæ*; that is, it ascends higher up, and more backwards, toward the curvature

curvature of the *urethra*, where the *lacunæ* terminate.

b. Towards Cowper's glands, of which above.

c. Where the fungous part of the *penis* begins ; for then it is as it were retained in a sack, from whence ulcers in *perinæo*.

d. When it comes to the bulb of the *urethra*, where there is neither fungous nor glandulous substances.

e. A little way behind this there are the twelve emissaries of the *prostates*, those of Littre's glands, and of the *vesiculæ seminales* ; which being eroded, the poison finds access into those receptacles.

These effects may arise from a simple *gonorrhæa*, either neglected or badly treated, of which this is the true prognosis.

The Cure of the first Species of the Gonorrhæa.

IT is very remarkable, that notwithstanding so many have wrote on the *gonorrhæa*, nothing valuable has been added to what the most ancient authors have said on the subject.

The cure consists in the expurgation of the malignant matter from the parts in which it is received : according to the diagnosis, ætiology, and situation. You are now perfectly acquainted with the *gonorrhæa simplex* ; but should it be enquired, What is its matter ? we readily reply,

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1. It is a stimulating virulence, which may infect the whole body.

2. Nevertheless, all that is discharged in a *gonorrhæa* is not virulent, but as it were the tears of nature, to dilute and wash away the malignant matter.

Now the whole cure consists always and only in the imitation of nature, by fitting those passages for a more ready expurgation. For this complaint, as we have already observed, being a true catarrh, there is no necessity to disturb the whole body by the exhibition of I know not what mercurials; and I must confess, that I have often reflected with detestation on the indirect practice of surgeons, who thus trouble nature, whilst all that is needful, is the expulsion of the infecting matter from the part affected.*

We

* Whether mercury is entirely to be discarded or no in the cure of the *gonorrhæa*, the reader may judge from the following estimate, where the calomel was given with the greatest caution, and its effects well attended to. This preparation of mercury was used, as it is the mildest, safest, and most common. During the exhibition, nothing was added but a gentle laxative now and then, when the *mercurius dulcis*, as it frequently does, restricted the belly. In twenty *gonorrhæas*, more or less severe or simple, as they happened to be, this medicine was given, five grains every night: it purged some plentifully and constantly; others, once or twice a-day; others, not at all. The gums of a few swelled in three or four days, when the acute symptoms abated exceedingly; and in about seven or ten days at farthest, nothing remained but a running of different colour and quantity. In three weeks, the medicine being continued regularly in some, or intermitted in others, according

We may see that the first writers, for instance, the great Fallopius, has openly said, If you would rightly treat a simple *gonorrhæa*, give place to nature; for when it flows freely, there is no danger. The whole art consists in expurging the infected matter, by procuring it a free passage thro' the dilated vessels. Let us therefore follow nature, as did the antient

cording as their gums were more or less sore, &c. about ten of them grew perfectly well. Of the remaining, some had a gleet left, yellow, green, or colourless, tho' without much pain. Others, whose running disappeared, had either swelled testicles, œdematous tumors of the ankles, and venereal eruptions, or pains in the limbs, &c. the former symptoms immediately succeeding, the latter perceived some time afterwards. The calomel was still continued, with the cautions before remarked, and in a greater or lesser time, cured most of those whose *gonorrhæas* terminated in the *lues*. One or two yet remained labouring under an obstinate gleet; and a salivation alone cured a third of a deep-seated *lues*. Such is the effect of calomel in a *gonorrhæa*, and, I may say, of almost every mercurial preparation, whether more or less combined, or changed by chymical processes; regard being had with respect to the dose, strength of the patient, &c. The account I have here given is the result of frequent trials, accompanied with observations faithfully collated, and so often repeated, that I am very sure they are in no danger of being disproved by any one, who has or will make the same experiments. This way of curing claps (with very little variation) is practised at this day, more than any other, especially in London, and that by the most eminent and regular surgeons. This method then is certainly the most generally practised, and hitherto perhaps the best and most successful of any other. It now remains, to consider the scheme proposed by our author, who has not cultivated any branch of physic with more diligence, penetration, and advantage, than the present.

physicians,

physicians, who, when they saw venereal ulcers and pustules break out on the body, assisted nature by prescribing sudorifics : which nevertheless are of no use in a *gonorrhæa*.

Our indication then is the expurgation of this disorder by the flux : which is not *virus*, but the vehicle through which it is carried off. This should be done in the easiest manner possible. If a man discharge an ounce of this matter, not a thousandth part of this is wholly poison : a very small quantity of the *virus* only adheres to it, and is thereby carried out of the body.

But how is this expurgation to be promoted ?

1. Not by impelling the poison to any other part of the body.

2. Nor ought we to endeavour to promote a greater flux of matter for its expulsion.

3. Nor must we seek any other way for its discharge.

A. Our business is to procure a sufficient quantity of thick matter, for then the cure is easy ; nor are we to admit a thought of diminishing it, till that is clearly indicated by the appearances.

B. It ought to flow freely, and not return again to the place from whence it issued ; to this we should be very attentive, lest it should recede thro' the membrane of the *urethra* into the cellular substance. Further, we should be careful,

C. Lest the matter be retained. When we are sound, scarce ten drops a day is secreted ;
but

but when the *lacunæ* are excited by a virulent stimulus, two ounces may be discharged in a day. If this matter is retained, it becomes acrid, the infection multiplied, and the disease increased; it must therefore be discharged; in this the whole cure consists.

Is any physician capable of attracting this virulence from the emissaries of the *lacunæ*, without this matter, furnished by nature? It is certainly not to be accomplished by any injection yet known; for thereby it is rather repelled; nature alone can effect it by affording a competent quantity of matter, which proceeding from within, dilutes and washes away the poisonous stimulus.

1. We ought to be apprised how very small the quantity of this subtle poison is, that so strongly contaminates when first received, and that produces such bad effects; for the smallest particle, or atom, insinuating itself into the *urethra*, generates this disease.

2. We should also consider what is the mucous matter generated by the glandular fabric of the *lacunæ*. That it is a vehicle, afforded by nature for the discharge of this adhesive poison; for as soon as this is effected, it returns to its natural state and quantity; nor can a *gonorrhœa* be cured, till that is compleated. If stopped by astringents, the matter is retained, the *penis* feels heavy and uneasy, ulcers arise, and the disorder is increased. Whatever therefore is proposed from exsiccation is of no valuable consequence; for if the
least

least particle of the disease is retained, matter will still continue to flow : as I have learnt from many experiments.

119 3. We are also to consider, that by how much more the virulence abounds above the vehicle : by so much more severe every symptom will appear, both in the patient, and in the ejected matter. For when the discharge is very yellow, green, or bloody, the virulency is great ; but when it is white, (though in large quantity) without pain, itching, or heat of urine, the malignancy is less, and sooner cured.

It is worthy our observation, that men who have been frequently diseased, are cured with the greatest difficulty ; for in them this discharge hardly ever ceases, although it is not yellow, because the dilated orifices of the *lacunæ* are affected by a kind of habitual paralytical diathesis, by which a cure is rendered impossible ; nothing, indeed, injures ; on the other hand, nothing is of service.

The Method of Cure.

I Would here be understood to mean the true simple *gonorrhæa* only, appearing soon after the infection was received, and also the first time of being infected. Let the drink be,

A. Simple water, in larger quantities than usual ; as also tea and coffee, sweetened with sugar or liquorice. With the last remedy alone this disorder has often been cured ; and
though

though sugar and honey have done the same, yet liquorice is much the best ; for honey has a little acrimony, relaxing and gently stimulating the vessels : this quality may, however, be meliorated by the addition of a little milk.

B. Milk-whey : especially in the summer time, as in the month of May, when animals feed on grass.

C. Hydrogalata : or liquors composed of three parts water, and one of milk, particularly in the summer.

D. Ptisans : of barley-water, made with stoned raisins ; to which add a little juice of lemons.

E. Weak fresh ale, called *mol* : without either wormwood, hops, or *carduus benedictus*.

F. Abstinence must be enjoined from wine, or other strong liquors ; at least, they must be used with great temperance ; for these stir up the venereal passions, and dispose to inflammation, by which the disorder is exceedingly increased.

If the patient drinks these mild liquors, his urine will be proportionably mild and plentiful, unless prevented by sweat. The urine also is rendered more bland, is discharged in greater quantity, and freer from putrefaction, than in its natural state, when it abounds with oil and salt, on which its acrimony depends. The urine, thus rendered mild, and frequently discharged, washes these parts more effectually than any injection. It is to be remarked, that as soon as the urine becomes a

little stimulating, the part immediately becomes affected by erections, with a sense of pain. As these should be prevented, if possible, the patient should by all means abstain from volatile or aromatic spirits : which, by increasing those symptoms, render the cure more difficult.

1. The food should be chiefly composed of farinaceous substances : from oats, barley, wheat, buck-wheat, rye, rice, and millet, prepared in various forms, in very weak broth : for if too strong, it causes a venereal *tentigo*.

2. Pot-herbs ; as beet, succory, purslain, endive, spinage : these are the most proper, care being taken, that not too much salt or pepper be added.

3. Roots : of carrot, viper's grass, parsnip, goat's-beard, &c. may be allowed.

4. Fresh butter-milk : as also flesh, and river fish, in small quantity.

5. Flesh and fish : these however, must be prohibited in great quantity, because they easily putrefy, and render the body too libidinous.

6. At the same time, the patient should not be permitted to gratify his appetite with the most luscious part of either roast or boiled meat : or what is seasoned by a saline or aromatic stimulus ; such as oysters, cockles, crabs, lobsters, crayfish, caveer, sturgeon, brawn, and such like ; for the antients justly remarked, that these excited venery. In one word, we should avoid every thing of that kind ; for I am certain, if the physician is able to suppress those

those emotions, he will cure his patient with ease and success, which otherwise will be attended with the greatest uncertainty: for if Hippocrates ever spoke true, by how much more the body is pampered, by so much more lascivious it becomes.

7. Fat of all things, must be carefully avoided; for there is nothing into which the venereal poison more easily insinuates itself; hence fried fish and flesh are most pernicious.

8. Motion: as running, horse-racing, fencing, shooting, &c. are extremely injurious. I have seen many gentlemen, who, during their travels, have unfortunately caught this disorder, which, from the continual motion in which they were engaged, was rendered incurable; for in riding particularly, the part affected is subjected to a perpetual concussion, contusion, and inflammation, by which the poison is rendered more active; whence incurable *fistulæ* arise. I once saw a nobleman, who, when at Rome, was affected by a simple *gonorrhæa*, being obliged to return home, on account of public business with which he was entrusted, he first made a rich entertainment, to regale his friends before his departure, and then set out on a long tour to his native country, by which the *gonorrhæa* was greatly increased in discharge and acrimony; so that when he came home, the flux was the most foul and malignant that could possibly be. He consulted almost every noted physician in Europe without success. I had

him under my care five months ; three times I stopped the discharge, but it always returned ; for the cellular substance of the *urethra* was penetrated and eroded ; nor could a depuration be accomplished, because of the unequal state and irritability of the part affected. No method of cure seemed at all likely to succeed, unless the whole *urethra* was laid open by incision, and the disorder thus destroyed ; but this I dared not to propose to such a man. Military gentlemen are subject to the same misfortune, and when such apply for cure, beware you do not promise too much, for your dependance must be on time, which may at length produce an external fistulous ulcer, when a cure may be performed, if the *fistula* is well opened and deterged. Such are the bad effects of violent motion.

9. Sleep in such persons ought to be longer ; for in that season the matter is concocted ; for by how much the thicker, so much the better, by how much the thinner, by so much the more acrimonious. But tho' in sleep its spissitude is increased, it ought, at the same time, to be more copious.

10. The urine should not be retained in the *vesica*, but discharged whenever there is the least urgency ; for the matter is retained more particularly at that season by the close apposition of the *foramen urethræ* ; so that when retarded too long, it becomes too thick and acrid, which is prevented by the emission of the urine, and thereby washed away and absterged ;

absterged ; so that although the rest, ought to be longer, its too great *remora* should be prevented as much as possible.

11. The air should be temperate ; heat and cold are equally injurious ; a mediocrity must therefore be preserved.

12. These things being duly observed, the *gonorrhæa* is easily cured ; but, if neglected, degenerates into other and worse evils above-mentioned. Now follows the cure by medicines, which is of two kinds.

A. Chirurgical. And,

B. Medical.

The chirurgical cure consists wholly in this :

A. That the passages are relaxed, through which the matter ought to pass.

B. That the infectious matter, or rather what contains the infection, be determinated thro' that canal, appointed by nature ; that is, thro' the *urethra*.

C. That this virulence be corrected as much as possible in the place it occupies, by a contrary antidote.

D. That care be taken, lest the infection is carried to any other places uninfected.

1. It is absolutely necessary in the first place, as soon as possible after an infection is received from commerce with an impure woman, to wash every part that touched her body with limpid water, in which a little marine salt and vinegar has been dissolved. With this remedy only, many men who have imprudently received infection, have been preserved free from

its bad effects. This was the chief remedy of the great Brassavolus, who has said, that nothing contributes more to the preventing of this, than new, disease, than immediately to wash the parts in pure water, as it is the best menstruum; but if a little vinegar is added, it then resists putrescency. Hence it is, that in Spain, before they engage with such women, they wash these parts with the juice of lemons and a little salt, as the *glans*, *scrotum*, *pubis*, *præputium*, inside of the *urethra*, &c. taking care, however, that the application is not too corrosive, for then it would produce an inflammation.

Take, for example, the following remedy,

℞ *Aq. Flor. Sambuc.* ℥ xx.
Acet. Sambuc. ℥ iſs.
Sal. Marin. ℥ ſs.
Spirit. Vin. ℥ ij.

2. This ablution ought to be repeated every twelfth hour.

3. After this ablution, every part that came in contact with infected places ought to be infused in a bath. This is a most important article in the cure. It should be made very emollient, that it may relax the rigidity of those parts, thro' which this poison has insinuated itself, thereby dilating the vessels, so that the fluid may more easily pass outwards.

This bath should also be repeated every twelfth hour: but why is the ablution to precede the bath? Because, that whatever of infection

fection is collected about these parts, might not mix itself with the bath, and thus enter the body. The ablution must be made with the *præputium* retracted; for, as Sydenham has remarked, even there also the venereal poison may insinuate itself. In such a bath the part is to be kept for half an hour, that the pores may be opened. If you ask the remedy,

R *Flor. Albæ. Sambuc. e M. ij. Fol. Parietar. M. i. Rad. Albæ. ʒi. Sem. Lini. contus. ʒij.*

Let this be made into a decoction, with a sufficient quantity of common water, and then expressed thro' a cloth, to the consistence of a mucilage; then add *Venice soap ʒi.* By this means the composition will contain a penetrating, anodyne, and somewhat astringent virtue. A most antient writer recommended this for the cure of the *gonorrhæa* at its first eruption.

Away then with mercurials and strong lixivia; for by their use I have seen twenty instances, where a good *gonorrhæa* has terminated in the worst inflammation and priapism, in the space of 24 hours time.

This is the most simple and best method of treating this disease; but least any one should esteem it of less importance on that account, change both the lotion and bath every three days for another of similar qualities, and then return again to the first.

4. After thus bathing, the part being well dried and cleansed, and the matter gently expressed

pressed out of the *urethra*, an injection is next to be used. But let it be remarked, that this is to be done, 1. After the bath. 2. After the part is well cleansed. 3. After the seat of the *gonorrhæa simplex* is well expressed, and cleansed from the virulent matter; for if this is not done, the injection is of prejudice, by carrying the morbid matter further up into the *penis*, which is contrary to our fourth indication.

above A composition suited to this design may be made of a decoction of mallows, or the decoction recommended below; for the Venetian soap is of service, if care is taken, that what is injected gives no pain, since only the mere change of malt-liquor brought on a strangury, as you know, in a young lad, and of consequence a hardness in the *penis*. A stimulating injection produces the same effects, and does more harm than good *: for this reason Sydenham

* This assertion of our author is most certainly true in the general, but not without an exception: for instance, when, even in a simple *gonorrhæa*, the symptoms affecting the anterior part of the *penis* are so severe as to occasion an extreme pain, from whence not only dysury, strangury, chordee, &c. but at the same time, a large, violent, and inflammatory swelling of the *glans*, which, if not speedily removed, threatens its speedy suppuration, or gangrene. In such a case, ablutions, baths, mucilaginous injections, &c. will not afford relief time enough to prevent the consequences above-mentioned. Such cases as these, I own, are not very common; yet they do sometimes occur. Their cause, I apprehend, is owing to a strong and great infection, to which the discharge is by no means proportioned, and which, if still retained, absolutely destroys the parts

denham rejects every injection, certainly too generally ; tho' that is not to be wondered at, because

parts it occupies. A speedy discharge of the *virus* is here necessary ; but how can that be accomplished ? Cataplasms, fomentations, and even the applications prescribed by the great Boerhaave are unequal to its necessary evacuation. Should the inflammation be allayed by venesection ? This will somewhat allay the inflammation, but by no means promote the expulsion of the poison ; of which it may be said, *interne redire malum est*. This is the primary effect, tho' not the ultimate design, of every revulsion : I therefore cannot but most entirely disprove the practice of bleeding, so strongly recommended by the learned Dr. Astruc, in order to allay the inflammatory symptoms in a *gonorrhæa* : nor is such a discharge to be effected by the best adapted purges or diuretics. Nothing less than a large and immediate derivation from the part affected will answer that purpose, and is only to be attained by a proper stimulating injection, thrown up as high, but no higher, than the residence of the disease. Such a method I have frequently practised with the most surprizing success ; as *Spirit. sal. marin. &c.* diluted in water to a degree suiting the design ; but the best of all that I have ever met with is the *præcipitat. alb.* made according to the London Dispensatory, but never suffered to dry. This must be repeatedly washed, till it has not the least taste, either of the sublimate or its menstruum. About a quarter of an ounce of the *præcipitate* to a quart of water is the strength which I find proper for this purpose in general ; but this must be increased or diminished by the discretion of the surgeon, according to the urgency of the case, strength of the *urethra*, &c. When this is thrown up to the part affected, it first causes a warmth, with a sense of pain, and in about a quarter of an hour the discharge begins, first very thin, in a most profuse quantity, continuing for six or seven hours : during which the patient should, if possible, avoid making water, as it gives the most exquisite pain. About the period above-mentioned, the discharge lessens, and grows thicker ; when the urine may be emitted as easy, if not more so, than before :

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because in England they are composed of much too acrid materials ; wherefore he at last says if injections are used at all, they should be made of *aqua rosarum et plantaginis*, with a little tutty.

As soon as the matter becomes thick, adhesive, and yellow, accompanied by a sense of resistance in the part, then

℞ *Aq. Rosar. Sambuc. a. ʒ ij. Aloes lucid. g. 10.*
Mel. opt. ʒ ij.

This, when injected, cleanses without pain, for it creates no uneasiness if dropt into the eye, and counteracts the venereal *virus*.

fore : the distention, heat, and redness of the *glans* disappears, and the next day the patient is generally freed from every painful or alarming symptom : in short, the danger is over, and his *gonorrhæa* becomes mild, and easy to be cured. Nor is this method less effectual to recal the running, and thereby most speedily remove the swelling of the testicles, and incipient buboes in the groin. When the running is suppressed by the symptom Dr. Cockburn calls *Algedo* (of which hereafter) this process will take off that suppression, and produce a plentiful discharge. The benefit arises undoubtedly from its stimulating the orifices of the inflamed, swelled, and compressed *lacunæ* ; for when the same injection is thrown up between the *præputium* and *glans* in a *phymosis*, from an inflammation or ulceration, caused by the venereal *virus*, it has no such effects, because there are no such glands : on the contrary, it will diminish the discharge, make it thick, dispel the inflammation, if not very great, and heal those ulcers in the quickest manner. This application applied to that part, though of the greatest use when the infection is discharged, will, at such a premature season, most effectually pox the patient, as I have myself seen in divers instances ; but of this I shall speak more largely, when we come to those ulcers.

1. But

1. But this injection should be thrown up as gently as possible, and without violence, which is apt to distend the part; for nothing more is here designed, but that what adheres may be washed away by a saponaceous abster-sion; and, 2. That what is viscid and inspissated in the emissaries may be a little diluted; hence, by so much the more gradually it insinuates itself, by so much the more gently the parts are dilated.

2. Care must be taken, that the injected fluid does not rise higher in the *urethra* than the seat of the disease; that is, the anterior part of the passage. To prevent this, let the *urethra* be empressed two fingers breadth behind the extremity of the *glans penis*: up that space gently impel the injection, not suffering it to proceed beyond the curvature of the *urethra* at the *os pubis*, where it always causes a heat of urine.

3. This being done, whilst the leaden * syringe is taking away, let the anterior part of the

* Lead is known by long experience to be as innoxious as any other metal, when applied to or retained in the body; nevertheless, for this use I would rather prefer a pewter syringe, because it admits and retains a smoother and better polish; but they should all be blunt at the extremity. These convey the liquor more effectually than those with small pipes, which often greatly injure the part, retard the cure, and bring on incurable fistula's; for when introduced with unskilfulness, or violence, they enter into the dilated orifices of the anterior *lacunæ*, and thus wound the spongy substance, or separate the *lamellæ* of the interior membrane. This is a very common thing; for it is not unusual

the *penis* be compressed, that the liquor may be retained some time in the affected place.

After this is done, if the matter is very tenacious, and the pain exceeding great, we ought to proceed with caution; for whosoever prevents a priapism, will be most successful in the cure; for when a priapism once arises, it frequently continues for twenty-four hours: nor can it be remedied but by a section of the *venæ præputii*. By this symptom the vessels are so much tumefied, that the patient cannot make water.

If therefore the pain is great, let a mucilage be made of the seeds of mallows, marsh-mallows, millet, or quinces, by bruising them in a mortar with a little water to the consistence of cream. This, when a little warmed, should be thrown up in order to mollify and lubricate the parts; for pain causes the *penis* to swell, which is prevented by this application.

5. Every thing that is astringent, warming, or strengthening must be carefully avoided, as red wine, and a decoction of St. John's wort; every thing composed of alum, *Jaccharum Saturni*, vitriol of Mars, vitriol of Cyprus, spirits of wine, &c. of balsamic tinctures, whatever is aromatic; balsams, as the Peruvian,

usual for patients, to whom such instruments have been given by their *quondam* Doctors, to complain their passage is grown up, and that because they cannot introduce so small a pipe, though they have used their utmost endeavours, and forced it with great violence. If the patient cannot make use of the round blunt end, the next best is the pyramidal.

or astringent decoctions. All these I proscribe, contrary to the opinion of almost all physicians.*

This may seem a bold assertion against so many skilful practitioners; but I need not apologize, since I am correcting my own errors continually.

There are at this time in Europe three projectors, who profess to cure this disorder by one injection; yet I have seen the most unhappy consequences attend their practice. The *gonorrhæa* indeed is thereby soon suppressed, but that is done by inducing an eschar on the orifice of the *lacunæ*, whence the flux of that matter is impeded, which is the true vehicle for discharging the venereal *virus*: under these crustaceous eschars ulcers are generated.

Hence the antient physicians have said, that the first remedy ought to be injections; but these should be formed, 1. Of pure water. 2. Of ingredients corrective of the poison. 3. Of the most emollient and relaxing liquids. In these three things those most prudent practitioners comprehended every requisite of injection.

The reason why I have above prescribed some forms for this purpose, is, 1. That you

* In the beginning of a *gonorrhæa*, or whilst any infection yet remains, these are most reasonably prohibited; but when a gleet continues after the *virus* is discharged, some, or most of these, as well as others hereafter mentioned, are frequently administered both outwardly and inwardly, with good success.

may proceed with safety ; and, 2. That you may have an example for other prescriptions.

I lately observed, that all those things that are astringent, corrosive, or consuming, are equally pernicious here, as fatal experience has often taught : for the same reason, corroborants should be avoided, because thereby the orifices are diminished, from a constriction of their fibres. On this account alum is to be rejected : the last, or *saccharum Saturni*, dissolved in water (by way of injection), constitutes almost every *arcanum*, and are in general use. *Vitriolum Martis* and *Vitriolum Cupri* are, however, the principal. To these we may add mineral chalybeats, called *acidulæ*, of which the German Spa and Tonnelet are the most famous : in these the vitriol of iron abounds. Others make a tincture by infusing Balsam Capivi, balsam of Peru, myrrh, mastich, oilbanum, with saffron, &c. in spirits of wine : with this diluted they wash the affected parts, by which the flux is diminished, but the disorder is increased ; for which cause these things were rejected by the antient physicians, to whom they were as well known as they have been to the moderns.

Many use decoctions made of the most astringent materials, as cinquefoil, tormentil-root, sharp-pointed dock, and rhubarb itself, (which being mixed with honey of roses, is used in injection), but as they are mixed with a large quantity of water and honey, relax more than astringe : all these things I reject.

We

We have before remarked, what was observed by some of the antient writers, that persons in the pox, on whom a *gonorrhæa* broke out, were thereby cured of the *lues*. This new appearance they did not at first know how to cure, as we are told by Antonius Brasavolus, who also calls the *gonorrhæa* a *lues venerea*; and Alexander Petronius, a most skilful and eminent Italian physician, says, that a *gonorrhæa* let alone cures itself, if not interrupted by contrary medicines, especially when unaccompanied by the appearances which indicate great malignancy, as yellow or brown matter, pain, heat, &c. from all which it is evident, that astringents act in a manner directly opposite to the design of nature.

I would now ask, how any one dares presume, (after nature has produced this salutary discharge, in order to prevent its access into the body), to suppress it, by constringing the passages thro' which it flows? You will, perhaps, expect I should now discover some antidote to the poison: such a specific, however, is yet unknown; even mercury itself does not correct, but expel, as was observed by Sydenham; and as for those other medicines above-mentioned, they only induce an eschar on the orifices of the *lacunæ*, as effectually as *lapis infernalis*, thereby constricting their orifices, suppressing their discharge, and causing an inflammation and suppuration, by which their extremities are separated.

Such

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Such flatter themselves, that if the extremities of the *lacunæ* are constringed into an eschar, the cure is then safely performed ; but the matter is thereby blocked up in those glands, where being retained only for twenty-four hours, it produces deep *fistulæ*.*

Having now done with chirurgical applications, we come next to

The Internal Medical Cure.

I Have always believed, from my observations on the œconomy of nature, that there never was a poison created, destructive to animal bodies, but there was at the same time an antidote provided. Some poisons are only relative ; for instance, that of vipers, which being lodged in vesicles near their teeth, is necessary to the concoction of their aliment ;

* Astringent, or those other injections alluded to by our author, are certainly very injurious and destructive in a recent *gonorrhæa* ; but their consequences are not always so pernicious ; for there are many instances, if writers on this subject are at all to be credited, where the discharge has been suddenly stopped by their use, without any such local effects as what are above described, tho' accompanied by a chordee : both being entirely carried off at one and the same time, and the patient freed from the disorder in that part, or any other, for the space of months, and even years. But in process of time, head-achs, nocturnal pains, ulcerations in the nostrils, with true venereal eruptions on the forehead and other parts of the body, discovered themselves : however, the most common consequence of a premature suppression, whether from cold or mal-practice, is a swelling of the testicles.

and

and if this is swallowed by a man to the quantity of a drachm, he will no ways be injured thereby; but if the least particle is received into the blood by the smallest wound, it induces a speedy and violent death.

Hence a true poison may reside in some bodies, and be again expelled without injury.

Such an antidote or specific has not as yet been discovered for the venereal poison in a *gonorrhæa*. I have perused all those authors who have wrote in Africa, America, and Europe; but there is not one of these who confidently asserts, they were possessed of such a secret, by which they could directly and infallibly cure their patients. They tell us indeed of Mercury, of China, and Sarsaparilla; but all the effect of these roots is to reduce the body, as it were, to a hydropic state, and thus to expel the poison by disturbing and changing the whole body.

What then is to be done?

Purgatives are the only means by which the cure is safely and certainly effected, tho' with some trouble. This the first writers on the *lues venerea* have already said. If a man is of so obstinate a nature as not to be moved by strong cathartics, they do him an injury, by raising a fever, which if it does not terminate in a *diarrhæa*, produces other evils: for this reason we should choose such as operate in the most effectual manner.

They should be collected from the class of Hydragouges; for so they are called, because

K

when

when given to a sound person, they dissolve the blood into a kind of putrescent state, rendering it unfit to be retained within the vessels; so that unless they operate by an alvine discharge, or by sweat, necessarily cause other diseases. If a sound man takes ten doses of Jalap successively, in as many days, he will daily discharge several pounds of water, and grow entirely pale, &c. And I am informed by my friend Phelipau, that nothing is more poisonous than a quantity of scammony sufficient to relax the belly being mixed with our food; for thereby the body is gradually consumed by a *diarrhæa*.

Therefore hydragouges dissolve the good blood, converting it into water, or, as Helmont has observed, change the laudable humours into a putrid serum; whence that quantity of water, which before had no existence in the body, is caused only by taking these medicines.

159 If you enquire what these are; I answer, the principal are Agaric, Cassia, and Radix Jalappæ; but that which I most recommend here is Manna, to be taken in large quantity, with a little acid, as Cremor Tartar or Juice of Lemons dissolved in pure water: this operates plentifully without exciting either heat or fever. Radix Mechoacanna, white and black, which acts the same as Jalap; Senna, principally the Alexandrine; Scammonium, both its juice and resin; Turbith Gummosum: all these resolve the blood into water, and give it

a ten-

a tendency backward. I do not mention Mercury, because I never permit that medicine to enter into the body, unless the cure cannot be performed by other things: 1. Because it hath something so incorrigible, that it almost always leaves some sad remains of itself in our fibres, where our greatest vigour lies, and thus brings on untimely old age. And as the mildest medicines are always exhibited where the disease is light, so Mercury should not be prescribed in a *gonorrhæa*; although it is of considerable importance, and to be commended in other stages of the *lues*.

The compound remedies are as follows:

a. The *Extractum Catholicon*. This is a most certain and general purger of phlegm, bile, and water, when prudently taken every other day: with this the ancients were well acquainted *.

b. *Elec-*

* From this antient medicine a great number of ingredients are expunged, yet so as still to retain the essential qualities and effects originally proposed. In the late London Dispensatory it was called *Extractum Rudii*, in the present *Extractum Catharticum*. The *Extractum Catholicon*, in the *Collectanea Chymica Leydensia*, we may suppose our author particularly refers to under this title, and is as follows:

℞ *Pulp. Colocynthid.* ℥vj.

Agaric. Alb.

Hellebor. nigr.

Jalap. ana ℥iv.

Pulverizatis grosso modo cum Sp. Vin. q. s. [℔vi. vel viij. sufficiunt] digerantur per dies aliquot. Tincturum à fæcibus separe per linteum. Fæcibus adde aq. pluvial. q. s. Digerantur per horas vi. vel viij. Dein lenitur simul ebulliant. Deinde

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b. Electuarium Hydragogum Sylvii *.

c. Pil. Cochiae majores. These are very efficacious in men of a constipated habit; but then they warm greatly, and are thereby unfit to be taken by those of hot constitutions. The effects of all these are, 1st, a resolution of all the viscid parts of the body; 2d, and when resolved, to discharge them by the *intestinum rectum*; 3dly, they induce a kind of stran-

coletur per linteum. Colaturam clarificatam affunde tincturæ præcedenti cum Sp. Vin. factæ, et lactescant simul. Hasce solutiones evapora, vel Spiritum Vini per arenam abstrahere. Reliquam evapora ad consistentiam usque mellis dilutioris. Dein adde sequentia pulverizata:

Aloes lucidæ ʒviij.

Scammon. ʒiv.

Et ad consistentiam pilularum evaporatione redigatur.

But as some eminent physicians give us an account of many and remarkable cures brought about chiefly by this extract, Fernelius and Riverius in particular, I shall here give the original prescription.

℞ Aloes Succol. ʒi. Turbeth Elect. ʒss. Colocynth. ʒvi. Agaric. Diagrid. Rad. Hellebor. ana ʒss. Sp. Diarrhod. Abbat. ʒi. Macis Stræchad. Arab. Galang. Cardamom. Zedoar. Caryophill. Cinnam. Flor. Anthos. Lign. Aloes Visc. Quercin. ana ʒss. Ambragris. ʒi.

Infunde omn. in Sp. Vini diebus 8 exceptis Speciebus Diarrhod. et Ambra, separa Tinct. a fæcibus cui adde Extractum Specierum Diarrhod. itidem per Sp. Vin. factum et Ambra.

Riverius tells us he cured a gentleman of fifty years of age, who laboured a year under the worst nocturnal venereal pains, in twenty days, by the *Pil. Catholicon.* and another twenty years of age, of a deep-seated pox of four years standing, in a month, by the same medicine.

* *℞ Bacc Junip. in aq. coct. expres. et ad pulp. consistent. redaet. Pulp. Tamarind. ana ʒiv. Rad. Jalap. ʒi. ss. Scammon. Elect. Cinnam. acut. Sem Fœnical dulc. ana ʒij. Sacchar. clarificat ʒx. M. f. s. a. Electuarium.*

gury;

gury; whence it is apparent they first melt down and render the venereal poison fluxile, and then determine it backwards.

Some men cannot take these without vomiting, or even convulsions: it is therefore necessary the physician be acquainted with such forms as may be always taken, or so to qualify those above-mentioned, that they may be safe and easy in their operation. If the patient is of a costive habit, or in the vigour of his age, the following forms may be made use of.

℞ *Resin. Jalap. gr. viij. Sacch. puriss. gr. iij.*
Scammon. opt. gr. vi. Stib. Antimon. gr. iv.

Reduce these into a fine powder, and then with one drop or more of *Bals. Peruvian. f. Pil. N^o. 5.* for one dose. This is intended for a strong man. You observe resin of Jalap to be the basis: Sugar is added, in order to dissolve the resin, which would otherwise collect into a heap, and in that state pass through the body. I have added *Antimon. Diaphoret.* because it contains a most convenient stimulus, by which the intestines are a little irritated; and the whole is perfectly mixed and united together by the Balsam of Peru, into pills, which I have never seen once to fail in their operation: besides, they may be easily gilded, and of consequence taken without offence either to the smell or taste.

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Another.

℞ *Mass. Pil. Coch. maj.* ʒi. *f. Pilul.* N^o. xv.
for one dose.

These, as Sydenham has well remarked, never fail; but are more suited to cold and pituitous temperaments, than to the hot and plethoric, where such warm ingredients are improper.

If the patient is disgusted by such a number of pills:

℞ *Extract. Catholic.* gr. xv. *f. Pil.* N^o. v.

And for those who are still more fastidious:

℞ *Sacch. albiss.* gr. ij. *Scammon.* gr. vi. *Trochisc. Alhand.* gr. ij. *Terebinth.* i. *M. f. Pil.* N^o. iij.

If the Scammony is not perfectly united with the Sugar, it will not dissolve: the Troches of Alhandal, which in Arabic signifies cakes of Coloquintida, are of so warm a nature, as when applied outwardly to cause a suppuration; and when mixed with Scammony, becomes as active a purgative as the most acrimonious bile.

So much for pills: which, when administered to those who are young and strong, you may be confident of their operation; but if the patient is easily purged, then half their dose will suffice: and to those who are more easily affected, a third or only a fourth part must be given.

The method of taking these pills is as follows; *viz*, Take a little cake of *Panis Martius*,

*tius**, which being put into a spoon, and mixt with water, is easily formed into a paste. With this the pills are to be wrapt up, and may then be swallowed in coffee or chocolate without the least difficulty.

I shall now present you with a specimen or two in the form of powders. And, first,

℞ *Resin. Jalap. gr. v. Sacch. alb. gr. ij. Scammon. gr. iv. Antimon. Diaph. gr. x.*

Let these be rubbed in a glass mortar to an impalpable powder: this never fails, and operates more freely than the former. Again:

℞ *Rad. Jalap. Mechoacan. ana gr. xv. Sacch. albiss. gr. iv. M. f. Pulv.* of a large volume, but small price; and therefore more suited to patients of the lower sort.

℞ *Rad. Jalap. gr. l. vel ad summum 3i. Sacch. albiss. gr. iv. M. f. Pulv.*

This also is well adapted to the poor: but it should be considered, that the *Rad. Jalap.* is by so much the better, by how much the more weighty it is; secondly, by how much more resplendent when broken; and thirdly, the more milky it appears when mixed with pure water. But when light, porous, and rubbed

* Panis Martius.

℞ *Amygd. decoctæ. et contus. lb ss. Sacch. albiss. ℥xij. Miscantur optime invicem, sub finem addendo: Ol. Cinnam. gutt. iv. Gariophyllor. gutt. i. Essent. Ambr. vi. Aq. Rosar. q. s. M. et formentur inde panes cujuscunque figura. Collectanea chymica Leydensia. cap. 330. pag. 312.*

to powder with the fingers, it is then worm-eaten, and of little value. You will perhaps wonder I speak of its exesion; nevertheless, worms find access not only into this root, but even into Coloquintida.

A Bolus from Βαλλω is a medicine of a form somewhat solid, yet sufficiently yielding to be swallowed at once.

℞ *Cassia recent.* ʒi. *Mana calabrin.* ʒij.
Scammon. gr. vij. *M. in mortario vitreo,*
et f. Bolus exiguus.

When this is well made, and covered, it is easily swallowed.

Another.

℞ *Resin. Jalap.* gr. v. *Scammon.* gr. iij. *Vi-*
tell. ovi gr. iij. *M. in mortario vitreo, et*
f. Bolus.

This operates most certainly: the yolk of an egg is its menstruum, the like or equal to which is not yet known; for by this medium, substances in themselves not misceable with water, are thereby united with and dissolved in it.

The third is a most convenient form, and such as we may even give to infants, in a dose proportioned to their age.

℞ *Rad. Jalap.* ʒi. *Terebinth. lucid.* gr. vi.
M. f. Bolus. This is as cheap as it is effectual.

A Fourth.

℞ *Extract. Cathol.* gr. xv. *Bals. Copaib.* gt. iv.
M. ad ignem, et f. Bolus.

But

But if this form is rejected by the patient, to whom a draught may be more agreeable ;

℞ *Rad. Jalap.* ℥ij. *Sacch. alb. gr.* v. *M. f. Pulv. tenuissimus.*

To this, whilst rubbing in a glass mortar, by degrees pour ʒi.ʒ of common water ; continue the attrition till the liquor becomes whitish, pouring off and adding a little more water, till the whole resin is extracted, when the powder will remain inert : add a little syrup of Roses to the solution, which may then be easily swallowed. The reason why sugar is used in this preparation, is, because the strength of Jalap consists chiefly in its resin ; so that unless it is rubbed with sugar, the resin will remain unmixed. This part of the Jalap is endued with so much penetration, that it will operate even in a quarter of an hour after it is taken. When infants are to be purged, where much caution is necessary,

℞ *Rad. Jalap. gr.* x.

Let this be rubbed with sugar, as before, and made into a draught ; or, to prevent nausea, it may be mixed in their chocolate ; for then neither the smell or taste of the Jalap is to be perceived.

Another Example.

℞ *Scammon. gr.* x. *Sacchar. gr.* ij.

Reduce it to a powder, in a glass mortar, gradually pouring on at the same time *Aq. Commun.* ʒij. The whitish liquor caused by this attrition

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attrition is to be poured off; the fæces must again be covered with more, and the operation repeated till the sediment becomes black; so that in about six drachms of water, the whole strength is contained: to this add syrup of sugar, or white roses ʒij. *M. f. Haust.* If you would conceal this medicine, a single drop of the *Ol. Cinnam.* will answer the purpose, without lessening its purgative force.

A Third.

℞ *Agaric. optim.* ʒß.

Rad. Jalap. gr. XL.

Trochisc. alband. gr. iij.

M. f. Pulv. This being mixed with three or four grains of sugar, and ʒiij. of water, into the form of an emulsion, add syrup *de Spina Cerv.* ʒv. *M. f. Haust.*

This is the most powerful cathartic of all, and proper only for the strongest men.

Now follow Decoctions. The first,

℞ *Agaric. optimi* ʒ iij.

Fol. Scrophul. aquat. M i.

Sennæ ʒ vi.

Rad. Jalap. ʒ i.

Sal Prunell. ʒß.

Boil these for half an hour in water, which dissolves the resin: we have then half a pound of the decoction; to which add *Syrup. Rosar. pallid.* ʒ i. *M. f. Potus.* Dose, one ounce every quarter of an hour.

This decoction is of great use to those who are difficultly purged. I have subjoined the

Folia

Folia Scrophulariæ on account of those of Senna, since no one can take of these last six times but he is affected by a nausea: for this information we are indebted to an English surgeon, who tells us, that the Folia Scrophularia boiled with them prevents that nausea, and at the same time increases their purgative quality. I have added the Sal Prunellæ, that the resin might be dissolved.

The Second.

℞ *Radic. Mechoacan.* ʒ ij.

Turbith. Gummosi ʒß.

Sal Prunell. ʒ i.

Boil these in a sufficient quantity of common water, for half an hour, to six or four ounces; to which add *Manna* ʒvi. or ʒiv. *M. f. Potus.* the dose of which is ʒi. every quarter of an hour. So large a quantity of Sal Prunell. is here necessary, because the Rad. Mechoacan. is wholly resinous: the Turbith is not resinous, but oleous, and soluble in water; and Manna is added, because it is a sweet and pleasant remedy.

These, I believe, you will find sufficient to vary your prescriptions; which is very necessary (especially when you attend the rich and great) both for the honour of our profession and your own interest, in this case closely united.

Those who have adopted this method of curing the *gonorrhæa*, as Sydenham and others, tell us, that there are some instances where
purges,

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purges, however well adapted, promote no evacuation, but on the contrary excite convulsions and faintings. What then is to be done? more especially as some are of so delicate a palate, as not to admit a repetition of the most pleasant purge: we must therefore have recourse to glysters, or to external frictions on the abdomen: this may be easily affected in a *gonorrhæa*, because they may be recommended under the notion of balsams; which being applied near the seat of the disorder, will on that account be esteemed the more serviceable.

For an Enema.

℞ *Rad. Jalap.*

Mechoacan. ana ʒiij.

Fol. Senn. ʒij.

Sal. Polychrest. ʒi.

Boil these half an hour, with a sufficient quantity of common water, and strain off seven ounces; to which add Syrup of Roses ʒij. This glyster operates as forcibly as if the Jalap was taken by the mouth, and is designed for strong and young persons; for when the habit is more weak, one sixth part is sufficient.

Another.

℞ *Elect. Phlegmag. Syl.* ʒi.

Syr. Rosar. pallid. ʒij.

Aq. Commun. ʒvi.

M. f. Clysma. This should be thrown up in the morning before breakfast, and after the body has been emptied by a stool, that it may

stay the longer in the abdomen. They ought to be injected whilst the stomach is empty, because the exhaling vessels are then much more easily stimulated; and by how much more empty the intestines are, the higher it will ascend: the patient also should use his utmost endeavours to retain the glyster as long as possible; for then not only the thick fæces are discharged, but the effects of a purge are produced at the same time.

The last method of purging is by liniments: these are impregnated with cathartic medications; so that being rubbed into the warm skin before a fire, they are impelled into the blood, carried by the veins to the heart and lungs, and thus into the arteries; till at length they perform the same office as if taken in by the mouth.

The Unguentum Althææ is greatly commended as a gentle laxative; for if infants are very costive, and some of this ointment is rubbed into them in the morning, they will be purged thereby. This is not however sufficient for the present purpose; it is necessary that other and more cathartic remedies should be made use of. Therefore,

Let the first liniment be thus made :

*R Ung. Alb. compos.
Arthanit. ana ʒi.*

In the morning let the naked belly be exposed to the fire, and well rubbed with a flannel till the skin is perfectly dry; and then the ointment

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ment is to be rubbed in. This seldom fails to work the patient so powerfully, that if continued too long, it brings on a *deliquim*.

Another.

R Ung. *Arthanit.* ʒi.ß.

Nervini

Martiat. ana ʒi. M.

and apply as above.

Our whole skin is porous: so that when the venous orifices are well cleansed, they imbibe freely: it is very probable that the essence wherein the purgative force consists, does not amount to the tenth part of a grain; and when that is spent it operates no more, as we see in Hellebore, Agaric, and Senna. When such purgatives are mixed with oil, the more gross parts not being admitted thro' the skin, act not at all; but the more fine and volatile being conveyed thereby into the body, affect the intestines by their stimulus.

When an Apothecary is compounding aloetic medicines, he is thereby purged; and there is scarcely any cathartic that he prepares by fire, but what will affect him in the same manner.

We shall now consider in what manner, and how long, these purgatives are to be used in a *gonorrhæa*.

Their effects may be reduced to the four following heads.

1. They resolve the blood, serum, and every tenaceous part contained within the vessels,

fels, into water; which are thus fitted to pass thro' the orifices of the mesenteric veins and arteries. Whence it appears that a moderation is to be observed in their use; for the body, when too much purged, is deprived of its nourishment, the aforesaid vessels are too much dilated and debilitated, and, if this evacuation is continued to excess, all the humours of the body may be discharged.

2. Besides their resolvent qualities, they have the property of determining the attenuated fluids backwards thro' the intestines and *urethra*. These effects are confirmed by experiments: what this power is precisely we are ignorant of; nor is it my business to explain: nevertheless, that they equally impel these fluids to the *urethra* as well as to the intestines, is very apparent, because every purge renders the urine more acrid. Is not the urine wholly tinged by only gr. vi. of Rhubarb? Does not Cassia make it black? If we take Manna, do we not perceive a stimulus in the *urethra*? And does not a strangury arise after the assumption of Senna? So that in these medicines there are certain specific qualities; since no one can be strongly purged but a strangury accompanies the *diarrhæa*, as was long since remarked by our late professor.

Hence I
shall suppose
improper.
However
it is much
used

3. These qualities correspond exactly with the design of nature: for after the *gonorrhæa* was added to the *lues venerea*, the *virus* was discharged by a fluid secreted in the *urethra*, as a shorter way. Now since purgatives re-

solve

solve the fluids, and determinate them thro' the *urethra*, they so far assist nature.

4. It is thus they cure a *gonorrhæa*. But by what reasons is this hypothesis supported? The matter is a poisonous spirit residing in the woman, by which a man is affected: it is so subtle as to insinuate itself by accubition, concubition, sweating in bed, &c. But how is it that, after the congress of one man with such a woman, another man is not affected by a commerce with the same woman? Because the poison adhering in the *mucus* of her *vagina* coming in contact with the *penis* of the man, the infection is thereby received by him, and extracted from her: from whence also it further appears, that the aforesaid remedies act agreeably to the designs of nature.

Is the cure effected by the physician? Only so far as he assists nature; for if that is counteracted, all is ineffectual. And after the most judicious treatment, the part cannot always be restored to its pristine state; for sometimes a white liquor, like oil of almonds, still continues to be discharged, tho' without any infection; being nothing more than a *stillidium* of mild fluid, such as we see ouze from an imperfect cicatrix; because the vessels, thro' which this tenaceous matter flows, continues to transmit too large a quantity of good juices: but this does not diminish the strength, or infect others; nor is it of any consequence.

How long is this method to be used? So long as there is a heat in the *urethra*, a scalding

ing of the urine, a great pain in the part, &c. Or if the patient is afflicted by a strangury, inflammatory tumor in the *penis, scrotum, &c.* or the discharge is mucous, thick, plentiful, and is either yellow, brown, red, or green, when dry; so long the purge must be continued every day.

By these rules we are informed when to purge, and when not. When the aforesaid symptoms remit, every other day will suffice; + and as they grow more mild, twice a week will be enough: the quantity of the dose is to be lessened for the same reason. When the cure is so far advanced, as no longer to require such resolvent purges, we must have recourse to corroboratives and conglutinants: such as Rhubarb, when mix'd with soft balsams: of the latter the hottest must be carefully avoided. But Mastich, which is the mildest of that class, and at the same time a good consolidative, cannot be too much commended. Therefore,

R Mastich. ʒß.

Rhubarb. ʒi.ß.

Terebinth. recent. gr. x. M. moderate igne, and make into pills of three grains each, of which the dose is twelve or fifteen every day, drinking some liquor to assist them in their operation; such as milk-whey, coffee, tea, &c.

Another.

R Mastich. gr. v.

Rhei. gr. xx.

Olibani. gr. v.

*after the virulence is abated every other day will
sooner heal the sores & compleat the cure if every day*

If these do not purge sufficiently, add *Scammon. gr. i. vel gr. ij.* reduce all to a powder; which is to be continued, more or less, until the quantity of matter is diminished, its acrimony corrected, and the colour white.

Perhaps a *fistula* remains: but believe me, that is not to be cured by wax candles, sharp injections, &c.* these aggravate the disorder, which is only a mere dilatation of the vessels. We may therefore be assured, that the method we have above related is the most rational and successful, nay, the only way of curing a *gonorrhæa*. I have omitted Balsamics, as Turpentine, Balsam Peru, Capive, &c. for these

* Since the time our author read these lectures, a much better form, composed of more suitable materials, has been substituted in the room of wax candles; viz. The modern bougies: which being composed of emplastic substances, when applied to the *urethra*, gently stimulate the sound, and really digest the unsound or ulcerated parts: so that, when cautiously used, they will cure a *fistula* of the anterior *lacunæ*, as I have experienced in three or four cases. But where the bougie, and other common means, prove ineffectual, I would here recommend a method I have more than once practised with success; that is, by introducing a small probe scissars, and cutting the orifice of the *lacuna*. A bougie must then be introduced a small space above the complaint, as frequent and retained as long as convenient. By this process (like that observed in *fistula's* of the *anus* or any other part) the *sinus* is opened, digested, and healed: the operation is very practicable, and performed with little pain; and if the few times I have had occasion to make use of it may be admitted as a testimony, it is very successful; for it succeeded in them all. I would here be understood to mean a *fistula* of the anterior *lacunæ* only; for to those situated higher up the passage such a method is not practicable.

30 or 40 Drops
Capivi taken in Lemon juice & water has a good effect
in curing the Gleet. Capivi is often mixed with
Elix of Vibriol acid, but the Elix being made from
Spices is too inflammatory

cause an inflammation and tumor of the testicles, even in a simple *gonorrhæa*. By these, according to the observations of Ravius, the matter is impelled first to the neighbouring parts, and then throughout the whole body *.

The last remedy I shall now propose is designed for young and plethoric persons, being composed of mild refrigerants, and adapted more particularly to the summer season, when the heat of urine is very great, and the *penis* troubled with frequent erections; by which the cure is much impeded. At such a time the body should be filled with a soft aqueous fluid, made from the flowers of mallows, dock, elder, petty mullein:

Leaves of endive, lettuce, pellitory, purslane:

Roots of mallows, liquorice, vipers-grass, parsnip, goats-beard.

The four greater and lesser cold seeds, as well as those of plantain, white poppy, and fleawort, are proper for emulsions.

R Sem. iv. frigid. maj. ana ʒss. cum f. q. aq. stilat. Flor. Rhead. f. Emulsio, ad ʒxviiij. quibus adde Sal Prunell. ʒi. Syr. v. radic. aperient. ʒss. M.

Of this drink plentifully every hour.

* Notwithstanding the opinion of our author, the good effects of Balsam Capivi, &c. are now sufficiently established by repeated experiments. In all probability he was prejudiced against this medicine by the account of his friend Ravius: for had he exhibited it after the infection was entirely expelled, he would, no doubt, have given it the character it deserves; for, when properly administered, it is more effectual than any other remedy: if prescribed too soon, it produces the effects described by our author.

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℞ *Sem. Cydon.* N^o. ij.

Papaver. albi ℥i.℞.

Portulac. ℥ij.

*F. L. A. Emulctum cum aqua communi ad ℥xviij.
vel xx. quibus adde Nitri puriss. ℥i. Syr. Diacod.
℥℞. M. and take as before.*

℞ *Fol. Althæ*

Parietar. ana M.℞.

Flor. Althæ

Rhead. ana P.℞.

Rad. Glycirrh. ℥i.

Sisari ℥ij.

Sem. papav. albi contus. ℥i.

Coque in aqua communi ad ℔iij.

Let the patient drink ℥ ij. of this every hour.

Another.

℞ *Rad. Chinæ*

Liquirit.

Salsaparill. ana ℥ij.

*Coque in sufficienti quantitate aquæ communis ad
℔ ij. and drink as above.*

This is a very mild and agreeable liquor, but of great price, and therefore should be prescribed only for the rich.

¶ This latter method is made use of in Spain, Portugal, and Italy, where they hardly prescribe any thing else; for there the matter of a *gonorrhæa* is sufficiently resolved of its own accord, without the assistance of purgatives. But this is owing to the heat of the climate: the patient, left to this method and nature, generally

generally does well, tho' the cure is slow, and protracted for several months.

If you pursue the whole course above recommended for the cure of a simple *gonorrhæa*, you will be very successful; nor need you fear its return, or any other bad consequence. This I affirm on the foundation of many repeated trials.

But if the *gonorrhæa* is compounded with other symptoms of the virulent *gonorrhæa*, or if a tincture of the *lues venerea* hath infected the body, it is not to be cured in this manner, but another, mentioned in its proper place.

Let it not be imagined that the above prescribed cure for the *gonorrhæa* is either a rash institution, or even a modern discovery; on the contrary, it is confirmed by the practice and opinion of the best writers.

I. The great Bravavolus, who was eminently skill'd not only in the Hippocratic and Galenic learning, but also in whatever the moderns have taught, says, that the *gonorrhæa* is a flux, not of semen, but of pituitous matter, mixed with a venereal infection: so that this author plainly makes a distinction betwixt the pituitous discharge, and the poison therein contained. The cure of which, according to him, is,

1. By repeated purges, and not by astringents.
2. By an emollient injection.
3. By cooling refrigerant ointments; as

those of Ceruss, Nutritum, and Populeum. This process is very well suited to the warmth of Italy: but in the room of these unctions, I have substituted washing and bathing, as more proper in our colder climate.

4. By corroborants and astringents: These are to be used at last, when we are sure the disorder is wholly expelled. In the room of these I have substituted subastringent baths.

5. If it does not yield to this method, a *lues* frequently succeeds: then recourse must be had to decoctions of Guaiacum or mercurials. (See page 674 and 685, in the *Aphrodisiacus*.)

II. No one ever acquired greater fame for the cure of the *lues venerea* than Leonard. Bottallus, who tells us, that the cure of a *gonorrhæa* consists,

1. In washing the *penis* and *scrotum*.
2. In bathing the *penis* in warm water.
3. In fomenting the *testes* with a penetrating wine.—Instead of this last I make use of a bath with a little salt, spirit. salis, &c.

4. In purging with Rhubarb, Turpentine, and Aloes. For my own part, I dare not thus prescribe in a simple *gonorrhæa*, excepting in its last stage, when only matter flows without infection; because, when Turpentine is given in the beginning, a swelling of the testicles is always the consequence*: but Aloes is of all others

* Swell'd testicles, as I have before observed, are the most common effect of a premature suppression of the running. Notwithstanding its frequency, there is no symptom pertaining

It is thought to be heating

others the greatest resolvent: Why then is not this hydragogue more frequently administered without astringents?

5. In the injecting of emollient fluids up the *penis*.

6. In soft mild diuretics; such as our last decoction.

7. In phlebotomy: an evacuation which, tho' this author recommends in every disorder, should not here be practised, except the patient be very strong, or has been guilty of excessive drinking.

III. Bernardus Tolitanus †, a very eminent physician, tells us, that the whole cure con-

taining to the *gonorrhæa* more difficult to be accounted for. The learned Dr. Astruc tells us, it is from inspissated semen in the meanders of the testicles: But whence that inspissation? Others have endeavoured to give reasons, which no more explain the cause than the last-mentioned author. The fact appears to be a transition of the *virus* from the *urethra* to those bodies. There are many instances where this derivation is perfect, where the *urethra* becomes suddenly easy without the least discharge, and to which, in some, it never returns: in others the tumor and pain is removed by a retro-transition to the *urethra*, and *vice versa*. This happens often in the same disorder and person. Something of the same kind occurs in many other complaints; as pains of the stomach retiring to the head; an inflammation of one eye, to the other; a pain of the elbow, to the knee or shoulder, as in the rheumatism, &c. I say, the suddenness of these cannot well be accounted for, in parts that are distant from each other; but in those which are nearer, perhaps the lymphatics, considered as absorbents, may afford some light to this subject.

† Called B. Tomitamus, in Armstrong's Synopsis. This writer, justly commended by our author, deserves the highest encomiums for his minute but exact observations, and judicious practice; in which he greatly excels most in the Venetian collection.

Because if veins being emptied may absorb y^e virus
L 4 *sifts*

sists in the use of emollients and refrigerants. But this process is adapted only to warm countries, where it is very effectual; for there the heat of the atmosphere spontaneously dissolves the humours.

IV. Alexander Trajanus Petronius, who was a man of the most profound learning, says, page 1323,

1. That the *gonorrhæa* is cured with difficulty: which is very true at Rome.

2. That the difficulty is greatly increased in those troubled with erections.

3. That refrigerants and laxatives are very serviceable.

V. If to these you add the opinion of the learned Dr. Sydenham, you will see, that after examining every method, and trying almost every medicine, yet at last he returned to the practice I have above recommended.

Before I come to other ways of curing the *gonorrhæa*, I shall proceed to speak of the second species; after which I shall have a better opportunity of shewing when an astringent injection is likely to be serviceable; and so of the rest, as occasion offers,

The Second Species of the GONORRHÆA.

THIS is situated not only in the anterior part of the *urethra* above described, but in the whole congeries of mucilaginous *cryptæ*, in the anterior part of the *penis*.

In the first species the seat of the disease was not above a thumb's breadth above the orifice
of

of the *urethra*: where Morgagni has demonstrated the large *crypta* in the superior part of the *urethra*, the cavity of which would contain a grain of barley, notwithstanding the smallness of its orifice; and when divided, its internal surface appears to be perforated with a multitude of minute orifices. Hence it is not one entire body, consisting of one orifice, but a true *crypta*, into which the humours are discharged from various parts.

Terraneus has observed, that there are two lateral *lacunæ*, somewhat large, near the extremity of the *urethra*; a little above these, other little glands; and somewhat higher is the *lacuna magna* of Morgagni: higher still is the *lacuna Cockburniana*; and as we ascend, Cooper's, and those other glands already mentioned. From all which we may conceive what a number of emissories there are in the *urethra*.

Dr. Cockburn further observes, that being willing to enquire what was their structure, in conjunction with that eminent surgeon Saint André; having procured a *penis*, and filled the *lacuna Morgagni* with wax, he noticed, 1. whilst the injection was impelling into that *lacuna*, it diffused itself into all its lateral orifices, and thro' them into all the emissories of the remaining *lacunæ*, even to the curvature of the *penis*: the mutual commerce of all the glands became thereby very apparent. 2. It was remarkable also, that the ceraceous matter had passed into the fungous substance of the
urethra.

urethra. If this communication is admitted, it is obvious, that according to the degree of pressure, a *mucus* may transude thro' the arteries into the cavity of the *urethra*: but where there is a greater resistance at the orifice of this great *lacuna* than at the fungous substance of the *urethra*, the matter must then necessarily recede into that substance. 3. When this injection is performed with considerable force, the veins surrounding the *urethra* are filled: the disorder, in like manner, may be propagated to them, and from thence into the blood.

These things being understood, you may easily conceive how difficult such a disease must be to cure; when the seat of a *gonorrhæa* is not only in the great anterior *lacuna*, but when those placed higher up, even to the curvature of the *urethra*, and Cowper's glands, are affected in the same manner as the *lacuna Morgagni*.

The *gonorrhæa*, of which I am now speaking, is when the venereal poison has diffused itself thro' those *lacunæ*, the glands of Cowper still remaining free: and the fungous substance of the *urethra* not yet eroded.

The symptoms which this disorder presents to us are as follows:

1. A greater quantity is always discharged.
2. The discharge is more gradual: for as the *lacunæ* are smaller the higher they are situated; so what they excrete passes thro' a longer and straiter passage: whence the flux is more
flow,

flow, but continual; that is, in a *gonorrhæa* of the first sort, the *stillicidium* is violent, but in this more constant.

3. Every symptom felt in the first species is more severe in the second. The cause of this disorder is,

I. A greater acrimony of the venereal poison. Of which it may be remarked,

1. If a woman, who has commerce with a man, exercises a more than ordinary venereal ardor, excited either by the aspect of her paramour, or any other accidental cause, the infection she then conveys is by far worse than what is received by an ordinary *coitus* with prostitutes. The antients have observed, that when a man is bit by a viper, he receives little or no injury, unless the animal was enraged.

2. When the putrescency has been long retained, it increases in malignity.

From these two causes this disorder is generally produced. If a woman admits a man labouring under the worst *gonorrhæa*, and immediately has commerce with another who is sound, with whom she indulges her libidinous passions to a high degree; the last man will be infected in the most malignant manner, whilst the woman shall be freed thereby from all infection: there are many examples of this kind *.

3. A.

* I lately had an opportunity of examining into a fact of this sort, where a man had commerce with a woman big with child, who neither at that time, nor afterwards, felt

3. A long continuance of the simple *gonorrhæa* with increase. If any one, who labours under a *gonorrhæa*, indulges venery, the parts are thereby irritated: for how much more rigid the *penis* is, by so much more the *urethra* is compressed, together with the adjacent parts; and whilst they are thus agitated, the matter is easily distributed from the great *lacuna* into the neighbouring canals; a circumstance I have frequently observed happen to young men.

4. The use of astringents: by which the efflux of the virulent matter is suspended for a time, but returns again with greater obstinacy.

a. If the venereal *tabes* becomes so sharp as to erode the little orifices, and a brown liquor of consequence is discharged, then small eschars arise on all those places; which are cast off in a few days, when the disorder is increased. It is for this reason that I have been so solicitous to guard you against such practices in the cure of the first species.

b. When a man, who has a *gonorrhæa* of the first kind, is necessarily exposed to the cold air in winter, the matter, which was before usually secreted, is thereby retained, because its egress is prevented by the constricted pores.

felt the least disorder: however, he was affected with a most virulent *gonorrhæa*, *phymosis*, and foul cancerous ulcers. Complaining to a comrade of his misfortune, he was informed by him, that tho' he had a clap, cancre, and somewhat of a chordee, he had lain with the same woman not many hours before the complainant. The woman, however, kept free from the disease, tho' she was the means of conveying it,

c. If

c. If hot spirituous medicaments are administered, which induce pain, dryness, and other complaints, the small apertures of the vessels are constricted, and their fluids coagulated; and because there is a communication of every *crypta* with all the rest, the liquor is of consequence expressed into the communicating *tubuli*. It is not worth enquiry whether this be done by medicine, astringents, aluminous, vitriolous, saturnine, or such like.

5. A repetition, or doubling of the disorder. When the first *gonorrhæa* only is present, there is no symptom worse than the erection of the *penis*; for then the *urethra* and *lacunæ* are compressed at the same time; so that their matter is thrown back into the cells. But when a fresh infection is received, the disorder ascends still higher: at least a man in such circumstances, who rashly indulges himself with women, greatly increases his disease.

6. Extreme heat: whether from baths, common fire, medicines, climate, or motion; more especially the last, as riding, which we have particularly forbid. Racing, leaping, and hunting, are very injurious; for by all these the matter, which was designed to flow outwards, is the more repelled, and thus causes the second species of the *gonorrhæa*.

The effect of these causes is,

1. An erosion of the spongy fabric of the *urethra*. I have lately related the experiments,
by

by which we are assured every *crypta* has such a communication with each other, that if the injection is still urged forward, it will penetrate even to the prostate, cellulous substance of the *urethra*, and *glans*. The cellular fabric is usually so collapsed, that it is represented as a simple canal by de Graaff; but this mistake is corrected by Ruysch. If then the venereal poison is once diffused in these cells of the *lacunæ*, it will not return, but spreads throughout the whole spongy texture, eroding the bulb and *glans*; by which the cure is rendered very difficult. Of which afterwards.

2. A reduction of the matter into the blood, and a commencement of the *lues venerea*. This will appear very evident, when you reflect, that the veins which return the blood extravasated in the cells back again into the body, must in the same manner absorb and convey the venereal poison into the mass of blood, and throughout the whole body; whence a true *lues* is produced.

Now follows the *diagnosis*.

1. If the causes which induced a first *gonorrhæa* have been repeated, we may with good reason suspect, that the second species of this disease either has already, or will soon arise.

2. From the quantity of discharge. If, for instance, the flux is increased in consequence of such causes, then we are sure the disorder

disorder has spread to and occupies the places above-mentioned.

3. The height of the *urethra*, from which the matter flows. When the higher you press the *penis* in a morning, the more liquor is discharged, till you rise to the *os pubis*, it is an infallible sign.

The *prognosis* is a difficult cure: or, if we credit Alexander Trajanus, it is wholly incurable.

In the course of practice, you will sometimes experience the truth of his observation: for when you have expelled the poison, the *lacunæ* will continue to discharge a pituitous matter, because the fabric and orifices of these glands cannot be restored to their pristine strictness.

This disorder often requires the most efficacious prescriptions. Brassavolus recommends decoctions of Guaiacum, and mercurial ointments: yet even these, according to his own confession, sometimes fail.

However, if there is no present symptom of the *lues venerea*, I dare venture to promise a cure, so far that a man may marry without the least risk of infection, and that his procreative faculties shall no ways be injured: but I cannot say that the pituitous discharge shall cease, because of the aforesaid relaxation, and a kind of paralytic diathesis with which the part is affected. Now if such patients fall into the hands of empirics, the prospect of

cure

cure is very uncertain. In short, with exhausted bodies, and empty purses, they are dismissed incurable *.

The CURE.

THE object we should principally have in view, with respect to the cure, is to take away the causes, than which no one is of more importance than the erection of the *penis*. For this the most strict diet is necessary to be observed; so strict, as even to sustain life with turneps, carrots, wheat, barley, oats, &c. boiled in water only. Such patients should also be frequently macerated in the warm bath. This method generally succeeds.

An error must be avoided: as when physicians and surgeons, who are ignorant of theory, suppose it necessary to strengthen the part. By such means the disorder speedily degenerates into the fourth species; but should not this happen, it is rendered incurable: for as soon as the little orifices are constricted, the virulence in the mean time not being extinguished,

* This remark, I believe, would pass, without the authority of a Boerhaave. Well would it be, if there were not some among regular practitioners, who both talk and act empirically, who promise rashly, and perform little: with whom it is common to speak of a clap, without any distinctions whatever, as a very trifling complaint; declaring a few days, or a week at farthest, sufficient for the cure; when it is well known, in many cases, to be extremely difficult and tedious, according to the degree of infection, temperament of the patient, &c.

every *crypta* is filled and obstructed, then the most intolerable distention is felt throughout the whole *penis*, every part of which seems to be compressed, and the urine is discharged in a small stream with the most excruciating and coroding pain*.

Ruyfch has demonstrated in his figures, that the fungous substance of the *urethra*, when arrived at the extremity of that passage, is reflected backward, and forms the gland; by this means, and this only, has it any communication with the *corpora fungosa penis*: thus it is that a tumor of the *urethra* extends its whole length; and if this is in a great degree, the *penis* is inflected downwards: because the *corpora cavernosa penis* are not affected in the same manner.

As for the method of cure, all that has been recommended for the first *gonorrhæa*, must here be repeated with double vigour, but chiefly purgation, which is to be continued till we are sure the whole poison is expelled; then

* This symptom, whether brought on by the improper use of astringents, fever, &c. is the very same as that described by Dr. Cockburn under the appellation of *Algedo*; but as it is not here delineated in that full extent, as in the fourth species of the *gonorrhæa*, I shall defer my observations on the *Algedo* till we come to that species. I have ever esteemed Dr. Cockburn's treatise on the *gonorrhæa* as one of the best ever published; as giving the most accurate description of the seat and consequences of a *gonorrhæa*. He is nevertheless silent as to the method of cure; that he reserves to himself as a *nostrum* comprised in one infallible injection: for the efficacy of which he would have us, or rather his patients, take his word.

we must have recourse to the subastringent remedies above mentioned.

The Third Species of the Gonorrhæa.

THIS happens when the infecting poison proceeds so far up the eroded *urethra* as the two lateral orifices of *Cowper's* glands. These two orifices, by an invariable law of nature, discharge themselves in the curvature of the *penis*, immediately under the *os pubis*, where the *lacunæ* of Morgagni and Terraneus end.

The situation of these glands, with the procedure of their ducts till they terminate in the sides of the *urethra*, has been already described. See pag. 113.

If the venereal poison ascends so high, and insinuates itself into these orifices, what is the consequence? These orifices are placed directly under the *musculi acceleratores urinæ*; and when these muscles act either in the expulsion of the semen or urine, their juices are impell'd to that very narrow part of the *urethra*, lest it should receive any injury by the impulse of either the semen or urine.

These two long emissaries, which in their natural state are empty, and never compressed but when either the semen or urine is expelled, become greatly dilated, and constantly discharge a much larger quantity when infected by the venereal poison.

These orifices may be infected either when empty or full. They are full when their glands

glands are compressed by the accelerator muscles: when these muscles compress the bulb of the *urethra*, that space betwixt these muscles and the bulb (where there are other small glands) remains free; but since these emissaries run partly without the *urethra*, and partly within it, till they arrive at the *os pubis*, it is evident that their glands are never evacuated but when either the semen or urine is emitted by the action of these muscles, or which very rarely happens from fulness: after which their emissaries remain empty.

If now the infectious matter ascends to these orifices, it may easily insinuate itself into them, because of their declivity with respect to their glands. When this happens, there arises,

1. A difficulty in discharging the urine: because a little tumor of that part soon follows the reception of the poison.

2. This species was never observed to arise, but when preceded by the second, and that by the first *gonorrhæa*: so that when this symptom follows the two former, we may safely conclude it to be the third species.

The causes are the same as in the second *gonorrhæa*, but more sharp and violent, and seated nearer the *os pubis*.

The signs are,

1. If after the two preceding *gonorrhæas*, a difficulty of making water arises, and no matter is discharged by pressing the *urethra*; but a constant and spontaneous distillation either

outwards or inwards: for if the infection once enters either of these canals, it immediately proceeds to the glands, causing extreme pain, and a manifest tumor below the *prostate* in the *perinæum*; that is, at the sides of the *penis*, about a quarter of an inch after it has left the *intestinum rectum*. When this tumor appears, and the patient complains of the most severe pain in this part, at the time of making water, many physicians are deceived, supposing these symptoms to have nothing to do with the *gonorrhæa*; on the contrary, you will ever find they arise from a preceding *gonorrhæa*.

2. Such patients always evacuate those glands whenever they make water, which circumstance is peculiar to this species; and with the last drops of urine, a large quantity of fetid ichorous matter is expelled. This is a sure sign; for in other *gonorrhæas* it always comes away before the urine. If you would be certain of the existence of this disorder, let the experiment be made as in the first *gonorrhæa*: when this is done, and nothing more comes, let that of the second species be tried: after which the *urethra* must be pressed in the *perinæum*, not touching the sides, when nothing will be discharged; then place the finger a quarter of an inch below the union of the *rectum* and *urethra*, and there press the bodies of those glands laterally; if matter is then discharged, we are sure that a *gonorrhæa* of the third species is present.

3. The

3. The difference of the discharged matter from that in the two preceding kinds: for in them it is thick and homogeneous; but here it is more fluid and corrupt, because longer retained: it is also fetid, which rarely happens in the two former, except in the summer.

4. Incurableness: because the former method is of no advantage here, the disorder lying without the *urethra*. A man in health discharges his urine six times in twenty-four hours: if this is done in equal time, these glands are evacuated every fourth, or six times in twenty-four hours.

The prognosis is as follows:

1. The glands are entirely consumed, and the putrid matter they contain is with difficulty expressed: it preserves its situation by its own gravity. Hence the posture in which the patient lies in bed must be regulated, by the position, length, and straitness of the emissaries; from which much benefit may be received.

2. An exesion of the membranes investing these glands: these, by the medium of the cellular membranes, are connected to the neighbouring parts into which the disorder may penetrate.

3. An ulcer arises in the *membrana adiposa* about the *urethra*: for the ulcers of these glands do not penetrate the *urethra*, but its surrounding flaccid cellular membrane, which is the true seat of every *fistula* seated in this part; and by how much laxer this is, by so

the further will the matter insinuate itself. As soon as such an ulcer is formed, the matter is no longer discharged thro' the *urethra*, but dispersed amongst the cells of the *membrana adiposa*.

4. A transition of the disorder thro' the cellular membrane to the neighbouring parts. The *urethra* is surrounded by the *prostates*; these by the *membrana cellularis*, which is continued to that investing Cowper's glands: whence it happens, that as soon as these last are affected, the disorder is propagated to the whole *membrana prostatica*; and in the same manner the whole length of the *urethra* may be affected, even to the *glans*; not in the fungous substance indeed, but in the common cellular tunic. The matter may also recede backwards thro' the same medium to the neck of the bladder and *intestinum rectum*.

5. A fistulous ulcer *in perinæo*, most difficult of cure: 1. Because the emissaries of Cowper's glands being no longer capable of discharging; the secreted matter having found another passage, is deposited in the cellular membrane: 2. And as this membrane is very dilatable, tumors of various sizes form, and disperse themselves thro' its substance.

6. As the disorder spreads, it infects all the neighbouring parts of the *perinæum*, *scrotum*, *prostate's*, *urethra*, *penis*, *vesica*, *intestinum rectum*, and even the thigh. All these consequences may arise from the neglect of a simple *gonorrhœa*, which is of course followed by a

second, and a third: at length physicians are consulted; and when a tumor is perceived in the glands, a surgeon is called in, who being ignorant of the disease, all the above symptoms appear; and proceeding still further, ulcers break out on the *mons veneris*: but it produces the worst effect of all the others, when it spreads into the thigh.

Thus we see that a simple *gonorrhæa* may degenerate into an amazing variety of evils, and at last terminate in the worst species of the *lues venerea*.

Of the CURE.

I Shall not in this place treat of all the above-mentioned symptoms, as they properly belong to another disorder (of which hereafter), but confine myself to that by which Cowper's glands are affected, in consequence of a third *gonorrhæa*.

1. All that was required in the second *gonorrhæa* must be here again repeated.

2. These glands should be frequently but gently expressed, so that they may be evacuated without being injured. The patient should be enjoined to lie as much as possible on his face, or at least his body should be so inclined, as that the natural perpendicular ascent of these ducts being inverted, their discharge may be facilitated. The expression should be repeated every quarter of an hour.

3. If this method should fail, and the tumor continue, or be increased, we must take other measures: the purgative course must be again repeated: and we should endeavour to form an abscess outwardly in the *perinæum*; and when these parts are dissolved by suppuration, and matured, the abscess must be opened with a lancet.

But first let me advise you to call in the assistance of skilful physicians; give them the history of the disease; and intimate your fear, lest the glands, by suppurating inwardly, should disperse the *virus* thro' the *membrana adiposa*; the only way to prevent which is by an external opening. It may be objected, that the glands will be destroyed by such a process: They will; but then they are by no means necessary to life, which otherwise is endangered by the spreading of the disorder. To promote their suppuration, let the bulbs of onions and garlick be baked in an earthen pot till they be reduced to a pulp: to ℥ij. of which add ℥i.ß of oatmeal, and ℥i. of fresh butter: boil the whole with milk to the consistence of a poultice, which should be repeatedly applied till the integuments are greatly attenuated. Or the following cataplasm may be used.

℞ *Farin. Lini*

Secalin. ana ℥i.

Flor. Althææ

Meliloti, ana Pij.

Fol. Althææ

Verbasci. ana M.i.

Coque in f. q. lactis recentis, coctis atque contusis adde olei lini recentiff. ʒi. M. & f. S. a Cataplasma.

This is to be continued till the part is so relaxed and softened, that the matter spontaneously tends thither.

The cold must never be admitted before the tumor is soft, and points outwards, when we mollify it yet more: afterwards the abdomen and thigh are to be compressed, and the finger introduced into the *anus*; by all which the tumor is rendered more prominent, and may be opened with a lancet without the least danger.

The next thing indicated is a depuration of the part; which, like all other glandular substances, is of a scabrous fungous texture: for this purpose we make use of turpentine, with the yolk of an egg and aloes, than which there is not a better digestive. If the *sinus* is large, and very foul, it ought to be cleansed with Unguentum *Ægyptiacum*, which is the very best detergent in this case.

We are to proceed thus till we are sure that every part is perfectly clean. But if any one attempts to produce the same effects by the use of stronger medicines, he will thereby increase the disorder to such a degree, as not to know which way to act. Many instances might be brought from authors in proof of this assertion.

A certain eminent writer informs us, that such a case occurred to him, which was followed

lowed by a diminution of the external discharge, and a painful tumor at the neck of the bladder: a fever coming on, another physician was called in: they then gave the patient more than ten grains of Turbith Mineral: this was repeated above ten times; notwithstanding which, the disorder still increasing, a surgeon was sent for, who being equally ignorant of the nature of this complaint with the two physicians, used a variety of means to recall the discharge, but in vain; for in a few days the whole body was covered with venereal pustules.

These things afford us a striking instance of what gross errors even the most skilful practitioners may fall into, who in curing diseases do not consider the structure of the parts affected.

If therefore the flux ceases, and a painful tumor succeeds, with a heat in the *perinæo*, or even when pressed no matter passes thro' the *urethra*, we may then be assured an ulcer is formed without that canal. The case then becomes so intricate, that most practitioners are at a loss how to proceed: they try every thing in order to expel the matter in vain: at last they have recourse to mercurials: but from the above it plainly appears what ought to have been their practice.

When the *sinus's* are well opened, and cleansed from all purulent matter, the disorder is for the most part cured; but if not, the worst venereal *lues* arises.

When

When the matter is in this manner brought outward, we have a *fistula*, which terminates not in the *urethra*, but outwardly in the *perinæum*. By how much more the ulcer is dilated, by so much more easily it is cured, because every part is more accessible to digestives, and the discharge of matter more free: on this account we should cautiously avoid the use of tents.

We should apply the most powerful digerents, whenever we see the sides of the wound flocculous or sloughy; such as Aloes, or Unguentum *Ægyptiacum*; by which last an eschar is made in the space of twelve hours, when it must be taken away, and exchanged for a suppurative application. This alternate dressing must be continued till the sloughs are intirely removed, and the bottom of the ulcer is of a flesh colour: after which a common digestive is to be applied during the granulation of the wound, remembring at the same time to preserve the opening. If there is no fever, the bottom of the wound appearing natural, and the *pus* good, we are sure the venereal poison is discharged: we may then at length bring on a cicatrix with safety. But if a fungosity remains, apply the following:

R. *Ung. Basilic.* ʒi.

Mercur. præcip. albi ʒij.

If this medicine is applied gently to the fungous sides of the ulcer, it produces an eschar with more ease than the red precipitate, which causes too great pain: after which we are to inspect

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inspect whether the wound continues flocculous, or covered with fleshy *papillæ*. The following may likewise be used.

R. *Ung. aurei* ʒi.

Mercur. præcip. albi ʒij.

M. and apply as above. Both these induce an eschar, and suppurate at the same time.

These things being done, the physicians will conclude whether it be proper to heal the wound, or otherwise; in which they will be determined by the condition of the *pus*, and the laudable state of the bottom and lips of the wound. Mercurial applications must be remitted, and the part dressed with the *Unguentum Basilicum simplex*: but if the flesh grows luxuriant, we again return to mercurial medicines.

If, after all, a new *sinus* is discovered, we must pursue another method; *viz.* that of a vigorous ptyalism; because we dare not propose further incision.

The salivation must be begun whilst the wound is open, that the matter may be discharged.

And so long as it continues, the circumjacent parts of the wound must be preserved flaccid: nor is the wound then to be healed before all the venereal matter is expelled. If the case is at all curable, it will yield to this method *.

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Observations on the Treatment of these Fistulæ.

* Our author recommends these abscesses to be opened by the lancet; which may not be improper in some few cases:

The Fourth Species of the Gonorrhæa.

THE neck or extremity of the *vesica urinaria* in men is strictly surrounded by the *sphincter vesicæ*; at which place the muscular tunic of the bladder disappears, and the interior mucilaginous membrane only passes out, which, after a little ascent, is surrounded by a glandulous substance, denominated *ωεγ-
σαίνω*, or *janitor*, by the Greeks.

We know that this gland is large in men, and so involves the *urethra*, that it appears to be lost within its substance. In this part that canal is more confined than in any other: its length is about half an inch, in which twelve orifices, proceeding from as many distinct portions

cases: But since we generally find the *membrana adiposa* considerably wasted, and the lips of the wound consequently hollow, from whence much inconvenience arises, I am of opinion that there should be either an excision of the excavated skin, or that it should be opened and destroyed by a caustic. By such a process the external aperture is preserved open, without the least danger of closing immaturely; a circumstance by our author justly esteemed of the greatest importance. The medicines he recommends for the depuration of the wound are in general good: they are not however in common use at present, except the Ung. *Ægypt.* Nevertheless there is not one effect arising from his favourite *Præcipitat. alb.* but what may be attained by the *Præcipitat. rub.* when mixed with a common digestive, in a ratio proportioned to what the wound requires: he is however undoubtedly right with respect to strong escharotics, such as the dry application of the *Præcip. rubrum*; for then an eschar of some thickness is produced, and the discharge for a time suppressed. This medicine, all others of the kind, and even the *Unguentum Ægyptiacum*,

tions of the *prostate*, appear : at the same place the apertures of the two ducts from the *vesiculae seminales* may be seen : these run thro' the fungous substance of the *urethra*, and open themselves below. There is also another common orifice proceeding from each vesicle.

Therefore, besides the exhaling pores, the *urethra* has in this part fifteen orifices, so patulent as to admit a hog's bristle.

This then is the most dangerous part, in which I place the seat of the fourth *gonorrhæa*.

If you recollect the penetrating nature of the venereal poison, and with what horrid velocity it assimilates the sound humours with itself ; if you consider the descent of the *urethra* in this place, with its restricted situation ;

cum, have precisely the same effects, in proportion to their strength : but as he has cautiously guarded against such an effect as much as possible, by the alternate application of an emollient digestive ; so the same security may be obtained by a like proceeding with respect to the *Præcipitatum rubrum*, or any other medicine of similar properties. His directions with regard to keeping the wound open, till the infection is wholly evacuated, by a ptyalism, are very judicious and effectual in the cure of obstinate venereal *fistulæ*. The salutary effects of a salivation however are not confined to venereal disorders : they are daily experienced in fistulous and phagidencæ ulcers, &c. of different kinds. And here I cannot help observing, that the celebrated Pâte of Mr. Ward, which, if I am rightly informed, has really cured several *fistulæ*, causes a salivation in some constitutions, in whom it is principally attended with success. I am also assured that Elecampane, which is a principal ingredient in that Pâte, augments every natural secretion, and frequently salivates.

you

you will easily see, that if the virulent matter ascends so high, these fifteen canals, together with the *prostate* and *vesiculæ seminales*, may be affected.

This fourth *gonorrhæa* always proceeds from a third, whose seat we have fixed in Cowper's glands, under the *os pubis*: so a third arises from a second, as we have already explained.

But I believe such a propagation is commonly caused by a perverse treatment of a *gonorrhæa*; as when aluminous, mercurial, saline, and even vitrolic medicines are thrown up the *urethra*, by way of stopping the discharge. If these succeed in the best manner, an eschar is formed; for if you touch the superficies of an ulcer with such medicines, it will be constricted, dried, or the part rendered insensible and dead, from the constriction of the solids, and a coagulation of the fluids: hereby an eschar is made, under which the live parts cause an inflammation and suppuration, with a separation of the eschar. Hence all these injections stop a *gonorrhæa*, but before nature has removed the cause: so that the matter being now no longer discharged, is repelled to this place; whence nothing is more frequent than a total suppression of urine, the bladder at the same time greatly distended; attended with the most excruciating pains, and followed by a paralysis of the *vesica*. I have seen a man unable to sit, and stamping the ground with his feet, in a state of desperation, for twenty-four hours, because unable to discharge

charge one drop of urine. I have also seen fatal hæmorrhages excited by surgeons, who, contrary to my opinion, introduced the catheter into a part so much inflamed *.

De

see p: 205

* I agree with our Author, that the common catheter can be seldom introduced without the consequences he has described, because of its inflexible rigidity, by which it is apt to enter into the sides of the swelled and obstructed *urethra*. We may nevertheless pass the flexible or worm-catheter into the bladder; for this easily complies with the natural curvature of the passage, making its way where there is the least resistance, *viz.* thro' the canal. But if we aim at something more than present relief from the drawing off the water, this catheter should be covered with some proper plaster, in the form of a bougie, leaving the orifices at the extremity open. By this means the passage of the urine is preserved; and the *urethra*, where constricted, swell'd, and inflamed, from the suppressed discharge, is gently stimulated and digested; whence the discharge is restored; by which the ischury, and every bad symptom, is at once removed. Such a case lately fell under my observation, where a gentleman was so much distressed and endangered by a suppression of urine (from what Dr. Cockburn calls *Algedo*) that his life was despaired of. His urine was at some times drawn off by the common catheter: at other times that operation did not succeed; for tho' the instrument really went as high, yet, from the confinement of its extremity, and the pain the patient endured, it was apparent it entered into the swell'd and spongy parts, in the sides of the upper extremity of the *urethra*, followed with a hæmorrhage. The flexible catheter was proposed, and succeeded admirably: it was next covered with plaster; it suppurated the part, whilst its outward extremity being stopped with a cork, the urine was emitted only when the patient wanted. The catheter, thus covered, was kept in four days; after which there was no more occasion for its use, for the patient was perfectly cured of his complaint in that time, who for three weeks before sustained a miserable life, wholly depending on uncertain relief from the common catheter. This
dreadful

De Graaff, after him Ruysch, but more especially Littre, have demonstrated the *prostate* to

dreadful symptom, or *algedo*, is not very unusual; and tho' it arises now and then from an injudicious treatment, is not always to be accounted for; nor does it constantly affect Cowper's glands, the *prostate*, or *vesiculæ seminales*, especially if such a method as that I have mentioned is practised in good time. The *algedo* is not peculiar to any one species of the *gonorrhæa*: it is however the immediate cause of the worst effects, such as our author has ranked in the third and fourth classes. But these, notwithstanding what he has advanced against injections, catheters, and candles, may be entirely removed by such means, if they are made use of before a real suppuration begins in the *prostate*, &c. As to injections, (See note, p. 137.) I have already explained how the flexible catheter may be used, both for drawing off the urine and promoting a discharge of matter, as a bougie: and when we come to strictures, caruncles, &c. I shall speak more particularly of the bougies now in use, with some improvements in their structure and application. But before I quit this subject, I shall further observe, there is one remarkable symptom more attends a venereal *gonorrhæa*, tho' but rarely, viz. an inflammation in, and a contraction of, the *vesica urinaria*, attended with a total suppression of urine. A German, aged 25, had a clap, in which the heat of urine, chordee, and other bad symptoms, were considerably diminished; when at length he found not only a difficulty of discharging his urine, but that its quantity was very small: at last it was totally suppressed, together with the running; when he felt great pain about the region of the bladder and loins, not being able to endure the least compression on the lower belly, which was very hard, but no ways swell'd. The catheter was introduced, tho' with great difficulty, and drew off about a quarter of a pint of urine mixed with purulent matter: the end of the instrument was covered with the same: after which he grew more easy. I bled him plentifully, put him in a *femicupium*, gave him a glyster and turbith vomit: the two former relieved him a little; the two last did not operate. He complained of shiverings, was feverish, and very thirsty;

to be a congeries of twelve membranous cavities, which being placed in a conical form, compose the *prostate* gland; each of these is surrounded with its own proper membrane; so that they do not communicate with one another; but all are invested with one external common membrane: arteries innumerable are distributed thro' their substance; and by their glandular fabric a limpid fluid is secreted, without either smell or taste, like oil of almonds: it is of a balsamic quality, and

so that he drank plentifully of soft insipid liquors. The next day I drew off nearly the same quantity as before, and plainly perceived the bladder was greatly contracted, containing no more than what came away. By this he was again relieved. I next purged him plentifully with Calomel, &c. his running returned as before; after which he soon grew well. From the large quantity of liquors this patient drank, and the disproportionate quantity he voided, in the space of three days; the apparent contraction of the bladder, together with the *pus* found in its cavity; it evidently proves, either that the matter of the suppressed *gonorrhæa* found access into the bladder, or at least that it acted so powerfully on the sphincter, and posterior parts of the *urethra*, as to produce an inflammation in the bladder, with a suppuration of its villous or mucilaginous coat, by means of its continuous vicinity. By the thickness, &c. of the contracted bladder, in all probability the extremities of the ureters were so much compressed, as no longer to discharge the urine into the bladder; whence the smallness of its quantity, and the extreme pain of his back. I am inclined to think that this disorder, together with those peculiar to a third and fourth *gonorrhæa*, are sometimes caused by the patient sleeping in a supine posture; especially if the matter is viscid, when it is apt to glew up the sore part of the *urethra*, and from the resistance it there meets with, flows backwards whilst in that position.

serves

serves as a defence to the nerves. This liquor, according to Leal Lealis, is a nutritious pabulum to the future embryo, in its passage from the *vesiculæ seminales*. We are told each portion is thus furnished with a distinct emissary, that there may be no part in the *urethra* to which their projected liquor cannot come; and thus surround the apertures of the seminal vesicles, that not one drop from thence can be discharged but it must be mixed with this liquor. You may now easily see the possibility, if the venereal poison affects one of these glands, of its forming an ulcer there; or if all the twelve are contaminated, that the whole substance may be consumed thereby.

But if those parts which lead to the *vesiculæ seminales* are infected, a disorder arises above the *urethra*; for if the poison gains admittance into the three emissaries demonstrated by Morgagni, it easily proceeds into the vesicles, which are placed high in the *perinæum*, and connected with the *vesica urinaria* and *intestinum rectum*, and have a commerce with the *vasa deferentia testium*.

If therefore the disorder occupies this part so far up the *urethra*, the cure is abundantly more difficult than in any other species of *gonorrhæa*.

In the first species the matter inflames all the space thro' which it passes; but here it flows thro' the whole tract: it inflames, excoriates, and frequently causes ulcers: besides, the expurgation is almost impracticable, on account of the part it occupies. I well know

that some rash and unskilful surgeons pretend to effect this by their remedies. I would ask, what is it to purge a glandular part? Is it any thing more than to throw in good juices thro' the arteries, and that with such force, and in such quantity, as to wash away the contaminating and contaminated? Nothing more has hitherto been effected in this case, by the most efficacious medicines, than giving the parts such a disposition, as they might less resist the expurgation and discharge of the disorder. I would further ask, what we are to do, if the disease occupies the *prostate* and *vesiculæ seminales*? Almost nothing, unless so happy a turn takes place in the constitution, as to enable the part to expel it by the mere strength of nature.

There are some who make use of wax candles dipt in mercurial ointments, &c. but these can by no means reach the seat of the disorder; or supposing they could, they would cause a concretion of the whole *urethra*, which in this part is the thinnest, as it is not covered by the spongy bodies*; and the substances by which it is surrounded are of a lax texture, being only the cellular and the fibrous membranes of the *prostate*, together with the glan-

* A concretion may arise from the use of wax candles, for ought I know. The bougies, however, in present use, if rightly managed, have no such effect; but, on the contrary, are found a very safe and effectual cure for almost every obstruction in the *urethra*. It is apparent our author was not acquainted with these bougies.

dular cellular sponges, of which that body is made up: and it appears from surgery, that there is no part more susceptible of inflammation and suppuration, nor any more difficult of cure than the cellular membrane; for there every disorder is apt to become fistulous, sinuous, &c.

If the *prostates* are melted down into matter, which is retained within its membrane, there is then some hope of expurgation, if the emissaries are yet open; but if they are closed, the matter spreads into the neighbouring parts, and may be propagated to the *vesica urinaria*, *intestinum rectum*, *vesiculæ seminales*, *vasa ejaculantia*, *epididymides*, *testes*, *scrotum*, *perinæum*, &c. especially if the constitution and strength of the body is impaired, which most commonly is the case in these patients: such I have myself seen, and even much worse than what Vercellonius describes; where the whole cellular membrane of the *vesica* has been wholly consumed, discharging a putrid *pus*: where the intestines have been penetrated, and the excrement has passed out on the side of the *scrotum*. I had also a case under my care, where the disorder fell on the upper part of the *perinæum*, and diffused itself every way: the *vesica urinaria* was so much eroded, that the urine continually drained thro' the *perinæum*, *scrotum*, and *pubis*: for such there is no cure. Some of these miserable patients however remain in tolerable state so long as they pursue such methods as prevent the propa-

gation of the disease, and preserve the openings from closing till nature affords a benign suppuration: without this, nothing can avail; and further, repeated salivations are of no use: the same is true of decoctions. And when such parts are fumigated, the outside indeed receives some benefit, but the internal mucous parts are not in the least affected.

If you view the disorder in this light, you will conclude with me that it is incurable. We should oppose the exhibition of any internal medicines before the parts are well laid open by incision. If, for instance, in the *lues venerea*, where the *tibia* is infected, the surgeon opens it by a large incision directly down to the bone, the part is preserved open; nor is it suffered to close till good *pus* is produced: at which time nature often causes a separation; by which means a reinfection from the otherwise retained matter is prevented as much as possible: for if this process is neglected, the infection creeps inwards. Some surgeons indeed promise the same effects from the application of caustics; but herein they err: for by such medicines the parts are always constricted. The knife is the only good dilator.

As soon as ever we perceive a *gonorrhæa* of this kind, we must immediately prescribe a diet, in which there is nothing pinguous; as decoctions of bread, raisins, endive, lettuce, and sorrel, or weak broth, seasoned with a little salt and vinegar. The body should be sustained
with

with laxative, emollient, emaciating, and antiputrescent food; to which may be added a small portion of salt. Such a patient must be immersed in the hot bath; by which he is the better disposed for depuration, which we propose to do by salivation; for thereby every humour is so much attenuated, as to be evacuated gradually, and easily, by the force of nature.

You will observe this cure seems more properly adapted to the *lues venerea*, when dispersed throughout the body. Method, however, requires its being mentioned here, because necessary to the cure of this disorder.

We have already seen, that all these evils arise from the corrosive venereal poison having insinuated itself in the pinguous *cellulæ*, contaminating the fat in the flaccid cellulous sinus's. When the venereal *tabes* finds access into these thro' the eroded *urethra*, the disorder always creeps upwards, as Vercellonius has remarked, who tells us, that he has seen these *fistula's* proceed even to the *mons veneris*.

This disorder, so far as I have been able to learn, can never be cured, except every minute particle of infectious matter is discharged outwardly, by nature or art. In the *lues venerea* that may be done, whatever part is affected, tho' most difficultly when seated in the fat; for there the sinuous *cryptæ* impede its separation. Ye will perhaps say, it may be destroy-

ed by mercury: but if the testimony of Sydenham is to be regarded, that mineral does nothing more in the *lues* than dissolve the humours, and dispose them for expulsion. To make this more evident, suppose a thorn, or any other pointed substance, insinuates itself into the body: if inwardly, it there remains till separated by the *vis vitæ*; if outwardly, it causes an inflammation and suppuration, by which the parts in contact are dissolved into a fluid laudable *pus*, and with it the thorn is discharged: it is not corrected, but expelled by the *vis vitæ*. The *lues venerea* in like manner insinuates itself into the fat, where it is supposed mercurials may act upon it specifically; but in reality they do no more than nature herself in the former case, *viz.* by inducing a kind of putrefaction on the humours, they promote its expulsion. Hence I infer, that when the venereal *tabes* has got into the pinguous *cryptæ*, you can never expel it, tho' you fill the whole body with mercury: but if you dissolve the humours, so as to render the whole body flaccid, and then discharge the poison by other means, the cure is performed; but if the least particle be left, it will break out again.

I have frequently tried fumigations, unctions, and large doses inwardly, without being able to produce any salutary effect, either by the specific or extinguishing power of mercury. In such a case the humours of the body should be purged of every thing oleous: 1. By a ma-

It is of opinion of some ingenious people of mercury cerating is a specific & absolutely destroys of poison. It seems to be the ~~most~~ most approved practice to give of argenti virgule in a pill with any conserve will & intima-ly mixt or to rub it in with ointment. for the vis vitæ or animal heat must be brought up to the due stand before a venereal ulcer will heal see p. 245

cerating diet. 2. By the most aqueous drink. We should observe the same rule with respect to oil, even in outward applications, by excluding plasters and ointments from such places, and using aqueous topics as the most emollient. The body should thus be filled with aqueous and emollient remedies, till it becomes in some degree hydropical. I am not ignorant that some, on this account, have misrepresented me, as if I cured the *lues venerea* by inducing a dropfy; but this is not worth notice. 3. By an external bath, or by exposing the affected parts to the steam of warm water: so that both outwardly and inwardly they may be relaxed as much as possible. 4. By exciting a ptyalism with *argentum vivum*, so as to promote a strong but gradual salivation. The reasons upon which this practice (condemned by some) is founded are as follow.

1. It is plain and obvious, in the present case especially, that the disorder occupies the adipous membrane; because, if a very fat man is salivated for the *lues*, his corpulency will be so greatly reduced that he becomes like a dry skeleton, from the evacuation of his fat. Hence it appears, that mercury has the power of attenuating a tenacious oil to such a degree, that it may pass out of the body in the form of water; for in the whole cure nothing of fat was ever seen to be discharged, either in the saliva, sweat, urine, or blood. As therefore the *lues venerea* resides in the fat, the whole cure consists in attenuating that substance.

2. When-

2. Whenever a fat man is salivated, he always emits a cadaverous smell. A young man of a good constitution takes mercury for the *lues*; but within three days he will have signs of an approaching salivation, *viz.* a cadaverous *halitus* from his mouth and saliva.

From hence it appears, that we ought to fill the body with water, macerate the parts affected in warm baths, and dissolve all the oil by mercury.

If the patient has strength enough to go thro' the whole process, he will recover; but not otherwise. If mercury is exhibited before the body is thus disposed, a salivation does not cure in the end, nor is the *tabes* expelled.

5. In the fifth place, every thing before recommended in a third *gonorrhæa* is to be again repeated.

6. But in the mean time the orifices of every sinus terminating in the common *fistula* must be opened; for if this is not done, there is no possibility of cure.

A patient of mine, who had consulted many physicians to no purpose, had a *lues*, which spread into the *scrotum*, reducing its whole substance into fistulous abscesses and indurations.

Notwithstanding the danger of meddling with such a case, yet when I saw the misery he endured, and observed that in all other respects the patient was healthful, I called in the assistance of a skilful surgeon, who, by opening

opening all the sinus's, made a perfect cure. He had before sustained several salivations, fumigations, &c. nevertheless somewhat was always left in the cellular membrane of the *scrotum*, which, the parts being laid open, was expelled by proper digestive dressings.

On this account I have always despaired of curing this *gonorrhæa*, where incisions are not practicable, unless those sinus's are unexpectedly cleansed by a mercurial ptyalism. These things being done, we are cautiously to avoid applying any medicine of the oleous kind to these *fistulæ*, unless it is first converted into soap: for this reason we proscribe ointments, since whatever is oily blocks up the passages, using only lotions of the alkalescent kind, as water impregnated with *Sal Ammoniac vel Marini*: by these the parts are preserved open, and cleansed at the same time; but if ointments are applied, the poison is locked up. *Lupum in stabulo occludis.*

Hence at this time honey, aloes, and Venetian soap, are of the greatest use next to water, especially when mixed with a little *Spiritus Vini*, *Spiritus matricalis Burrhi*, & *Spiritus Vini Theriacalis*. If the parts are too flaccid, the sinus's are then to be filled with these medicaments; by which nature will be enabled to cause a separation by those apertures: but if we are not able to effect this, the case is incurable; the miserable patient becomes a burthen to himself, and a spectacle to others.

But

But a most excellent remedy, in this case, is the vapor of mercury, applied morning and evening to the open sinus's. The method of doing this is by sprinkling ʒi. of cinnabar upon burning coals, at the distance of a foot, or thereabouts, from the part affected; to which it is conveyed thro' a thin iron tube, for the space of seven or eight minutes, when a thin eschar, resembling a spider's web, will appear on the wound; after which the above saponaceous medicines are to be applied *.

I have

* Our author has omitted to mention the principal and most frequent, tho' not the only cause of a multiplicity of sinus's in this part, *viz.* the extravasation of urine, which almost always follows a suppuration of the *prostate*, and generally finds access into the original abscess. The urine passing thro' the perforated *urethra* insinuates itself into the cellular membrane, sometimes to a great extent, as appears by the case mentioned in Note, p. 104, where it destroyed the *glutei* muscles. The *vesica urinaria* is so well defended by nature against the strong, ammoniacal, saline, and calculous disposition of the urine, as to suffer no injury from those properties; but when it escapes from thence into other places, it produces inflammations, abscesses, and *fistulæ* of the worst kind, not to be cured, even after all infection is removed, but by the most compleat dilation of every excavation: nor can we then insure the patient from a return of the disorder, unless we are so happy as to heal the wound in the *urethra*, than which there is nothing more difficult, especially where the *fistula* is of long standing, and that for several reasons: 1. If the *urethra* has suffered a loss of substance, as it commonly does, the edges of the wound, like all other membranes, contract themselves, and recede from the orifice. 2. Every time the patient makes water, the acrimonious urine passing thro' it stimulates the part to a further contraction, and preserves the aperture till the retracted edges become callous. 3. If the wound is seated in the *corpora spongiosa* of the *urethra*, and

I have now related every thing, so far as I am able to collect, concerning this species of the masculine *gonorrhæa*.

I. From

produces a loss of substance in that part, it can never afterwards be restored, as we every day see in deep cancrs of the *glans penis*.

The only way by which a cure of such a *fistula in perinæo* is to be obtained, depends entirely upon the Bougie: but here I do not mean those in common use: they must be such as absolutely prevent the egress of urine thro' the wound, without which there is scarcely a possibility of success: nor will the common catheter answer this purpose; for no man can bear that instrument constantly in the *urethra* and bladder, without the utmost pain and danger. This Bougie must have the quality of that instrument as a canal; and that of the common Bougie, as flexibility, mildness, and digestion: all which is attainable by the worm-catheter, when covered with the same plasters used in composing common Bougies. With these (introduced with its style, which must then be pulled out, leaving the catheter in the part) the patient need not be confined: they yield every way, and admit of any motion without injury; and are to be renewed only when the plaster is somewhat resolved, which will be in proportion to its consistence: I have sometimes let them remain for four days together. In the mean time the outward wound is not to be neglected: callosities are to be consumed, digested, and incarnated: and tho' the *urethra* is never restored, yet, by the concretion of the teguments, a firm substantial cicatrix may be brought on the part: after this is done, a common Bougie should be frequently introduced, and continued till there is no danger of a stricture from the cicatrix. If the surgeon is not furnished with the above-mentioned catheter, he may make one of equal use, by winding a small well-tempered wire upon a style, covered as that is directed: after which a small wire must be introduced instead of the style, that it may have strength to pass the *urethra* into the bladder. When we are sure it is within that cavity, the small wire or style must be push'd thro' the extremity of the Bougie, in order to give the urine a free passage thro'

1. From what has been said you may judge what is to be done when the flux of a *gonorrhæa* ceases, and a tumor succeeds. The tumor increases without pain, attended with a small degree of ischury; next, perhaps in the morning, a great quantity of purulent, yellow, and green matter, is discharged thro' the *urethra*, by which we know the *glandulæ Cowperianæ* are affected. This never more frequently happens than from improper injections.

2. From hence ye understand that *fistulæ* may and do arise in the cavity of the *urethra*, without the least suspicion of their existence: on the contrary, such effects are attributed to a caruncle, which, as Brunner has observed, is nothing else than a concealed *fistula*, whose superior *lamella* is somewhat indurated; a circumstance he fully proved in his observations on imperfect cures of this disorder. We may read his account of what appeared in a variety of dead subjects dissected by him, in *Miscellaneis curiosorum Lipsiensibus*, where he never found any other appearance than that of a fistulous ulcer †.

From

thro' it; when it must be taken out, leaving the worm-bougie in the bladder, as directed in the flexible catheter. Its outward extremity is then to be stopt with a cork, &c. See Note, p. 192.

† Anatomists, who have a great variety of dead subjects, are the best qualified to determine the true and genuine appearances produced in the *urethra* by an imperfect cure of a *gonorrhæa*. Amongst these there is nothing has been more sharply disputed than the reality of caruncles. We have

From hence also we are acquainted with the ischury, which sometimes succeeds a *gonorrhæa*, even after it has been long cured *. We are frequently sent for to men who are suddenly seized with a suppression of urine, attended with extreme anxiety. Surgeons, who had before attempted to introduce the catheter in vain, declared the passage was filled up with carnous excrescences. Altho' I never knew this disorder prove mortal, I have seen it continue for twenty-four hours, till, by a sudden and violent convulsion, some purulent matter was at length expelled; after which the urine was voided with considerable pain †.

I had

have the authority of Boerhaave, Brunner, Dionis, Palfyn, Petit, and the late Mr. John Douglas, &c. (of whom I will venture to affirm this age has not produced a more accurate anatomist or an honest man) that they never saw a true carnous excrescence in any part of the *urethra*, excepting in or near its anterior extremity. And tho' I never had many opportunities of examining such dead subjects, I can produce the following observation in confirmation of their opinion; *viz.* that I never yet met with one person afflicted with a stricture in the *urethra*, but that such a one had a small running from the *urethra*, which may be perceived by expressing the *penis*, or in the first drops of urine. The smallness of the passage in that part arises from the thickness or sponginess of the *lamella* covering the *fistula*.

* I have seen many cases of this sort, where strictures have continued from one to twenty years after the original *gonorrhæa*; but such patients were never perfectly free from a small running.

† When the urine is entirely suppressed, from a venereal or any other cause, and no relief at all can be obtained without making a puncture with a trocar, the most eligible place for that purpose is the *perinæum*, as advised by

I had an opportunity of examining the seat of the disorder in a certain gentleman, which I found to be in the *prostates*: these were so much swelled, that not a single drop of urine could be expelled till the retained *pus* was discharged.

This is, in all probability, the same case mentioned by Hippocrates, where he says, *caruncula, in urethra ischurium faciens, suppuratione facta curatur.*

by Dr. Astruc. But if I might be allowed to dissent from that excellent writer, I should rather propose the side of the rhapsé precisely where the incision is made in cutting for the stone; where all the inconveniences that arise are less than those attending that operation. A large perforated worm-bougie may, with the assistance of a style, be easily introduced thro' the canula of the trocar into the bladder, where it is to be kept as a conductor for the urine till the suppression is removed. Some, I know, prefer making the puncture above the *os pubis*, where the high operation is performed: but this is attended with so much danger, that in all the cases I have ever seen, or even heard of, not one single person has recovered, excepting the suppression was removed immediately after the operation; for the urine escapes thro' the wound of the bladder into the abdomen, causing the most violent inflammation, soon terminating in a gangrene of the parts on which it lies.

But when a suppression of urine happens, we should be very careful in our enquiries whether it subsists in the bladder; for when (as it sometimes is the case) the disorder is in the kidneys, the inflammatory symptoms are extended from thence not only to the ureters, but even to the *vesica urinaria* and its sphincter, much resembling a suppression of the bladder. Such was the case of a gentleman mentioned by Riverius, in his first observation, which had been for some time mistaken for a suppression in the bladder.

There

There is always a little of the venereal tincture remaining in those places, which is very curable without a salivation, according to the rules laid down in the fourth *gonorrhæa*, if the prostates are first emptied and afterwards well expurged.

But if, under the notion of destroying the excrescence, wax candles smeared with escharotic medicines are introduced, they excite intolerable pain; and though they should by chance seem to cure, yet the disorder returns for the most part in a short time*.

A. From

* Our author having described the effects of the venereal poison on the *vesiculæ seminales*, *prostates*, and *Cowper's glands*, with the fistula, in which it terminates, seems to intimate that strictures of the *urethra* are also peculiar to those parts; whereas there is no portion of that canal exempted from a stricture. I am however of opinion with him they are the consequence of a fistula, for the reasons alledged in the preceding note. He condemns wax candles with the greatest reason: he might have included probes of cat-gut, lead, silver, steel, and canulas of the same materials, through which escharotics and even caustics were applied to the supposed caruncle. In short, as he has subverted the theory, he might with equal justice have exploded the practice of Turner, Astruc and Wiseman, in their method of treating this disorder, whose proceedings cannot be thought on without horror: the honour of deviating from the established method belongs to Le Dran, who rolled linen dipt in melted wax upon cat-gut: Col. de Vilars made some improvement on Le Dran: the work was at last compleated by Daran, who luckily hit on a right composition, by which the inequality of that part of the *urethra* occupied by the stricture was digested, wasted away, and the disorder cured. This author adopted the opinion of caruncles without the support of a single fact: he attributes specific virtues to his composition, and is guilty of many

O

other

A. From what has preceded, we may learn what to think of the cure of a *gonorrhæa* by sudorifics; some have thought it curable by these. You know that in the first stage, the venereal disease was so volatile as to diffuse itself presently through the whole body; that in the second, ulcers appeared; and in the third, the *gonorrhæa* broke out. In the first stages, I would not deny but that sudorifics might cure: it is certain, however, that they do no service in a *gonorrhæa* *.

B. What

other empiricisms. His method, however, has been imitated, and bougies formed of very different materials, which have been found to answer equally with his, as those of Mr. Sharp, Warner, &c. Those I use are made of equal quantities of mercurial and soap plaister, stiffened in proportion to the warmth of the season with rosin, wax, and levigated antimony. The grand point is, to get through the stricture; when that is done, the cure is seldom long in suspense: but this is attended with great difficulty; for where the *urethra* is very much contracted, the bougie must of necessity be small, and consequently weak; for if made extremely stiff, it is apt to break or crack, and liable to be left in the *urethra*: to prevent which, the ordinary composition may be rolled round a small plain wire or catgut, taking care the end is well covered: by these we may gain admission through the stricture, in which they may be safely left with the same benefit, though greater pain than the ordinary bougies: as soon as the passage is gained, the common bougies are to be introduced, repeated, and retained as long and frequent as possible. Some persons are so tender at first in this part, as not to be able to endure the continuance of any bougie: in such they should be introduced twice a day, before making water; by this the patient will be somewhat relieved, and the *urethra* by degrees reconciled to their longer stay.

* There is one complaint properly belonging to this subject, which our author has omitted, viz. the *gonorrhæa virulenta*

B. What is to be thought of a cure by diuretics? This method has prevailed almost every where, but chiefly among empirics, who, so far as I have been able to learn, have rendered their patients miserable thereby. It is a practice destructive to the human race, and ought to be every where exploded.

a. They tell us, the origin of the *gonorrhæa* is in the blood; and that the reason why it affects

virulenta sicca, or *dysuria venerea sicca*, taken notice of by Dr. Astruc. This disorder has frequently occurred to me in practice, tho' not attended with all those symptoms recorded by the last-mentioned writer; who also describes it as principally affecting the *prostates* and *vesiculæ seminales*. Whether these are ever affected, or no, I will not pretend to determine. The complaints generally related by such patients are, a burning heat in the *urethra*, generally constant, tho' sometimes remitting; extending the whole length, or fixt to some one or more particular parts of that canal: nor did I ever perceive it to be accompanied with the least running. The most common seat of this heat is from the curvature to the extremity of the *penis*, tho' it now and then ascends higher. It is neither the attendant or forerunner of any other disease, but constituting in itself a real, painful, obstinate disorder, very difficult of cure. Nor is any thing more true than the observation of Astruc, that a *gonorrhæa sicca* is much worse than that with a running; because the poison, being retained, erodes and injures the place affected the more on that account. This complaint is so difficult to remove, that all the means used in the virulent *gonorrhæa* attended with a running are here of no manner of service. What then is to be done? I answer, that if a running is excited in the part, and kept up a proper time, the heat, and its stimulating cause, will be removed; which may be done without the least danger or inconvenience, by throwing up the white *Præcipitat*, in the form and manner recommended in Note, p. 224. If this be repeated every morn-

affects the *urethra* is, because nature determines it there, in order that the *virus* with which the blood is impressed might be discharged and cleansed by the urine as a *lixivium* appointed by nature as the general purger of the blood ; and that this appears in all diseases where the humours degenerate.

b. They say, that diuretics in a singular manner determine the action of this *lixivium* to the *urethra* ; that the poison is deterged, as

ing, a large discharge will be promoted, and continue for three, four, or five hours in most cases : after which the flux ceases, and the heat is abated ; returning however towards night, tho' in a smaller degree than before. The injection is thus to be used daily, till nothing more of the heat remains ; which in some is three or even five weeks. This method is in general effectual. But when a discharge cannot be promoted, it is then only we need have recourse to other methods ; the best of which is that recommended by Astruc ; *viz.* vigorous frictions of mercurial ointment on the part ; because, as he says, the poison in these cases not being discharged by a running, there is the greater need of specifics to correct it. During the frictions it cannot be improper to purge the patient every two and three days : yet notwithstanding this has been continued for a month, the complaints frequently return ; then the frictions are to be repeated, and increased so as to make the mouth sore ; the mercury being carried downwards as before, to prevent a *ptyalism*. Should this fail, a salivation must be entered upon without delay. From what has been said (all which I have experienced several times in practice) it appears, that it is (otherwise than by injection) cured with the greatest difficulty ; and that it is at length overcome by the same process as a confirmed *lues venerea*. A patient, whose *urethra* I could never stimulate to a discharge, nor cure by mercurials outward or inward with the addition of purgatives, was at length obliged to be salivated.

it were, by an internal depuration to that part, and there discharged.

These are the two fundamental hypotheses, by which these men support their method as of the greatest importance, and most agreeable to nature, which in part is very true; for nature does endeavour to expurge the *gonorrhæa*, and expel it by diuresis; from whence it happens that a *gonorrhæa* simplex, if it flows freely, and the patient submits to a proper diet, will sometimes cure itself.

I would ask these men, Whether a *gonorrhæa* that is not thus mild, and whose discharge is less free, ever cures itself? Or, if it requires greater help, whether diuretics alone are sufficient for its cure?

A decoction of mild diuretics in water, as leaves of goats rue, rue, capers and liquorish, have frequently cured many *gonorrhæas*, with great abstinence, from fat especially; but these are not sufficient where the matter is either yellow, green, or thick, accompanied with a heat in the *urethra*.

Where these symptoms appear, I allow they change their method, and exhibit every kind of turpentine and balsams, which yield a sweet odour to the urine; whence it is they place every requisite for cure in Cyprus turpentine, balsam of Capive, Peru, Mecca, and the balsam of Gilead, which is commended as a capital remedy. All these taken by one in perfect health, impress the urine with a violet smell; and as they obtund all the acrimony of

the urine, so they cure many *gonorrhæas*, especially if emulsions of poppy, lint, the four greater cold seeds, and such like, are used at the same time. But I repeat it again, whilst the matter is malignant, what avail these turpentine? For the most part, swelled testicles; because the urine being urged with violence, and the infection agitated thereby, they act more as a stimulus than by way of lotion: whence the heat of the *penis* is increased, succeeded by a little tumor of the *corpora varicosa vel pyramidalia*, which soon extends to the *testes*.

Ye now see the reason why a mild *gonorrhæa* only is capable of being subdued by the diuretics above-mentioned: but if these bring on heat, itching, tumor, &c. you then see the necessity of desisting, and having immediate recourse to the purging method.

c. Tulpius, Bartholine, or both, have given it as their opinion, there are certain poisons in nature, which, when taken into the body, discover themselves principally in the urine; as Millepides, Vermes Majales, and Cantharides. By these the quantity of urine is increased, becomes fœtid, and of a high flaming colour: if the dose is large they produce a true *gonorrhæa*, not to be distinguished from one that is venereal; whose matter is viscid, yellow, and even bloody, accompanied with painful erections. All these effects may be produced by the exhibition of ʒi. of Cantharides.

The above-mentioned authors observing this, concluded that these poisons would attenuate

and disperse an obstinate venereal *gonorrhæa*. Hence it was that the *Tinctura Antinephritica* of Tulpius became so famous throughout Europe. This tincture is made by infusing powder'd Cantharides in *Spiritus Nitri dulcis*, by which an effervescence arises, that will continue for more than six years. If the glass is well stop'd, the effervescence seems to cease, or else it expels the cork, or bursts the vial: from whence Homberg affirms, that there are perpetual effervescences betwixt acids and some particular alcalies. Bartholine infused or boiled the flies in *Spiritus Vini*, and thus composed a medicine which is said to cure the most obstinate *gonorrhæas*, under the title of *Tinctura ad Gonorrhæam*.

Whilst young in practice, I exhibited these tinctures to several leucophlegmatic patients: amongst the rest a gentleman, suspecting he had something of a *gonorrhæa*, wanted a medicine that would both discover the disorder and facilitate the cure. I gave him a small quantity of the *Tinctura Cantharidium*, desiring him to take only a few drops now and then; but he, desirous of dispatch, took double the quantity at one time, and was immediately seized with a violent itching and heat in the *urethra*, accompanied by a continual dribbling of urine, yellow and green matter, striated with blood. These complaints were soon allayed by a fomentation of warm milk, and drinking plentifully of liquorish-tea and milk *. We

* I have several times made use of the *Tinctura Cantharidium* of the London Dispensatory, in cases where an

We see that these medicines have the property of rendering the urinary salts so acrid, as to corrode the nervous tunic of the bladder, depriving it of all its mucilage; and of exciting a convulsion in the part, by which sometimes even blood is discharged.

I would now enquire, of what service these are in a *gonorrhæa*? For my part, I never saw one instance where they cured: on the contrary, they only create a violent stimulus, and an incredible flux of matter. For this reason they are never given by a good practitioner, unless the patient is of a lax leucophlegmatic temperament, and the *gonorrhæa* of the mildest species.

A gentleman on his travels had a most obstinate *gonorrhæa*, of several years standing, without producing any other complaints. Having in vain consulted the most eminent physicians of every country, he was at length persuaded by an empiric to take a tincture, which appeared to me to be made of the *Vermes Majales*, or such like; which excited such a heat and dryness, that the matter, which before was thin, and flowed freely, became stiff,

obstinate gleet has continued after the infection appeared to be cured. As I used the utmost caution with respect to the dose, it never produced those severe symptoms related by our author: on the other hand, I never saw the least benefit arise from its exhibition: it generally created a fresh heat in the *urethra*, and increased the running. But if an advantage is to be obtained by any preparation of *Cantharides*, that of the Hospital Dispensatory seems to bid the fairest for that purpose.

See Doan Mead

as if it had been dried by the fire: whence that extreme heat in the *urethra*. These observations have induced me never to prescribe these medicines but in the cases above-mentioned, and then in small doses, with a large quantity of the inspissated juice of liquorish*.

D. What

* Preparations of Vermes Majales, Lumbrici Terræ, &c. are to be met with in few English Dispensatories: nor do I believe their effects are experimentally known in this country. And tho' the opinion of the great Boerhaave is justly esteemed decisive, yet it may not be improper to present the reader with some forms from the *Collectanea Chymica Leidensia*, that a practical estimate may be made of their good or bad effects.

Præparatio Insectorum.

Duplicis generis insecta dantur vel quæ ea semine proprio, vel è terræ gremio producantur: vel secundo, quæ ex cadaveribus putrescentibus, sterquiliniis, & quâvis putridâ materiâ nascuntur. Primi generis interno, & externo usui, absque præparatione inservire poterunt, si in minimâ dosi exhibeantur, ut lumbrici terræ, &c. Si verò sæpius eorundum dosis repetatur, malignitatem quandam deponunt, & corrosiva existunt, ratione salis acris in iis existentis, quod sequente modo corrigitur.

℞ Lumbricorum Terræ, q. s. Hisce superinfunde Salis Tartari optime calcinati partem quartam. Digerantur simul in Balneo Mariæ per hor. vj. Dein superfunde Spiritum Vini ad supereminentiam duorum digitorum. Digerantur denuò per hor. xxiv. Dein tinctura à fæcibus separata usui servetur.

Secundi generis insecta nunquam per se sine noxa assumuntur, ob sal corrosivum, & acre, in maximâ copia ibidem residens, ut in Cantharidibus, Vermibus majalibus, &c. Hæc duplici modo præparantur vel mediante sale alcali fixo, ubi Sal ejus volatilis alcalicum & particulas minùs mobiles obtundere volumus eo modo uti ostendimus in processu, cui titulus tinctura, seu essentia Cantharidum.

Diuræticum

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D. What sentiments are to be formed of the method of curing a *gonorrhæa* by injections? After ablutions and bathing, I have above recommended mild injections of pure water

Diuræticum Specificum in Gonorrhæa.

℞ *Vermium Majalium* q. p. *Ex his generali methodo extrahito tincturam cum sale Tartari alcalico.*

Dos. a gutt. x. ad xxx. in Vino vel alio aliquo vehiculo.

Processus secundus.

℞ *Verm. Majal. q. p. resolvantur in f. q. Sp. Nitri & præcipitentur cum Ol. Tart. per del. Pulverem præcipitatum ab omni salsedine ablue: exicca: & usui re-
verva.*

Dos. pulveris in substantia a g. vi. ad xij.

*In gonorrhæa recenti potest exhiberi absque ulla præcedenti corporis præparatione. In gonorrhæa verò virulentæ nec adeò valet, nec exhiberi debet nisi præcedenti corporis præparatione, per purgationem scil. ab Extracto Catholico, vel similibus aliis. Potest etiam decoctum aliquod præmitti. Pulvis uniùs horum vermicum interiùs assumptus tam vehementer ἀνὰ κὲ κατὰ οπε-
ratur, ut difficulter sedatur.*

I omit those other preparations of the Vermes in the *Collectanea*, as they differ in nothing of importance from the above, and shall only insert the following cautionary note under the last process.

Quod si in curatione gonorrhæa per tincturam Vermium Majalium excitatur acrior stranguria, quòd cum lacte amygdalato, lacte vulgari tepido saccharato, alijsve emulsionibus, dolor cito tollatur.

It is the opinion of our Author, and the best practitioners, that nothing, either internal or external, should be given to stop the discharge from the *urethra* before we are well assured the infection is perfectly cured; and the evidences on which we depend for that information are frequently so equivocal, as scarcely to admit of a positive determination: I have known some of the best judges

water and honey; without which I believe a *gonorrhæa* cannot be well cured; because nothing is more natural than to draw out the received poison by those very passages through which

judges deceived herein: I have seen the *lues* arise after a seemingly innoxious, colourless, and filamentous running has disappeared; and on the other hand, no such effects have succeeded one that ceased whilst yellow or green, accompanied with a small degree of heat. These I allow to be peculiarities: they are however necessary to be known, not only as cautions in practice, but as antidotes to presumption and censure. The running generally goes off with the infection, where no indirect methods have been used in the cure; and where the patient has not been guilty of excess, or obliged by his situation in life to use improper exercises: for this reason, among the lower class there are none so difficult to cure as drawers, coachmen, riders, &c. In these an obstinate gleet generally remains for a long time, and unless they relinquish their business, is scarcely to be cured. In such cases I have made trial of the most celebrated medicines: sometimes one and sometimes another has succeeded: but I never met with one at all times effectual; nay, a single case has frequently eluded the separate or combined forces of every celebrated remedy. Those from which I have received the greatest assistance are Balsam Capive, alone or with Rhubarb; the Pulv. Styptic. of the Edinburgh Dispensatory; and Balf. & Oleum Succini.

I shall postpone what I have to say concerning the advantages of injections to a more proper place: but before I conclude, I cannot help mentioning a remarkable circumstance of a patient of mine, who during a *gonorrhæa* had always a yellowness of the *tunica albuginea* of both eyes, equal to any thing I ever saw in the jaundice. This symptom always abated in exact proportion as the infection was subdued, and vanished intirely when the cure was completed.

The eyes however are generally affected in some manner by a lasting gleet: the pupil is dilated, and contracts
but

which it entered. But the injections commonly used are, 1. either such as diminish the quantity of discharge, or are, 2. supposed to correct the disorder by a singular specific property. Those who have attempted this by astringents, have not only failed in their design, but also rendered their patients miserable.

but little when suddenly exposed to the light. From whence it should seem, that the nerves of the eye were impaired. Such effects so frequently accompany that complaint, as inclines me to ascribe it to that cause.

In others it sometimes happens that the globe of the eye is diminished in bulk. The ciliary edges of the eyelids (instead of being, as they naturally are, smooth, tense, and exactly adapted to the sphere of the eye) are then more loose and unequal, and when closed a hollowiness appears at each angle.

Riverius has given us some admirable prescriptions for an obstinate gleet; such as the *Conserva Fructus Brusci*, *Aqua Quercetani*, &c. by which, we have the testimony of that great man, the worst gleets were cured; and the *Collactanea Chymica Leidensia* contains many valuable forms for this purpose, authorised by the most eminent professors of that university.

I have had frequent occasions to observe, that the solution not only increases the discharge, but creates a fresh heat in the *urethra*. Experience has also informed me, that Dr. Nickoll's prescription is of no use. I have also given a fair trial of the advertised Jesuit's drops, whose effects very nearly resemble those of *Balsam Capivi*; but, as administered by those whose property it is, generally produces swell'd testicles, buboes, and a confirmed *lues venerea*. Many patients, who had taken that medicine, have at different times applied to me (and I doubt not to others) in such circumstances.

I remember the decoction of Burdock to have cured one person of a gleet; but tho' given to many others, had no such effect: and I know a gentleman, who gave large bolus's of the *Viscus Quercinus* to several patients for some time without any service.

a. If the best Alumen Ustum is dissolved in water, we have a sweet liquor, which, when properly diluted, warmed, and applied to any humid ulcer on the body, causes a white eschar that will separate in three days, leaving the surface of the wound more clean than before. If a venereal ulcer, in the hand, for instance, is washed with such a liquor, it becomes white, contracted, and within twenty-four hours deprived of all its moisture: in less than three days a crust falls off, when the matter returns again, and the wound appears more clean. It produces the same effects precisely when applied to any venereal ulcer of the hand, &c. For this reason, when ulcers are too moist, skilful surgeons touch them with calcin'd alum, in order to constringe the vessels.

So far as I have been able to discover, almost every Arcanum is composed of alum; or,

2. Of Saccharum Saturni, and every kind of saturnine preparation. When these are mixed with soft fluids, they have a saccharine aluminous taste, more sweet than the former; but produce the same change when applied to ulcers.

3. Vitriolum: I do not mean the Cyprus, or white, but the common green, or Roman Vitriol. This is one of the most important external medicines; and when diluted makes the same alterations on ulcers as the two former.

When these medicines are applied to those places from whence the *gonorrhæa* is discharged,

charged, they induce a little eschar in those parts; and if the disorder is seated in the anterior *lacunæ* only, the flux will be stopped in three or four days: and thus the cure is speedily completed.

Where the *gonorrhæa* has been extremely mild, there I admit such a method has sometimes succeeded: it is nevertheless extremely fallacious; for if made use of where the disorder is somewhat more severe, it is followed by tumors, and a variety of other evils.

b. The other method is by injecting certain medicinal preparations, of qualities opposite to the venereal poison: but these are so injurious to the human frame, as to endanger the life of the patient. For instance, corrosive Sublimate is of such an acrid burning nature, that it destroys every kind of animal bodies; yet when mixt with Sal. Tartaris, it immediately becomes mild and inoffensive. There are certain poisons injurious to one animal, by which another is no ways affected: for instance, we frequently see a pestilential distemper rage amongst one species, as oxen, &c. whilst men, horses, sheep, &c. are wholly exempted from the infection. On the contrary, when the plague rages amongst men, all other animals escape the infection.

Some physicians have boasted, there is not a poison in all nature, to which medicine does not afford some known antidote.

Now the *lues venerea* is a most acrid poison, chiefly infecting the human species: I would therefore

therefore ask, what is the medicine which, when applied to the human body, will destroy that poison? Some have ventured to publish they were possessed of such an antidote: I confess myself however intirely ignorant of any such medicine.

The famous Dr. Cockburne, in his treatise of the *gonorrhæa*, has declared publicly that he was possessed of such a remedy. His method, as far as I have been able to discover, is, that as soon as the venereal *virus* is received in the parts of generation, either of men or women, outwardly or inwardly, he was able to extinguish the infecting poison by a mild liquor, tolerable to the nerves, not in the least astringent, repelling, or corrosive, but possessed of genuine specific qualities as an antidote. Was such a specific known to me, I would at this time openly and candidly communicate it to you: but whilst it remains concealed, we must depend intirely on the word and candour of this gentleman.

I have seen several patients who had been treated according to this method, that declared they were not perfectly cured: nevertheless, I am convinced that this is the most innocent of all the other methods by way of injection, especially as it is made use of in the beginning of the disorder.

I once requested this gentleman, by letter, to discover his Arcanum; which he refused, tho' it is the part of every beneficent man to commu-

communicate whatever may be of service to his fellow-creatures *,

* I shall now fulfil my promise with regard to Injections. At the beginning of a *gonorrhæa*, the injections recommended by our author are excellently adapted to answer all the intentions he proposes, especially where preceded by washing and bathing. His whole process, both with respect to the design and composition, so far as I know, is entirely new, and enforced by the strongest reasons. What renders it still more valuable is, that it is not only a rational and practical method, but a very successful one. I have made use of it in every case where he has recommended it with the happiest effects. The impropriety of those injections which have prevailed at different times has been fully canvassed, and set in a true point of view by our learned author. But as an obstinate gleet is so common a consequence of very bad or ill-treated *gonorrhæa's*, I shall propose two medicines, which have generally succeeded when internals fail. The first is the Spiritus Sal. Marin. diluted according to the sensibility of the *urethra*, which I find very different in various persons. I throw this up twice a day, increasing the spirit by degrees. In this manner the *urethra* will be so inured to and hardened by the injection, as to admit its being thrown up of an amazing strength, without the least uneasiness. After the three or four first days the running is diminished, and in about ten or twelve, at farthest, goes quite off: notwithstanding which, I continue it for some time every other day, till there is no danger of a relapse. The other injection is the White Præcipitate Lotion before-mentioned, and recommended in the *Algedo*. The way I use it is by injecting a small quantity, the strength of which must be so properly suited to the *urethra* as to cause a little heat, and excite a greater discharge, which will continue for about an hour: after this space the running goes intirely off for the remaining part of the day. I thus repeat the injection at the same time, once in twenty hours, till nothing is to be seen or squeezed out of the *urethra* in the morning: and after this, once in two or three days, for a week or more, to prevent a relapse. I never make use of this method myself, but when internals fail, and there is no other remedy.

Notwith-

Notwithstanding I have made the most diligent enquiries, I have never yet been able to find one instance of even a recent *gonorrhæa* cured by baths or injections alone.

E. In the last place, let me see what may be advanced in favour of escharotics applied to the *urethra* by means of wax candles. Observations teach us, that in every *gonorrhæa* the *urethra* is eroded, and even sometimes ulcerated: where it does not discharge freely, a *lues* (tho' very seldom) may arise: the flux, however, may be excited with ease and safety by mild injections, and with infinitely greater advantage than by corrosive applications, in their nature destructive to the human frame.

Some however, urged by the obstinacy of this disorder, have injudiciously attempted to cure it by applying medicines to the part, which, by their greater tenacity, might remain longer in the *urethra* than injections: they mix such remedies as are in general thought proper for ulcers, and introduce them to the part affected.

This method would indeed appear somewhat plausible at first view, were they to mix soft balsamic ingredients, by way of emollients and suppuratives, such as Mastich, Olibanum, Myrrh, Sarcocolla, Balsamum Peruvianum, &c. But instead of these they use mercurial, vitriolous, and such like metallic escharotics, which for the most part cause inflammation, a greater suppuration, and degeneration of the *urethra*.

And seeing the disorder occupies the sinuous *cryptæ* of the *urethra*, it is apparent these remedies cannot have the least access thither, tho' they are capable of causing the most acute pains and tumours in that part.

It is also well known, that the ulceration and discharge are thereby greatly increased; so that were it possible to cure the infection by these means, a perpetual *stillicidium* would remain for the most part.

It is therefore easy to form a right judgment of this method. Were we possess'd of a real antidote, then indeed it would be proper to apply it topically, in order to extinguish the venereal poison: but as such remedies only erode the parts, they ought never to be administered *.

Brassa-

* Notwithstanding the boasts of Daran, it is obvious his, or any other the best-formed Bougies, can never cure a virulent *gonorrhæa*, for the reasons alledged by our author: they cannot reach the *cryptæ* of the *lacunæ*, where that disorder is seated. All that a Bougie effects, is either the dilatation or suppuration of the part in which it lies in close contact. The urine is sometimes hindered from a free passage, and its stream very small, where there is not the least contraction or stricture in the *urethra*, viz. by some of the viscid matter of a *gonorrhæa* partly glewing up the sides of the *urethra*. This complaint is instantly removed by the introduction of any kind of Bougie, &c. There are other passages besides the *urethra* subject to strictures, that will by no means admit the continuance of such a composition long enough to promote a suppuration, and yet may, and have been cured by gradual distention: for instance, the *strictura œsophagea*: This disorder, always fatal in itself, is curable (excepting where compli-

Brassavolus lays it down as a general axiom, that a *gonorrhæa* produces no other disorder but a simple *gonorrhæa*; *i. e.* that a person infected only with a *gonorrhæa*, cannot convey the *lues*, or any other distemper. This notion is indeed probable, when the *gonorrhæa* is of a mild and benign species; but when it is highly virulent, the infection will be proportionably malignant †.

2. Alexander Petronius says, that “if an obstinate *gonorrhæa* (which does not enfeeble, but gradually diminishes, and brings on a dysuria) be left to nature, it will be cured.” According to this opinion, there is a twofold *go-*

complicated with a cancer of the part) by the frequent introduction of a leaden Bougie, &c. In like manner the *urethra*, *anus*, *nares*, *meatus auditorius*, &c. may be enlarged, when they cannot suffer a continued application. The next and most important effect of a Plaster-Bougie is suppuration, obtained only by some hours continuance, wasting away the stricture by gradual dissolution. If therefore it can be introduced beyond a stricture, it acts with a double force, and generally makes a speedy cure. If this does not succeed, it may be furthered by cutting (*See Note, p. 162.*), when near the extremity of the *penis*. With respect to Bougies, we have an eminent instance that a remedy may be, and often is, extolled for qualities it does not possess; but when in the hands of judicious practitioners, is converted to real uses, unthought of, and never proposed, by its first patron and inventor.

† So far as I have been able to discover from observations, an infectious *gonorrhæa* communicates the same disorder to a clean person, without variation; but not till the eruption of the distemper; for in practice we generally find, that if such an infected man has commerce with his wife before the running appears, she commonly escapes the disorder.

norrhæa; the first attended with infection, and the latter a consequence of its remaining in sinuous places after the poison is extinguished. If a sinuous ulcer rises in the fungous body of the *urethra*, there will then be such a *fistula* as generally happens after the decay of the cellular membrane in any part of the body. Hence it follows, if the venereal taint is destroyed, and a *gonorrhæa* still remains corroding the internal parts, the ulcer will not be cured by antivenereal medicines: then he says nature is to take her course. This notion deserves a more attentive consideration than is commonly imagined, if you would be certain of the real cause of the flux: and even if all fear concerning the *lues* should be removed, yet still we shall have reason to dread lest the discharge become immoderate, or the disease enter into the whole cellular substance.

The best remedies in this case have often proved unsuccessful, as I have experienced in two instances: the first was that of an English gentleman, who had tried every experiment in medicine without any benefit; an incredible quantity of liquor was continually discharged; he had recourse to the Bougie, but to no purpose; he left it to nature, and it still continued: when he applied medicines it became worse, and no medicine I could think of proved successful. The second was that of a very robust man in the prime of life, who, in spite of every precaution, was subject to erections in his sleep, which produced a fresh *gonorrhæa*,

gonorrhæa, ~~and~~ returning again by means of the erection as soon as it was cured. He then committed himself to the care of a man, who burned the Part with strong escharotics, which brought on violent pains, increased the discharge, and reduced the patient to the lowest degree of emaciation; but when his health revived the erection returned, and the discharge appeared as usual.

An eminent writer advises the patient in these cases to commit himself to nature, to live in a warm climate, and to use warm baths, in order to keep the parts constantly flaccid; and I am of opinion it is much better to leave persons to nature than torture them with a variety of remedies; especially as it is undeniable that they are capable of begetting very sound and healthful children, notwithstanding this complaint *.

A *gonorrhæa* is never worse than when received from a common strumpet, who has just lain with an infected man: and when several persons, any of whom having a *gonorrhæa*, use the same woman, the last will always find himself the worst affected by it.

* A man is not only capable of procreation whilst labouring under an obstinate and incurable gleet, but even when he has a stricture of any part of the *urethra*, and tho' the stream of urine be even as small as a crow's quill. I have known several men troubled with strictures for many years, who nevertheless had as regular a succession of children as others who had no such disorder.

*Of the Symptoms of the Gonorrhæa,**And first of the PHYMOSIS.*

THERE are many symptoms in the *gonorrhæa* more troublesome, and more to be dreaded, than the *gonorrhæa* itself; among which we may reckon that disease of the *præputium* which was called by the Greeks *φίμωσις*, and by the Latins *fibulatio*. It was a custom for those among them, who kept servants, to knit the *præputium* together in such a manner that the *glans* could not be produced from it. The method of performing this operation is described by Celsus, lib. vii. chap. 25. The purpose for which this was done was obscene. From hence, when the *præputium* is by disease rendered incapable of being drawn back, it is called *φίμωσις*.

The words *επιφίμωσις* and *παράφίμωσις* have occasioned some ambiguity. If *επι* be taken in the sense in which it is understood in Celsus, it signifies the disorder arising from the glands being covered; and *παράφίμωσις* means a circular tumor of the *præputium* drawn back behind the *glans*; but the nature of the Greek language does not forbid us calling either of these disorders *φίμωσις*.

This disorder of the *præputium* is one of the most frequent and troublesome complaints that can happen in a *gonorrhæa*, whether it ap-
pears

pears before or behind the *glans*: but as it is confined chiefly to the *præputium*, those who are circumcised escape it. The inveteracy of this evil arises from hence, that the *præputium* is of a texture different from the rest of the body, having neither muscle nor contractile fibre, and internally consisting of a thin cuticle. This *epidermis* is never callous till after a *phymosis*. If it be examined in erection, the cellular membrane appears excessively attenuated, and never fat but in eunuchs. The rest of its structure is composed of arteries, veins, lymphatic vessels, and nerves: it is almost transparent, and naturally pendulous. If these parts are at all injured in the time of extension, they will be much lacerated.

Now as the *præputium* is most irritated in coition, it receives the poison, to which it is directly applied, as soon as it is warm and expanded: and if we consider the natural fabric of the part, the number of vessels, the attrition, the heat, we shall not be at a loss to account for the obstinacy of the complaint in this place.

It is the worst when it happens in the internal surface, as may easily be imagined from the nakedness and sensibility of the part.

The first symptom is generally an inflammation. I am of opinion that almost all *gonorrhæa's* are occasioned by its internal membrane being affected; for those who have been destitute of this part receive very little injury: and

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as long as the least inflammation remains here, no progress can be made in the cure *.

A violent swelling succeeds the inflammation. The faces of persons who have an *œdematous eryspelas* swell exceedingly, especially under the lower *palpebra*; because the cellular membrane, here destitute of fat, is soon filled. When the face is swelled with the small pox, the eruptions are elevated, but when they seize upon the eye-lids, the swelling becomes very large and pellucid: hence we may understand that the nature of this membrane is such, that it is subject to a greater degree of swelling, and is more troublesome, in proportion to its tenuity. If the part be opened, a mortified eschar forms itself, separates, and falls out: therefore all incisions in these cases are to be dreaded †.

When

* As the *gonorrhæa* is but seldom accompanied with a *phymosis* and cancrs, so this last-named disorder also frequently subsists without a *gonorrhæa*.

† Our author has justly observed, that a mortification of the *præputium* in some part is a common consequence of its suppuration: but his rule to avoid incision for that reason, is not in all respects to be observed: for tho' it would be improper to make an aperture in the middle or belly of the tumor, thro' which the *glans* always protrudes itself, as it does when a piece falls out from mortification; yet if the *præputium* is divided thro' its whole length, the matter retained under the foreskin has then a free egress; the part may be commodiously dressed and digested: and when the tumor is entirely subsided, and the *virus* wholly discharged, the *præputium* may be again reunited, as much as shall be thought expedient, by the common suture, or that used in curing the hair-lip. A reunion is absolutely necessary,

When the part swells in this manner, the reflux of humour is prevented, and the circulation of the blood diminished: so that from the increase of fluid the swelling rises to a prodigious size in the space of twenty-four hours. In other parts of the body, where the circulation is languid, there are muscles, which by their action accelerate the blood; here there are none.

An extreme hardness attends this symptom, which is nothing but the distention of the cellular membrane to so great a degree, as to resemble a solid substance.

Next follows a suppuration, which generally destroys the whole *præputium*; for the ulcer endeavouring to discharge its contents, and being confined by the constriction of the part, the *pus* spreads and corrodes on all sides.

Hence arises a cancer. We ought to be very cautious in preventing a suppuration, which may terminate in a gangrene; but at least when a small ulcer begins, it is pressed against the *glans* by the constriction of the part, so that the warm humours cannot be evacuated; and when an aperture is made, the lips become retorted. These are commonly called shankers; concerning which Sydenham says, that the

necessary, to prevent a deformity of the part, which would otherwise purse and bag under the *frænum præputii*. Incision however is not required but where the case is extremely bad; because it may in general be cured with proper and frequent injections. And even if a mortified piece separates from the side, the part will reunite if the *præputium* is retracted and retained behind the *corona glandis*.
bottom

bottom of them is so callous, and the fides so dry and retracted, that they scarce yield to any medicines.

The part being thus inflated, comes quite over the *glans*; and the more it swells the more it is contracted; so that there is little hope of drawing it back. The *glans* and the *præputium* being both inflamed, mutually press each other: hence the disorder is extremely augmented; the collected matter is retained, attended by pain, inflammation, and violent action: so that this symptom may be said to be the worst belonging to the disorder; for the putrid matter getting no vent, is continually increasing the disorder, and at last brings on a mortification as its natural crisis.

In Ruysch's preparation of this part, it seems that the thickest place of it does not exceed the diameter of a hair. Now if there be lodged under this any matter endued with an erosive power, it is impossible that so delicate a structure should not be dissolved. This is called a *necrosis*; which frequently affects the *glans*, but is prevented from hurting the *corpora cavernosa* by a membrane which is betwixt them.

These are the symptoms which generally prevail when the *glans* is covered by the *præputium*; but when it is withdrawn behind that body, it rises in the form of a thick ring, which swells the *glans* to an enormous size, and produces the most excruciating pain, as the violent contraction of the ring will scarce admit

admit the water to pass thro' the *urethra*. This complaint is called *paraphymosis* *.

Before we proceed to the cure, another circumstance deserves to be attended to. Ruysch has demonstrated that the *glans* has a membrane of a peculiar nature closely adhering to its surface, without which it would be rough, and covered with sharp points. When this membrane is eroded in an *epiphymosis*, the *papillæ* emerge, and run into venereal warts, which are apt to turn cancerous. I have seen real cancers rise only from the application of sharp medicines, when these warts surround the *corona glandis*. It is called the *corona Hispanica*, which I have known to be as large as the little finger. In the cure of this complaint the most skilful physician will often find himself baffled.

1. He must take care least the stagnating matter should be corrupted; which may easily

* The *paraphymosis* is a very common disorder, and may happen with or without infection, caused by neglecting to return the *præputium* after coition, &c. I admit that it is more severe when accompanied by an infection. The stricture is formed by the extremity of the prepuce reverted; and the *præputium* is generally distended with extravasated lymph to an enormous size, especially after two or three days continuance. In performing the cure we are directed to cut the strictures, to compress the tumid *glans*, and draw the prepuce forwards: but before this it will be proper to scarify the distended *præputium*, and squeeze out the water. By this method the patient will suffer but little, in comparison of what he feels in the ordinary way. I do not know any author who has given directions concerning it, tho' it be the best way of reducing the swelling.

happen,

happen, when, thro' fear of an inflammation, suppuration, or gangrene, he administers too debilitating medicines. When the *præputium* swells, if emollients are applied, its membranes degenerate into a mucid gangrene; and it ought always to be remembered, that the greater the swelling is, by so much thinner is the membrane, and the thicker is the matter contained. 2. On the other hand, some, observing this great tumor, conclude that there must be a discharge; and so far they are in the right: but in procuring it they have recourse to the most powerful medicines; so that if a resolution of the part does not speedily take place, instead of a mucid there will be an inflammatory gangrene.

I have seen so many instances where the utmost skill was necessary to guard against these two extremes, that I must be pardoned if I enter minutely into this subject.

Suppose a young robust person, of a bilious warm temperament, in the heat of summer, to have a large inflammatory swelling on the *præputium*; what method is to be taken? 1. I answer, Bleed plentifully. I have asserted before, that a *gonorrhæa* ought always to be carried outwards, and discharged by the same outlet through which it entered. This, you will say, is inverting my own rule; and so it is, if you do nothing else. But let it be remembered, this is only done for the sake of avoiding greater mischief. If the *phymosis* by this means subsides, I am sensible that part of the poison must be carried into the blood.

2. I must therefore have recourse to medicines which shall expel the infection; and if it be in the beginning of the disorder, there is no necessity for salivation, fumigation, or baths; a purgative hydragogue every day will be sufficient. By this means the *membrana cellularis*, in which the disease lurks, will be gradually diminished and dissolved.

The following remedy is, of all others, the best adapted for this purpose.

R Rad. Jalap. ʒi.

Fol. Sen. fs. ʒß.

—— Scrophul. Maj. ʒij.ß.

Sal Prunel. ʒi.

Infunde spatio $\frac{1}{4}$ horæ tum colaturæ ʒij. expressæ adde Mannæ Calabricæ ʒvj.

This purge is to be repeated every day till the parts relax without a putrescence; which will generally happen on the fourth or fifth day.

3. Now is the time for cleansing the surface of the *glans* and *præputium*. When surgeons have brought their patients to me under this complaint as incurable, I have found that there is an absolute necessity of getting access to the concavity of the *præputium*. To this purpose small leaden pipes must be gently insinuated betwixt the *glans* and *præputium*, and by that means with a syphon a liquor may be injected.* The nature of the injection must be deter-

* Syringes without pipes are much more convenient, and less injurious, than those our author recommends. See Note, p. 139.

mined by the state of the complaint. Water itself is sufficient for a depuration; and if the pain be exquisite, should be injected every two hours, without any other mixture; for any thing stimulative would only increase the tumor and the pain. If there be a *fætor*, attended with a disposition to putrefaction, let a little wine be added; for there cannot be a better antiseptic.

When the part is cleansed, emollients may be injected. They ought not either to mollify or deterge too much in the beginning, but should be rather somewhat astringent; to which, if necessary, a little salt may be added. Some have commended milk; but it coagulates, heats, and is not easily washed away: therefore I would advise a decoction of the flowers and leaves of marsh-mallows.

These things being done, and the corrupt matter removed, detergents may be applied, adding honey of roses to the emollients before-mentioned. But notwithstanding this method, if there be too copious a discharge thro' the pores, and a relaxation in consequence, then a mixture of the vinegar of Litharge may be used with caution.

4. The following liniment will be proper to succeed the injection.

R Ung. Nutrit.

— *Popul. an. ʒi.*

Sacch. Saturn. gr. x. vel xii. vel ʒß.

M. f. Litus.

Let

Let a little of this be injected betwixt the *glans* and the *præputium*, and let the external surface of the *præputium* be anointed with it.

5. To the preceding remedies a cataplasm must be added, without which the cure will not be completed; otherwise the *præputium* will degenerate into a coreous substance. Let it be made of flowers, leaves, and the root of marsh-mallows, with new milk, and some rue, scordium, and linseed-oil.

A person lying in bed will in general be soonest cured: but if exercise is unavoidable, the following plaster must be applied.

℞ *Emplast. Diapomphol.*
——— *de Mucilag. ana* ʒi.
Sacch. Saturn. ʒß.

If the part is cold, the quantity of the *Emplast. Mucil.* must be increased, or the *Emplast. de Meliloto* must be added.

6. When there is a lentor in the fluids, which threatens a gangrene or a schirrus in the *præputium*, a fumigation, made by a small quantity of the following powder, will be of service.

℞ *Gumm. Benzoin.*
Mastich.
Olibani
Ammoniac
Galban. ana ʒi.

M. f. Pulvis grossus.

After all, there are often coreaceous callosities remaining after the inflammation is gone,
which

which hinder the free motion of the *præputium*. The vessels being infarcted with a sharp subtile matter, lose their contractile force; so that the humours stagnate and increassate, but without any poisonous or malignant cause. The patient indeed will hardly believe that such a callous hardness is innocent; and therefore he commits himself often into injudicious hands, undergoes a tedious cure, and is tormented by greater evils afterwards.

In this case it is the best to have recourse to a dissolvent which shall not suppurate, such as Vinegar and Sal Ammoniac. The *Materia Medica* affords not so powerful a resolvent as Vinegar: it was in high estimation among the ancients for its service in all cases of spleen, melancholy, and madness; and nothing can be better than the vapor of Vinegar in dissolving and dissipating all sluggish tumors, excepting milk, which it coagulates*. Sal Ammoniac is very friendly to the human constitution, keeps the humours in a fluid state, without hurting the blood or the solids. It is more penetrating than sea-salt. But the best dissolvent of all is Sal Ammoniac when mixed with wine; for wine is more efficacious as an external than an internal medicine.

The ancient surgeons were of opinion, that fomentations of wine resisted putrefaction. The modern camp-surgeons use Spirit of Rosemary, Aqua Vitæ, Matthioli, Spiritus Matricalis, and

* If the ancients may be credited, the steam arising from vinegar sprinkled on burning coals is a most potent and effectual resolvent of slow, cold, and indolent schirri, &c.

the like ; but perceiving these things to produce a callosity, they returned to wine again.

In Germany the method of keeping flesh in the summer is to steep it in Rhenish wine, with a little sea-salt ; by which means it may be preserved a whole season.

Now if you take ℥ xij. of the best wine, ℥ i. of Sal Ammoniac, and ℥ xij. or ℥ xiiij. of distilled vinegar, and make a fomentation, and keep it to the part all night, it is a remedy which I have never known to fail in these cases. When these fomentations cannot be used, the Emplastrum Meliloti is their best supplement.

Of Venereal Warts.

IF the extremity of the nerve grows out of the *epidermis*, into a hard rough tubercle without pain, it is called a Wart.

Now warts grow in two places : first, where there is a *cutis* ; 2. when the nervous *papillæ* have nothing but the *epithelion* to protect them. In the last case they are the most obstinate and dangerous, as in the *pudendum*, &c.

I never saw a more horrid spectacle than a man at Amsterdam, who was beginning to have *myrmerciæ* or *formiculæ* all over his face : he advised with one person and another ; but the warts increased both in number and size, till his face was entirely verrucous.

The texture of these warts is the same with the *papillæ*, which swell and become luxuriant, of various forms. The nerve is the same, only

its integuments protuberate. If in trepanning for an apoplexy the *pia mater* be in the least injured, the cortex of the brain is extruded, by the impulse of the *carotides*, thro' the hole in the skull, into a kind of *fungus*. The rise of warts is similar to this.

Every wart being neglected at first, increases, becomes painful, rough, and of a red, purple, or black cast. If they be cut, the patient may die of an hæmorrhage, or they grow cancerous: an inflammation succeeds, which brings on exquisite pain; and as they cannot be resolved, a luxuriance and putrefaction follow.

Warts are not dangerous in places guarded by the *cutis*: they are the worst where it is wanting, as in the eye, mouth, nose, &c. In men they sometimes cover the whole surface of the *glans penis*; and no wonder, because it is formed only of an infinite number of *papillæ* lying upon one another, in greater quantity at the *corona* than the aperture of the *urethra*; and consequently they are more dangerous in the former case than in the latter, because the *epithelion* being more thin and weak here, and the *vis vitæ* more urgent, the parts separate, and warts rise up in every point in the form of a ring; which has induced some writers to think they contain certain animalcula. Hence they degenerate into a cancer, and often swell into *cristæ* so large, as sometimes to be seen to project without the gland, even whilst covered by the *præputium*.

I have observed warts to grow in the urinary passage without occasioning pain, or hindering the course of the water: in such cases, when it has not been adviseable to use caustics, I have given a purgative of Turbith mineral; after which the warts have perished, and been discharged with the water.

Sometimes these warts grow in the anterior part of the *urethra*, so that they are visible at the orifice of the *penis*.

Those who treat them injudiciously with corrosives, generally excite such a motion and efflux of the humours, as will inevitably produce a schirrus or cancer.

The CURE.

I. A very brisk mercurial purge must be given, to dissolve the blood and expel the venereal poison, otherwise all local applications will have no effect. This is a radical cure; and tho' it be violent, it is absolutely necessary, especially when the warts are somewhat elevated; for then they will never yield to any topical remedy.

Turbith mineral was the medicine first prescribed by Paracelsus, in *Libro Nosocomii*, where he says, if quicksilver be dissolved with oil of vitriol, &c. and five or six grains of it given in Theriaca, it is a sovereign remedy against warts.

There was a woman at Paris very famous for curing the venereal disease. She gave very
Q 2 large

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large doses, and reduced her patients to the last state of debility. By this means she cured those disorders which no other method could have removed; and her secret was only Turbith mineral.

Helmont the father, speaking of the Paracelsic mercury, says, Take the powder of In°. de Vigo (which was Precipitate prepared with his own hand) pour upon this the oil of vitriol distilled to the utmost by a fire of three days continuance: the spirit of nitre is thus expelled, the mercury is destroyed by the oil without ebullition, and the Turbith mineral produced. This should be washed with water, to diminish the acrimony.

Paracelsus very judiciously gave it with Theriaca, which is very proper to prevent any intestinal hæmorrhage. Sydenham likewise speaks in its praise: but it ought to be well prepared; for if the powder remains white, it is not sufficientlyedulcorated, and may occasion a *diarrhæa*. It should be of a citron colour, and without taste.

When the constitution is weak, it should be administered with caution, *i. e.* from iv to viij gr. Cockburn gave from xiv to xv grains. I never exceeded viij, and have met with all imaginable success.

If three grains of white precipitate be mixed with *pilul. cochicæ ad 3ß.* it is of great service: and one or two grains of red precipitate mixed with the Extract. Cathol. gr. x. is of equal benefit.

*I suppose it means the calcined mercury or
R^g precipitatus per se* Some-

Sometimes the patient, after taking these medicines, is seized with violent colics: in which case the Theriaca with oil of almonds must be administered immediately; for it is a sign that the intestines are eroded *.

2. These

* With respect to *verrucae* and cancers, I have had frequent occasions to observe, that the most corrosive preparations of quicksilver given internally, as Turbith mineral, Præcip. rub. are of much more service than those that are composed of pure Argent. &c. This is apparent where the Calomel, or solution of corrosive Sublimate, &c. are taken in such cases. A great variety of medicines and nostrums, composed chiefly of Argentum Vivum, have at different times prevailed since the appearance of the *lues venerea* and *gonorrhæa*; each of which has been extolled, as containing a safe, easy, and certain cure for both these diseases, with all their various symptoms, of whatever degree or duration. I hope I shall not be accused of want of candour, when I pronounce the whole class of Arcana's so many base impositions on the public: for it is evident, that not any one preparation of mercury, however mixed or compounded, is proper for all cases, or for any one individual case, throughout the cure. I admit that every one of them may cure, under all the disadvantages with which they are administered: but this is nothing more than what may be as frequently obtained by any common preparation of quicksilver whatsoever, taken at random. There is no other difference, with respect to mercurial medicines, but as they are more or less mild, approaching nearer to pure Argentum Vivum, or receding from it, by being mixed with stimulative cathartics, or compounded with vitriolic other acrimonious menstruums, or exhibited in different quantities, &c. There is not one of the most celebrated Arcana's which I have not, at a considerable expence, made an impartial trial of, both in the *lues* and *gonorrhæa*, comparing their effects with each other, and with the more common, known, and authorized mercurial preparations; and I am perfectly satisfied, that all mercurials given in-

Q 3

wardly

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2. These purges being used two or three days, the parts should be fomented, that the warts being softened, may change their schirrous nature, and so prevent an inflammation

wardly have precisely the same effects in a ratio proportioned to the acrimony or mildness of the preparation, doses, strength, and temperament of the patient. Belloste's, Keyser's, and the mercurial pills of the London and Edinburgh Dispensatories, &c. have nearly the same operation: Keyser's however are the mildest; but their effects are more slow than the rest of this class: all of which seem to be made of quicksilver kill'd, with some balsam, powder, &c. and mixed with different cathartics.

Of the chymical preparations, Turbith Min. Præcip. rub. alb. Mercurius dulcis, and all the Panacea's, have the same effect on the body, and every stage of the *lues*, when given in doses proportioned to their greater or lesser acrimony. The sharpest however, such as the Sublimate, &c. by no means agree with a *gonorrhæa*. This is not owing to the quicksilver, but to certain adventitious qualities derived from chymical processes and mixtures. The Mercurius dulcis, which is the mildest of this class, possesses all the advantages, without the inconveniences, attending the more acrimonious, and may be exhibited in a *gonorrhæa* without the tediousness and uncertainty of the *Pillulæ Mercuriales*, &c. for when given with due caution, it will cure with more certainty in half the time which those of Belloste or Keyser require. I admit that the Calomel does not operate uniformly; that at one time it purges, at another constipates, often makes the mouth sore, and endangers a ptyalism: but these various effects are always owing to the negligence of the patient or the imprudence of his surgeon. Nor is the Calomel less efficacious in the worst *verruca* than Turbith or Præcipitat. rub. without the danger attending those medicines, especially when taken in large doses.

Thus we see that Mercury, which in judicious hands is the most sovereign remedy ever discovered, may become the most dangerous and fatal when improperly administered.

I apprehend mercury ~~cannot~~ may dissolve y^e solids, & from hence the mischief it does, it is certain it weakens y^e stomach, & hence arises indigestion & parent of all evils. For if y^e food be not properly prepared for nourishment how can the body be healthfully sustained?

from the increased quantity of blood brought to these parts, by a decoction of new milk, boiled with linseed to the thickness of cream, to which Basilicum may be added.

3. Afterwards we should touch the parts with a gentle escharotic, such as

R *Vitriol. Cyprin.* ʒj.

Aq. Rosar. ʒj. ß.

Or,

R *Alum. Ust.* ʒj.

Aq. Rosar. Calid. ʒ iij.

Or very slightly with the Lapis Infernalis.

Emollients should always precede the use of escharotics; for if there be any degree of erection, or any remains of infection, an inflammation will inevitably ensue.

4. All these things being done, let the parts be covered with *Emplastrum Diapomphol.* and the effect will be a very promising separation. Caution must be used, lest the warts be irritated by too violent caustics; for by that means horrid cancers are formed.

All warts within the *urethra* are cured in the same manner. If more expedition is required, inject three or four times a day a decoction of marsh-mallows and honey of mercury diluted in new milk.

Some writers of note prescribe Oil of Vitriol, Precipitate of Mercury, Troches de minio Vigonis: but in my opinion you will have more success if you second the use of emollients with gentle escharotics.

COROLLARY.

FROM what has been said, the reason appears why a *fistula* so frequently arises at the beginning of the *urethra*, where the *frænum* is situated.

After the *gonorrhæa* is cured, a little ulcer frequently appears; which being neglected, destroys the fabric of this part, by eroding a small foramen thro' its substance; and tho' this perforation is not usually larger than the head of a small pin, yet part of the urine and semen are generally discharged thro' it during the life of the patient.

The cause of this disorder may be easily deduced from what has been said concerning the *lacunæ* in general, and of the *lacuna magna* in particular; on which the venereal poison acts with greatest force.

The outward orifice of the *urethra* is always shut, except in a *gonorrhæa*; and even then its *labia* are closely constringed in the night: so that whilst the patient is sleeping the matter is retarded and retained; from whence a callous ulcer is easily formed, which terminates in a perforation.

This disorder never happens when baths and fomentations are made use of, but almost always when internal medicines only are exhibited.

As the complaint is preceded by a kind of itching

itching in the part, so may it be easily prevented by a little caution.

But when the disorder has taken place, it is cured with great difficulty.

1. We must bleed the patient plentifully, that whatever is administer'd may the more easily be conveyed to the part affected.

2. An antiphlogistic purge must be taken every three days, to remove the inflammation.

3. A thin diet.

4. A daily bath.

5. A wax candle must be gently introduced a little way up the *urethra*, in order to dilate it, that the foramen may become conspicuous, and to prevent the remedies applied to it from touching the opposite part of the *urethra*.

6. Whilst the candle continues in the *urethra*, the *fistula* must be touched with a very small sharp-pointed piece of Lapis Infernalis, and continued whilst one can number six or eight, in which time the callous margin will be eroded. The Lapis must then be taken away, and the candle continued.

7. The candle is to be left for two or three hours, till the force of the caustic is spent, and that it may not find access to the opposite side of the *urethra*. By this time the lips of the wound will appear crude, when the *fistula* must be wash'd with milk, and the candle withdrawn.

8. It is then to be dress'd with Basilicum, or Balf. Arcæi mixed with fresh butter: these assimilate easily, and will cure the *fistula*.

Of

Of the Tumor of the Testes in a Gonorrhæa.

THIS tumor occupies the whole substance of the *testis*. At first it is somewhat soft, but afterwards it becomes truly schirrous, extruding itself equally outwards.

It frequently arises suddenly, but for the most part increases slowly to an enormous size, accompanied with great uneasiness, without acute pain, under the *os pubis*. This uneasiness is owing to the *testis* being suspended by the *tunica vaginalis*, spermatic vessels, and *vas deferens*; all which are commonly affected: for the disorder generally begins in the *epididymis*, from whence it extends to the varicose vessels of the *testis*, and its *vas deferens*; which last becoming much larger and thicker than before, the tumor is thereby propagated to the *vesicula seminales*. The *epididymis* often swells without the *testis*; and after the tumor is cured the *vas deferens* frequently remains schirrous.

From hence we learn, that all the vessels of the *testis* are swell'd; since the tumor uniformly distends not only that body but the whole seminal fabric.

The cause is a greater collection of humours than in a natural state, and that because they are not evacuated, as in a state of health*.

The

* The cause of this tumor, assigned by our Author, is pretty near the same as what is alledged by Dr. Astruc; but

The *testes* are supplied with spermatic arteries, which are distributed chiefly thro' their external surface ; but these are not the seat of this disorder,

but for my part, I cannot see why the semen is either more inspissated, collected, or retained during a *gonorrhæa*, than at any other time when a person abstains from venery : for if the semen is not evacuated for any space of time, it matters not whether it is caused by a compression on the excretory ducts of the *vesiculæ seminales*, or a voluntary abstinence. A tumor of the *testis* would be as much the consequence of the latter as the former, at any period of life betwixt puberty and age, *cæteris paribus*.

Besides, as the compression must be first made on the orifices of the *vesiculæ*, so the effects would be first felt in those receptacles, 2. on the *vasa deferentia*, 3. on the *epididymis*, and last of all on the *testis* : whereas the pain, tumor, &c. are always first perceived in the *epididymis* ; at which time, and even after it is greatly increased, the *vasa deferentia* are very seldom affected, if the *testis* is suspended from its commencement. This may be demonstrated by the touch ; for we then feel they are neither swell'd, or painful to the patient if compressed by the fingers in a gentle manner ; the reverse of all which is experienced in the *epididymis*, where this disorder always begins. But how the *epididymis*, so distant from the seat of the *gonorrhæa*, is so frequently swelled by a premature suppression of the running, is perhaps not to be otherwise accounted for, than by supposing that the venereal poison is transferred from the *lacunæ* of the *urethra* to the *epididymis* by certain undiscovered lymphatic veins, in the same manner as it is conveyed by them to the inguinal glands in a venereal bubo. The lymphatic veins have been consider'd by some as the only absorbents ; and they have lately been demonstrated so to be by Mr. J. Hunter. Diseases and anatomical preparations abundantly prove there is no part of the body destitute of such absorbents ; but they are most apparent near lymphatic and conglobate glands. When the venereal poison finds access to those glands, either in the course of circulation, or by a local susception, it is apt to stop and disorder their structure, as we frequently

disorder, which occupies the more internal and ejaculatory vessels.

The *testis*, which is covered with a nervous *tunic*, has two orders of vessels; the one composing its whole fabric, and not only secreting, but retaining the *semen*; the other are so disposed, that they support, preserve, and nourish the former.

The first kind are a continuation of the arteries, which do not terminate in the veins, but in very small receptacles; into which they discharge the secreted genital liquor through their minute patulent orifices. In brutes there is only one such receptacle, called *Corpus Highmorianum*, &c. The *semen* therefore appears

quently see in the inguinal, submaxillary, and other glands. Perhaps this may be owing to their delicacy, and slowness of their circulation. Great advantages are however derived from this impediment to the further progress of the infection, when followed by a vigorous suppuration of these glands, which commonly happens when they are infected by the transition of the *virus* from a neighbouring part, where it was first received, as in an inguinal bubo from recent cancrs of the *glans penis*, &c. Such a termination however seldom happens in the *epididymis*; for when proper means are made use of, the running and all its symptoms again return to the *urethra*, when the tumor subsides without suppuration, or any other appearance than a return of the *gonorrhæa virulenta*. Some small part indeed of the *epididymis* remains harder than before, without any injury to its functions. Whether this return is by lymphatic vessels, whose situation is retrograde to the former, I will not pretend to determine. Thus much I think is certain, that there is in all such cases either a partial or perfect transition of the venereal *virus* from the *urethra* to the *epididymis*, and *vice versa*, and that not only by the course of the seminal canals, but from some other communication by means of lymphatic vessels, &c.

to be retained in two places : for Bouclarius Datyrius has demonstrated that the *testes* of a boar are divided by a *septum* ; on each side of which he perceived a great number of distinct cells, terminating in the *Corpus Highmorianum*.

A like fabric obtains in the dormouse and field mouse, than which there are no animals more salacious or fertile : but when we unravel the testicle of all other animals, their structure appears to be the same as we have described in men, where the seminal liquor passes through the *epididymis* and *vas deferens* into the *vesiculæ seminales*. It must however be observed, that in those animals which have frequent coition, all the *semen* is not first sent to the *vesiculæ seminales* : for during the venereal orgasm their *vasa deferentia* are equally compressed with the seminal vesicles, and discharge the *semen* by a different way, as appears from the course of those canals.

When a tumor arises in the *testes*, its excretion is impeded, the part is inflamed, and its vessels become varicous ; which is the reverse to what happens in the *hydrocele*.

1. This tumor is caused by whatever obstructs the *vas deferens*, particularly when the *gonorrhæa* is stopped by restraining remedies : for then the communicating *lacunæ* being filled and distended with retained matter, may not only compress the *prostate gland*, but even the *vesiculæ seminales*. Such a tumor very seldom occurs where the *gonorrhæa* discharges freely.

2. Violent motion, particularly riding.

3. The

3. The balsamic method of cure which is practised at Amsterdam, Rotterdam, and at most sea-port towns, where there are great numbers of seamen. We have already given our opinion of balsams, preparations, cantharides, &c. and shown that though they sometimes suddenly accomplish a cure, they are also attended with the greatest danger.

A like tumor sometimes arises without any venereal cause, at or about the age of puberty, from the fluxion of genital fluids, attended with great pain.

This disorder, after lasting three or four days, disappears spontaneously: it is similar to those pains in the loins felt in females at the beginning of their *menstrua*.

If such a tumor is complicated with a venereal infection, it produces sanious ruptures, and the worst fistula's in the *scrotum*.

The *testis* seldom suppurates, unless the venereal *tabes* has diffused itself throughout the whole body, which constitutes a second species of this disorder, joined with the *lues venerea*; but this does not happen once in a hundred cases.

In order to cure, 1. The original obstruction must be removed by resolution, and, 2. The inspissated matter rendered fluxile. But this must be done with the greatest prudence, and without precipitation.

1. To effect the first, we must have recourse to plentiful and frequent bleeding.

2. The

2. The second is to be obtained by the most resolvent, attenuating, and antiphlogistic purges; such as agaricus, folia fennæ, tamarindi, and manna: all these resolve the blood, and evacuate it by the *intestinum rectum*. We have not a more remarkable proof of this than in manna, ʒi. of which will sometimes discharge several pounds of water this way, without exciting the least inflammation: ʒi. of cremor tart. produces the same effect.

See errata

The medicines above commended being apt to create a nausea, may be corrected by the *Scrophularia aquatica* five nodosa, to which may be added *Radix Graminis*, or its juice: they should be continued till they cause a kind of diurnal *diarrhæa*.

3. But as they frequently induce a troublesome rigidity on the parts to which they are determined, this may be prevented by a timely exhibition of an emulsion of poppies, with *Lapis Prunellæ*; or of oatmeal, barley, the four greater or lesser cold seeds: but the very best remedy of all others is nitre, by which this complaint is allayed and extinguished with the greatest certainty.

4. As the disorder is seated so near the *intestinum rectum*, so baths and fomentations applied to that part are of singular efficacy in resolving the tumor; hence emollient and resolvent glysters of milk, with fyrrup of marsh-mallows or honey, and a little nitre, should be thrown up the *rectum* after every stool.

5. Emollient

5. Emollient fomentations, and resolvent cataplasms of the farinaceous kind, should be applied to the *pubis*, *perinæum*, and *scrotum*. These last are of great service; for whatever dilates the arteries, resolve equally with what attenuates the fluids. For instance:

R *Farin. Fabar. Rom.* ʒi.

Coyne *Eoque cum Oxycrato, sub finem, addendo.*

Sal Ammoniac q. ss. ʒ

Olei Lini aliquantulum. f. Cataplasma.

6. The part should be fumigated with Olibanum, and a little Sal Ammoniac, several times in a day: for the form of fumigation, see p. 239. The vapour of warm water, with a little vinegar, is also of service.

7. Gentle frictions may be used on the parts, in such a manner as not to cause the least pain. If the *testes* were not already schirrous, I never knew one instance where this method failed. But when they are arrived to that state, amputation is the only remedy; for even a salivation is then of no service; Turbith mineral indeed, when given at the beginning of this disease from gr. v. to viij. has sometimes relieved, but it is apt to bring on a dysentery before the cure is obtained*.

* When the tumor extends from the *epididymis* to the *testis*, which is very rare, and owing to the greatest neglect of the former, it generally becomes schirrous, forming an obstruction very difficult, if not impossible, to be removed without amputation, which should be performed before it extends to the spermatic vessels; for then the operation is extremely hazardous, as observed by Mr. Potts: but if the
testis

testis suppurates and forms a tolerable abscess; or if from a posterior neglected abscess, a fistula is formed within its substance, it may be cured by a perfect dilatation, as I have experienced in several abscesses and fistulæ of the *testis* and *epididymis*, without injury to their functions: the treatment of such a case with success may be seen in the second volume of medical observations. The principal reason why diseased glands of the neck, breasts, &c. are so frequently the subjects of fistulæ, is for want of the original abscesses being compleatly dilated, and which at last is the only effectual method of cure; the case is precisely the same with respect to the *testis*, &c. I might observe further, that the principal things to be regarded in the cure of fistulæ and abscesses is, 1. a compleat opening of all their sinusses; 2. a preservation of those openings by an equable gentle distention, sufficient to prevent fungi and premature cohesion, and yet at the same time to admit of the growth and increase of true and solid granulations; 3. to prevent and allay such a degree of inflammation as might, and frequently does cause other sinusses and abscesses. To answer all these purposes, there is nothing more proper than a dressing of dry lint, covered with a cataplasim of bread, milk, and sweet oil, especially in the *scrotum*, where other applications are unnecessary from first to last. This method of dressing is practised, and has the suffrage of the most eminent surgeons of the present age. From what has been said, we may conclude, that the advocates and opposers of tents have both carried things to an extream, since by this gentle and successful method the whole tribe of escharotics and painful dressings are excluded, as not only useless but pernicious. Nor is laudable white and light *pus* more deficient with these dressings, than where the most extolled suppurants are made use of; on the contrary, it is produced sooner, and the wound of consequence sooner cured.

C H A P. VII.

Of the GONORRHÆA in WOMEN.

A Threefold liquor is discharged by an infected man in coition.

1. The proper liquor of the *gonorrhæa*, improperly called *semen*.

2. The native humours of the *urethra* and *præputium*.

3. The true *semen*, which is seldom or never infected, excepting in a chronic *lues*; and if it then conveys an infection to a woman, it does not produce a *gonorrhæa*, but a more subtle disease: this is evident from experiments; for men labouring under the very worst virulent *gonorrhæas* beget sound children; whilst others who have no such apparent disease in their genitals, propagate the most miserable infants. The *gonorrhæa* of women therefore receives its origin from the virulent matter of the masculine *gonorrhæa*.

An ulcer also in the male *urethra* communicates another kind of *gonorrhæa* to women, in the most speedy manner possible.*

* Our author in this place probably means a cancerous ulcer at the extremity of the male *urethra*.—Such a disorder in this or any other part of the *penis*, coming in contact with the *labia pudendi*, &c. will there produce its own species, or another ulcer of that kind, as I have before remarked.

But

But if a man labours under the *lues venerea*, it propagates that disorder by coition, rather than a *gonorrhæa*, and *vice versa*. This is established by a variety of experiments.

But what are the parts to which the ejected poisonous humour first comes in contact? It is apparent it cannot ascend higher than the prominent *os uteri*, betwixt which and the upper extremity of the *vagina* there is a kind of flaccid circular chink or cavity; for I believe no one ever saw a *gonorrhæa* within the *uterus*.

The male *semen*, &c. having ascended thus high, it again descends, returning through the *vagina* out of the body; for if a woman does not conceive, the whole is again discharged within a quarter or half an hour after coition.

And when a conception takes place, the whole *semen* never passes into the cavity of the *uterus*, for the greatest part is discharged soon after conception: it was Hervy's opinion, that no portion of the *semen* entered the *uterus*: Ruysch however has demonstrated the contrary from a woman who was killed soon after coition; and from mares, deer, cows, &c.

When the *semen*, &c. has been retained in a place inaccessible to the air, for the time above mentioned, it becomes warmer than in its natural state; and when it returns to a place exposed to the air, it instantly acquires a greater virulency, corrosiveness, and putrefaction.

It is however somewhat impeded by the

rugæ of the *vagina*, and at its orifice, which is always in a state of contraction.

De Graaff, who has most accurately described these parts, demonstrates that the *vagina* is thinnest at the *uterus*, becoming more thick as it descends; so that at its termination it is near half an inch in thickness, whence the stricture of its outward orifice, where the matter is retained, and the infection is first received; for it rarely affects the upper part of the *vagina*.

When it escapes from thence it falls upon the expanded *alæ* of the *pudendum*, at the orifice of the *vagina*: so that these two places are generally and principally affected.

The ejected matter seldom adheres to the upper smooth transuding membrane, which repels it from its sides, particularly in the venereal orgasm; but it may stop at different places, and occasion as many different *gonorrhæas*, as we shall see by an anatomical description of these parts.

1. That part of the *vagina*, next the *os uteri*, is perfectly smooth, without wrinkles, *lacunæ*, or *cryptæ*, having only small pores, such as we see at the root of the tongue: having descended about one third of its length, the circular *rugæ* become visible; this part is more dry and constricted than the former, from which the received fluids are naturally expelled; for which reason venereal disorders in the upper part of the *vagina* are not very frequent. It hath been demonstrated that the vessels which discharge

charge the menſtrua into the *uterus*, are the ſame by which its cavity is at other times lubricated and moiſtened : when dilated they diſcharge the menſtrua ; and when more contracted, a whitish and thick fluid ; but when conſtricted yet more, they then emit only a ſimple thin lymph.

Here then we find there is a perpetual ſtillicidium ; and if there is any place where the arteries diſcharge more than is again abſorbed by veins, it is in the cavity of the *uterus*, and upper extremity of the *vagina*.

Anatomy teaches us that the menſtrua are diſcharged naturally only from the *uterus* : nevertheless, in thoſe women who have an exceſſive menſtrual flux, ſome part is furniſhed by the upper part of the *vagina* ; hence an infection rarely happens here. 1. Be cauſe of its poliſhed ſurface. 2. Be cauſe of the continual ablution.

2. In the lower part of the *vagina*, the *rugæ*, or ſemicircular eminencies, uſually ariſe : they are called *rugæ*, or *juga*, be cauſe of the *ſulci* or furrows between them : theſe do not ſurround the periphery of the *vagina* in complete circles, being interrupted or deficient at their extremities, at unequal lengths with reſpect to each other, in the ſame manner as the valves of the inteſtines.

All theſe eminencies are compoſed of the moſt ſenſible nervous *papillæ*, which are the principal inſtruments of venereal pleaſure. See

Graaff, p. 214. Morgagni *adversar.* 1. p. 12. & *advers.* p. 45. & Sanctörin. *observ. anatom.*

3. By how much more the external orifice of the *vagina* is constricted, by so much the larger the *vagina* appears; and by how much lower the *os uteri* descends, by so much the greater and more numerous are the *rugæ*; and the reverse.

4. At its anterior part we first see the orifice of the *urethra*, about half an inch below the *clitoris*; not within, but just without or above the anterior extremity of the *vagina*: it is included betwixt two *alæ* or *nymphæ*, so as to preserve it from the access of the external air, and at the same time to direct and regulate the stream of urine.

5. This orifice has a peculiar formation and structure, which the ancients attributed to the *prostates*, whose situation they assigned to this part; to which they were again restored by Graaff, and confirmed by Morgagni and Sanctörinus, after they had been long neglected by medical writers. They circumscribe the whole *urethra*, and form that prominence or corpuscle we see at its extremity, which is covered by a reflection of the very fine, thin, polished membrane of the *urethra*.

The interior membrane of the *urethra* is surrounded with a thick fungous substance, in the same manner as that of men is circumscribed at the bulb of the *urethra*. It is also furnished with *lacunæ*, &c. as in men, subject to the same diseases, and have the same uses.

See

See Morgagni *adversar.* 4. p. 44. edit. Ital. & Graaff, p. 203. Writers on the *lues venerea* of women relate a variety of phænomena affecting this part, the causes of which they were unable to explain, because ignorant of its structure.

6. The afore-mentioned prominence at the extremity of the *urethra*, called *prostates* by the ancients, have the same structure as those in men: they are furnished with patulent orifices surrounding the opening of the *urethra*, which discharge a glutinous humour, like that of the male *prostates*: nor is there any other essential difference than that the liquor *prostatæ* *harum* of men mixes with the semen. But altho' women are destitute of seed, they nevertheless emit a liquor thro' the orifices of their *prostates*, with considerable force, in the venereal orgasm; at which time only it is discharged. This was thought, by a famous man, to explain that passage in Ovid, Epist. Sapph. Phæoni, vers. 134. 156

Et sine te non libet esse mihi.

These *prostates* are subject to fistulous and sinuous ulcers, sometimes penetrating even to the *mons veneris*; at which *Vercellonius* and others were greatly surprised, as they were not able to account for them.

7. We next perceive the *cristæ muliebres*, *nymphæ*, or *prolabiæ*, whose structure is similar to that of the *corpora fungosa penis*. Ruyfch has described them as wholly vascular; but it is apparent from their tension and rigidity in

the venereal orgasm, that they are furnished with intermediate receptacles betwixt the arteries and veins; and Morgagni has demonstrated that innumerable orifices, of different diameters, are distributed all over their surface, which discharge a white thick humour, like that of the *præputium*, and subject to a variety of disorders.

8. The *clitoris*. This body so nearly resembles the *penis*, that some have asserted the internal parts of generation in women are truly male, and the external only female. It has a *glans*, two fungous bodies which arise from the *os pubis*, erector muscles, arteries, veins, and cells; is covered with a *præputium*; hath tension, erection, titilation, and resolution, in all respects as the virile *penis*.

It is placed above the *urethra*, and at its upper anterior part projects almost without the body.

From the similar structure and disposition of the parts to the male *penis*, it is plain they are subject to the same diseases, producing the same appearances we described when treating on that subject.

9. The *sphincter orbicularis vaginae*. Diseases of this part are exceedingly troublesome, because of its frequent distention, dilatation, and contraction.

10. The *corpora fungosa clitoridis* are also distended when compressed by its muscles, which, like those of the *penis*, hinder the return of the venal blood. If any one desires a
more

more full account of these parts, and their diseases, let him consult Sanctörinus's Anatomical Observations, Morgagni, Graaff, and Douglas's Myotomia Reformatä, where he will find what I have advanced confirmed by the clearest evidences.

Venereal Ulcers, vulgarly called Chankers, in Women.

THESE have been already described in men. The places where they most usually appear in women are in the rugous part of the *vagina*, but very seldom in its superior smooth part, from whence the venereal poison is as it were repelled; but on the contrary, being stopt and retarded by the *rugæ*, it produces cancrous ulcers, more especially at the *sphincter vaginæ*, where they are most constricted and numerous. 2. Upon the *nymphæ*, whose *lacunæ* retain the venereal matter, and are at the same time exposed to the air. From hence, 3. it may transfer itself to the protuberance or *prostate*, to the inside of the *urethra*, and to the *clitoris*.

A sound man having commerce with a woman who is most malignantly affected, will sometimes escape a *gonorrhæa*; but in a few hours after he will perceive, in the external part of his *penis*, a little red spot like a flea-bite, elevating itself in the form of a squamous ulcer, which

which at length terminates in a cancre. Such is the ulcer we are now describing.*

This is the reason why such women as are the worst diseased have not a *gonorrhæa*, but cancrus ulcers, which are endued with the greatest malignity. What relates to their diagnosis, prognosis, and cure, may be seen in the chapter concerning Venereal Warts.

The First Species of the Fœminine Gonorrhæa.

WHAT has been said in the history of the masculine *gonorrhæa*, of the natural liquor of the *urethra*, of its increase, alteration, &c. when affected by the venereal poison, may be applied to the genital parts of women, which also are naturally humid, but not flowing, except in the menstrual discharge.

But when the patulent orifices, with which these parts abound, are affected in a *gonorrhæa*, they discharge an incredible quantity of fluids, increasing more and more in proportion to the greater dilatation of these vessels. The sooner this flux begins after infection, it is always the more white : in a few days however it degene-

* When a man has a cancre on this or any other part of his *penis*, if the woman be examined from whom he received the infection, some such ulcer will be found in her *labia*, &c. and *vice versa*.—This is a general rule, founded upon a variety of observations ; it has nevertheless some exceptions ; for instance, where a *gonorrhæa* is very malignant, it will corrode, and produce cancrus on any part where it remains some time, as on the *glans*, *corona*, *præpuce*, and even on the skin of the *penis*, *scrotum*, &c.

rates, becoming yellow, green, &c. as in men. But by what means shall we be able to determine that this flux is of a venereal nature? Here indeed the greatest caution is necessary; for women of very lax, pale, cold, and fat temperaments, who live sedentary lives, and indulge themselves in the modern pernicious custom of drinking drams and cordials, are very liable to an obstinate lasting defluxion on these parts, like that we see in the noses of children, and which, tho' very troublesome, has not the least acrimony. Such women are generally sterile, and by no means excited to venery.

A remarkable instance of this I once saw in a Lady of high rank, who discharged an incredible quantity of thick matter, which when dried was both yellow and foetid. Notwithstanding these appearances were suspicious, I suspended my judgment; nor would I venture to pronounce any thing, as the husband of this Lady was a man of the greatest chastity, and had frequent commerce with his wife, without the least injury: and when I obtain'd a cure of this person without antivenereal remedies, I was then convinced that such a flux may arise in some women as to deceive the most skilful physician. From hence also I learnt caution in the diagnosis of this disease. This Lady became fruitful after her cure, and produced healthful children; nor had her husband the least disorder whatsoever.

Some

Some authors have asserted that this flux is continual, excepting the time of the menstrual discharge. Nothing, however, is less true; for tho' the blood is then discharged, the mucous vessels are not more constricted at those times, but continue as relaxed as usual.

A true idea of an infectious *gonorrhæa* may be formed,

1. If, soon after a preceding congress, a new and unusual complaint suddenly arises, we then suspect a *gonorrhæa* beginning.

2. If this additional disorder increases daily; for the preceding disease is very slowly and gradually augmented; but when a venereal infection is added to it, the discharge is suddenly and violently increased.

3. From its degenerating into worse. Nothing demonstrates this more, than when, after congress, the catarrhal flux suddenly becomes putrid: it is then no longer doubtful; it is apparently venereal.

It will be asked, perhaps, why I do not mention strangury, heat of urine, &c. But these symptoms do not accompany this species of *gonorrhæa*, because the urinary parts are not affected. But if a true pathognomonic sign is required, no such is afforded by this disease; for even the matter is by no means an infallible criterion, with respect either to its colour or quantity.

The feminine *gonorrhæa* is frequently accompanied with *cristæ condylomata* and *verrucae*, especially in the rugous part of the *vagina*.

If

If the *gonorrhæa* continues for a long time, the whole extent of the *urethra* is in danger of being infected: however, this does not so frequently happen to women as men.

In order to cure, it is absolutely necessary to prohibit all venereal commerce betwixt the husband and wife, otherwise the disorder will never cease, because propagated to each other by re-infection.

The internal method of cure is the same with what is prescribed in men; to which mercurials may be added, if necessary. Externals may be applied either by way of fomentation, injection, or by means of sponges, so as to cleanse the parts. For instance,

R *Absynth. Roman.* ℥ i.

Summit. Rutæ

Scord. ana ℥ ℞.

Coque in f. q. aquæ communis et colat ℥ xij. *adde mellis rosar.* ℥ ij. With this the parts are to be well washed.

Nothing is of more service than exercise of body, for sedentary women are hardly ever curable; in this respect their case is directly the reverse to that of men.

If the flux be suddenly increased by the use of the above remedies, it is a good sign. As soon as it lessens, let the applications be less acrimonious; and, when diminished to a small quantity, water, honey, and salt, will be sufficient to compleat the cure.*

The

* When a woman is infected by a recent *gonorrhæa*, it is cured with much greater ease and facility than in a man, because

The Second Species of the Fœminine Gonorrhæa.

WE have already taken notice of that glandular prominence surrounding the external aperture of the *urethra*; with which however it has no communication, not even by its excretory ducts, which open themselves on the surface of the *tubercle*: Now if the venereal infection is by these conveyed into its substance, it will produce the same effects as we have described in the *lacunæ* of the *vagina*.

It becomes immediately swelled, tense, prominent, and painful; discharges a yellow mat-

because topical medicines may be commodiously applied to every part.—They may be perfectly cleaned by ablution, which should be done at least twice a day; after this a mercurial ointment of pure *Argentum & Axungia Porcinæ*, should be well rubbed into the affected places, and lastly covered with some emollient, or, if painful, even anodyne cataplasm. By this method an inflammation is either prevented, or, if present, taken away; and the infection, instead of being repelled, is preserved at, and extracted from, the part by the constant warmth and humidity of the topical applications. And although with our author we do not admit the mercury to be or act as a specific antidote, it is, when used in this manner, of the most signal service, as a local dissolvent, fitting those humours for evacuation, which are invited outwards by the other applications above-mentioned. I would not be understood to exclude purging, &c. at proper intervals, without which perhaps the cure would not be perfect: they are, however, absolutely necessary to prevent a sore mouth from the use of the ointment. By this process the discharge is for the first three or four days greatly increased; but the heat, tumor, and virulent colour diminishes, and in ten or twelve days generally disappears, without any inconvenience or bad consequence to the patient.

ter, especially when it is compressed. As soon as the *urethra* emerges from the bladder, it descends perpendicularly for about half its length, when it is inflected upwards and forwards, so as to open between the *nymphæ*.

Sanctorinus has discovered a muscle which surrounds the body of the *urethra*, having a bifurcated origin, one from each *tuberculum ischii* : when this muscle acts naturally, but more especially when stimulated by a venereal infection, the *urethra* is drawn downwards, and projects without the body. The knowledge of this muscle only enables us to account for that remarkable phænomenon, which increases to such a degree in some cases, as to form an ulcerated tumor, the size of a pigeon's egg.

This *gonorrhæa* in women therefore is similar to that of men, where Cowper's glands are affected.

The Diagnosis of this disease is evident, including what has been said in the first *gonorrhæa* ; to which must be added, the venereal stimulus, præternatural tumor, and external discharge above-mentioned : but the genuine pathognomonic sign is, when the patient suffers the most exquisite torture at the end of making water, and no pain before.

The pain is caused entirely by the action of the *musculus sanctorinus*, which expels the last drops of urine ; as may be observed in mares, whose *tuber* is continually moved, till every drop is expelled.

If

If this painful disorder in women be neglected, it is followed by the worst evils.

But the most threatening symptom of this species is the suppression of urine, caused by the compression of the orifice of the *urethra*, which is placed in the very centre of the tumor. When the *musculus sanctorinus* acts, the pain is exceedingly increased, and the passage rendered more strait: hence arises the dysury attending such cases, not so much from pain as compression, by which it is chiefly distinguished from the third *gonorrhæa*.

This species of the *gonorrhæa* seems to be the same as described by Vercellonius in *Tractatu de morbe venerico*, which he observed frequently to occur in Italy, where the worst ulcers beginning at the orifice of the *urethra*, diffused themselves to the *mons veneris*.

With respect to the Prognosis, we have reason to fear, lest the erosion should spread to the spongy sides of the *urethra*, and at length proceed to the *mons veneris*, where also the urine finds access, and creates the disorder described by Vercellonius.

In the cure of this disease, the same cautions mentioned in the masculine *gonorrhæa* are necessary: here also we must carefully avoid every thing acrid, as most pernicious and destructive to the cellular fabric of these parts, on which they induce a hardness and rigidity, somewhat like what happens in the venereal orgasm. Such medicines erode, inflame, and constrict the *urethra*, so as to bring on a suppression

pression of urine like that of the fourth masculine *gonorrhæa*,

The topical application of mercurials are very injurious ; on the contrary we must have recourse to the most emollient and relaxing remedies, as decoctions of mallows in milk, or seeds of white poppies, lint, oats, and such like in whey ; these take off the tension, and gently stimulate the parts to a discharge of the venereal poison outwardly, through those very passages by which it was received.

Or if other symptoms, such as were described in the masculine *gonorrhæa*, arise, we may dilute some vitriolic preparation, as the Lapis Alchymicæ, &c. in so small a quantity as would give no pain when dropped in the eye, and apply to the part ; these make a thin eschar, without causing the least inflammation.

If the urine is suppressed, we must bleed the patient immediately, in order to make a speedy revulsion, and to prevent the most violent inflammation and tension from the fluxion of matter in those parts : for this purpose anodyne cataplasms can never enough be commended, made of the fresh leaves of garden poppies boiled in milk ; to which must be added, a little Saccharum Saturni, or vinegar of litharge. The same effect may be obtained by the leaves of henbane, mixed with those of mallow, petty mullein, or lint-seed, prepared in the form of cataplasms.

In the next place we must endeavour to expurge these cellular parts as much as possible,

ble, by persevering in the use of emollients; and when the virulence is considerably abated, soft detergents may be added, as Venetian soap, and such like. In other respects, the internal cure is the same as prescribed for men: it ought however to be observed, that sedentary, fat, and lax women are not to be purged without danger of a *deliquium*; so that a regard must be paid to habit and sex, by choosing such purgatives as act in the gentlest manner, as Manna, Tamarinds, Rhubarb, &c. Strong hydragogues are not here required, because the blood is more fluid, and the vessels more lax than in men.

The Third Species of the Fœminine Gonorrhæa.

HAVING already described the length, structure, &c. of the *urethra*, according to Graaff, Ruysch, and Morgagni, it is apparent, if the venereal *virus* ascends so high, it will there produce a true *gonorrhæa* as in men, attended with tumor, erosion, discharge, and heat of urine.

Heat of urine, however, is by no means a true pathognomonic sign of a *gonorrhæa*; for that symptom does not exist in the first and second species, but when the *urethra* is straitened by a hard tumor.

When the *cryptæ* are ulcerated, the urine finds access into their communicating cavities, and diffuses itself either upwards or else downwards into the *vagina*.

What-

Whatever occurs in the Masculine *gonorrhæa* may arise in this place, where the heat of urine and strangury produce the same effects in women, as when the *urethra* of men is eroded. See *Morgag. adv.* 10. page 44.

The prognosis is an increased erosion, and an entire suppression, which at length terminates in an involuntary and foul discharge of urine without sense.

The method of cure is by emollients, laxatives, and anodynes, precisely as in men.

If the matter is extremely virulent, let an emulsion of lint-feed, made with rose or plantain water, or whey, be gently injected up the *urethra*, as a shorter and more effectual way than by internal medicines only.

It is a principal point in the cure to render the urine mild by drinking a large quantity of thin fluids, such as whey, mallow drink, coffee, tea, and such like, already mentioned in the masculine *gonorrhæa*.

The Fourth Species of the Fœminine Gonorrhæa.

CAsparus Bartholinus, in *tractatu de ovariis mulierum*, has remarked, that in the lower part of the lips of the *vagina*, about an inch from the *frænum*, by the French called *fourchette*, there are two large glands, often larger than a pea, one on each side, seated under the *epidermis*, skin, and *membrana adiposa*.

Each of these has an emissary larger than any found in the *penis*, opening at the interior surface of the *nymphæ*, near the orifice of the

vagina, and discharge a peculiar fluid in considerable quantity.

Bartholine, after considering the magnitude, fabric, and emissaries of these glands, called them the female *prostates*; wherein, tho' he differs from me, it may in some measure be admitted, because they are composed of smaller glands in the same manner as the *prostates* of men: Morgagni, in *prima editione advers.* tells us he found these glands so large, that he was able to separate and demonstrate them with their emissaries. *Vide Advers. 1. tab. 1. lit. h. in tabula ubi uterum delineat.*

These glands are included within the *sphincter vaginæ*, by which position they are necessarily exposed to its action; at which time their fluids are expressed, as in the *Glandulæ Cowperianæ* of men. When the venereal poison finds access into these glands, it causes a *gonorrhæa*, with tumors in *perinæo*.

The antients were not unacquainted with the effects of this *gonorrhæa*, the causes of which they were ignorant of, as they were strangers to these glands described by Bartholine.

The figure Bartholine has given was taken from Morgagni; nevertheless, their true situation is represented by Sanctörinus, from whence it evidently appears, their contained fluids are never expelled but by the action of the *sphincter vaginæ* in the height of venery. I call these the *prostatæ Bartholini*, in order to distinguish them from those already described at the extremity of the *urethra*. When these glands

glands are affected, a tumor arises on one or both sides of the *labia*, very different from venereal buboes: when the disorder extends to the *sphincter vaginae*, the pain and tumor is necessarily increased, secret ulcers are formed, the cellular substance of the glands is at length consumed, and when the part is pressed, matter is discharged into the *vagina*.

As the disorder increases, it penetrates thro' the teguments of the glands, and spreads into the cellular membrane connecting the *vagina* and *intestinum rectum*; the matter formed in this part cannot discharge itself outward, being hindered by the *musculus vaginalis*; on the contrary, it recedes inwards, where it finds the least resistance, and produces the worst kind of *fistulas* and *sinuses*, tending more towards the *rectum* than the *vagina*, causing that appearance at which Vercellonius was so much surprised, *viz.* an erosion of the *intestinum rectum*, discharging the *fæces* by a most foul ulcer. This disorder is very frequent among prostitutes.

Many suppose the *vagina* to be eroded in this case; nevertheless, the whole disorder exists in the glands above described. How is this disease to be known? 1. By the pain and discharge following an impure coition. 2. By the colour of the matter when dried. 3. By pain, heat, and tumors at the places above-mentioned, increased by pressure, as in sitting.

With regard to the prognosis, it is attended with great danger, and very difficult of cure;

for the disorder being in the glands which are in the cellular membrane, it generally produces phlegmons ; but as all these parts are covered by a muscle, the matter is confined and disseminated inwards, unless speedily evacuated.

The method of cure recommended in every other species of *gonorrhœa* is here of little or no consequence, because in these lax and cellular parts an expurgation is not to be obtained, but from their perfect separation from those that are sound, by suppuration.

1. The infection must be corrected as much as possible ; not by salivation, or the use of cathartics, but by mollifying the parts, and gently expressing the matter, without injuring them.

2. By forming an abscess, which should be matured with cataplasms made of rye-flour, lintseed, or oatmeal, and the bulbs of onions or lilies, boiled all together in milk ; to which at last must be added one tenth part of Gum Sagapen dissolved in the yolk of an egg, or oil of lintseed : this cataplasm is continually renewed night and morning, and the quantity of Sagapen increased in proportion to the indolence of the tumor, till it is perfectly matured.

3. The abscess must be opened, and its aperture carefully preserved by the moderate use of tents, till the matter is laudable, and we have reason to conclude the *virus* is wholly discharged ; but notwithstanding the most judicious treatment, this disorder will sometimes degenerate in the worst *fistulas*.

From

From what has been said of the Fœminine *gonorrhæa*, it appears there is no other species of that disorder than what has been described : particularly, that the *uterus* is never the seat of a *gonorrhæa* ; for though the *virus* may possibly find access into its cavity, it is soon expelled by ablution, because the excretion of that part is much greater than its absorption.*

* Altho' our author has with great judgment divided the Fœminine *gonorrhæa* into four distinct species, and accurately described their situation, effects, and cure ; he has, nevertheless, omitted to mention the most common seat of that disorder, as we find it in practice, *viz.* the *lacunæ*, which every where, for the space of a quarter of an inch diameter, surround the orifice of the *urethra*. These are almost always affected, the whole area abovementioned appears red and fiery ; each *lacuna* is more elevated than in its natural state ; its little orifice is enlarged, and seems to be filled with a thick matter resembling a small slough, and if the part be pressed, a thin discharge may be seen to transude through the slough, as it were through a sponge. That this is the most common seat, especially of a recent *gonorrhæa*, I have had many opportunities of learning, both in dead and living subjects : and I am inclined to believe, that the several symptoms of the several species described by our author, ought rather to be esteemed so many stages of progression from its origin in the *lacunæ* surrounding the *urethra*, than as distinct or original species of the *gonorrhæa* ; at least, though his distinctions may be admitted as just, a wrong idea may be conveyed by his *modus describendi*.

And altho' a heat of urine is not an absolute pathognomonic sign of a virulent *gonorrhæa*, it generally does accompany a recent disorder. Whether a little of the urine is extravasated naturally, or only from a consent of parts in this disorder, I cannot say ; but the patient almost always complains of this symptom as a most afflictive circumstance.

Venereal ULCERS within the Vagina.

IT is observable, that the *vagina* is sometimes affected by a peculiar disorder, distinct from either the first species of the *gonorrhæa*, or a discharge from the *tuberculum urethræ*; a flux from the interior surface of the *vagina*, or even its orifice or *labiæ*. This disorder has more the appearance of an oblong wound, or fissure, than an ulcer, the bottom of which is broad, whilst the top is constricted; from whence they are denominated *παγὰδες* rather than *ελχὴν* by most authors. They generally run in a transverse direction to the *rugæ*, and frequently occupy the whole space from the orifice to the polished part of the *vagina*.

From these fissures there proceeds a perpetual stilicidium of malignant matter, (commonly mistaken for a *gonorrhæa*) and ulcerations through the whole extent of the *vagina*. The matter discharged is such as proceeds from the worst ulcers; sanious, thin, acrimonious, and in the highest degree infectious.

Where this complaint continues any considerable time, it diffuses the infection throughout the whole body, constituting the *lues venerea*; from whence we see the necessity of an immediate remedy, which however is attended with difficulties, because the disorder is situated above the external orifice of the *vagina*; so that we are not able to apply any medicine to
 4 the

the part but by way of injection, for which purpose we use aloes, myrrh, and honey, mixed into a balsam with the yolk of an egg, and then reduced to the consistence of an injection with a proper quantity of water: this should be retained in the *vagina*, till it is well deterged. By the repetition of this method the matter generally becomes white: in the mean time, those internals prescribed in the first species of the *gonorrhæa* are not to be neglected.

Venereal CONDYLOMATA in the Fœminine
Gonorrhæa. *

ALL those little glands, or *cryptæ*, whose juices serve to preserve the softness of the parts, are easily destroyed, and rendered superficially callous by a too great attrition, or ulceration; and as far as the callosity extends itself, so far is the perspiration obstructed. By continuance the callosity increases in thickness, so as to form a species of hard tumor, very difficult of cure, for it will not either suppurate or soften.

We must first endeavour to mollify them by soft decoctions, as mallows boiled in milk, &c. and then pare the *callus* almost to the quick,

* These are commonly seated on the true skin; and though they frequently appear on any part of the body, they are most apt to arise about the verge of the *anus* in both sexes, and the *vagina* of women.

as is practised by smiths, &c. whose hands are subject to such tumors merely from attrition. This method was practised by the antient physicians, as we read in Juvenal,

—*et occinduntur, medico vidente, Mariscæ.*

Venereal VERRUCÆ in Women.

WE are already informed, that the *rugæ* of the *vagina* are composed of sensible nervous *papillæ*, and that the intermediate spaces or vallies between them are furnished with *cryptæ*, like those of the *penis*, and the whole covered with a fine thin membrane. When this membrane is destroyed by a slight ulceration, and the *papillæ* thereby set at liberty, they immediately protrude themselves; and as they are furnished with blood vessels, so are they subject to bleed considerably.

When they increase to a great height, and occupy a large extent, it is called the *callure Hispanicum*. *(collare)*

The internal cure of this very obstinate disorder is the same as in men, *viz.* by purging with Turbith Mineral: and as for injections, the most emollient only must be used, lest we bring on a cancerous *diathesis* from irritation.

The *cristæ* described by authors are nothing but a congeries of these warts, or conglomerated *verruca*: I have seen a cluster cut off, which weighed more than two ounces.

The external cure of this disease was always, and still continues to be attended with the most
cruel

cruel and severe operations, such as the actual cautery, or incision ; nor is there any other method ; for they increase by emollients ; and if caustics are applied, which do not almost instantly destroy them, they degenerate into the most horrid cancers.*

CHAP.

* These warts, *cristæ*, or *verrucae conglomeratæ*, in and about the orifice of the *vagina*, are sometimes so numerous and large, as not only to fill and block up the *meatus vaginalis*, but to extend themselves over the whole internal surface of the *labia pudendi*, projecting outward beyond its edges, in a manner much resembling a cauliflower. There is nothing more obstinate than this disorder ; for as they discharge freely, they render most caustic applications quite ineffectual. If they are cut off, they generally sprout again and increase ; nor do they always disappear after the most severe ptyalism. These warts are not peculiar to women, but appear in the inside of the *præputium*, *glans*, and *corona penis*. I have seen the whole perfectly covered by them, and the original appearance so entirely lost, that the extremity of the *penis* resembled a kind of fungous excrescence. The actual cautery bids the fairest for a radical cure ; but where are the patients who will submit to it ? I have tried every form of caustical applications, and I will venture to affirm the only infallible one to be Arsenic ; a medicine, I am persuaded, which, if properly corrected and cautiously applied, would safely and effectually destroy any kind of fleshy substance on the living body. When one third Arsenic is melted into a brittle substance with two parts antimony, we have a slow, sure, innocent caustic, which being mixed with the yolk of an egg to a proper consistence, and daily applied to a fleshy part, will induce a total destruction of it. The reason why I say a fleshy part, is because it does not either act on the true skin at all, or if it does, we cannot confine its action ; it is apt to spread very wide. Some skill is required to know when the *verrucae*, &c. are perfectly dead, and of consequence the time to leave off the caustic ; for if they are not wholly insensible and bloodless, (which we learn by

C H A P. VIII.

The First Species of the Lues Venerea.

WHEN the venereal contagion above described has found access into the vital humours, it induces the *lues venerea*.

By

by piercing them with the probe) we no sooner suspend its application, than they actually revive with the greatest malignity, and increase : but if continued its proper time, they separate in a week or more afterwards, entirely whole, with very little diminution of their substance. With this medicine (adding a little opium) I destroyed a large quantity of *verruca* in a patient, that blocked up the orifice of the *vagina*, and projected out of the *labia pudendi* ; the whole separated entire, and weighed several ounces. They had been frequently cut, caustics had been often applied, and the person had undergone two severe salivations; without the least benefit. She has now had no return these three years. It is not necessary to make use of this remedy in less malignant cases, as they are easily cured by common applications. I have been the more particular with respect to this medicine, because it has several advantages, when properly corrected. 1. When thus applied, it acts slowly, and with little pain, producing no disorder in the constitution. 2. By repetition it will penetrate and destroy as deep as you please, which is the reverse to all other known caustics ; for when they have made an eschar, they will destroy scarce any deeper, however frequently repeated, till the first eschar is separated, which being thrown off by the increase of new subjacent flesh, would then render such repetition not only tormenting but fruitless. The substance on which it acts with the greatest and most efficacious force is flesh, commonly so called, by which I mean any sarcomatous increase or degeneracy of the parts under the skin. Further, by this application I have frequently destroyed, and afterwards extracted entire, the largest and
most

By the vital humours I mean those which are impelled by the heart through the arteries, and returned to it again by the veins, (for the fat, &c. are not vital humours.)

In the different species of *gonorrhæas* the disorder is external, but in those which we are now considering, it is first internal, and, after a

most indurated scrophulous glands of the chin, neck, *axilla*, &c. When these are put into spirits, they become whitish, and so much resemble those cancerous tumors extracted by Mr. Plunket's medicine, (which are preserved in the same manner) that I defy any one to distinguish the one from the other. No caustic will produce an eschar in the least resembling that caused by Arsenic: it is peculiar and distinct from any other. Nothing more seems necessary to bring this most powerful medicine into practice but the knowledge how to correct it. Some have recommended Opium, Sulphur, Antimony, &c. for this purpose; I have found the last most useful, mixt as above directed. Arsenic is certainly a poisonous medicine, and the worst effects follow its external application, without due correction. The antients were sensible of this, and gave directions for that purpose; and there never was a time when it was totally disused, those who knew how to manage it having always secretly preserved to themselves the valuable nostrum. I hope what I have said will induce some to make such improvements in the refinement and correction of Arsenic, as shall render it an infallible topical application in scrophulous glands, *sarcomas*, *schirri*, and even some ulcerated cancers. I should have remarked, that when a substance covered by the skin is intended to be extracted by this application, it is necessary in the first place to make an eschar through the skin with the common caustic, which eschar is by no means to be separated, but the next day the arsenical preparation may be applied in a small quantity to the centre of the eschar, and thus repeated every day, till what is designed to be destroyed is perfectly dead, which will separate entire in a week or more: to assist its separation nothing answers better than the common cataplasim of bread and milk.

time,

time, bursts forth, and shews itself by external appearances, in a manner directly opposite to the former; so that when the human body is first infected by the *lues*, it can never be discovered even by the most skilful physician, whilst it remains in a state of equal distribution; but whenever it is deposited in any particular place, it becomes sufficiently apparent. After the strictest enquiry, I have never yet been able to discover one certain sign or criterion by which we may be positively assured, whether a man be infected by the very worst species of the *lues*, or perfectly free from it. It has been said, that such infected persons are melancholy; but, on the reverse, they are frequently jocular and merry: That they are afflicted with nocturnal pains; but these never happen unless the venereal matter fixes on the *periosteum*: That such persons are listless and heavy; but this is only a sign of an approaching inflammation, or critical deposition of the venereal matter; nor does such a *cacochymy* accompany the disorder at its origin, it is only perceived when there is a *metastasis*, or critical deposition of the venereal matter, which I denominate the second stage of the *lues venerea*, wherein it is exactly similar to other acute diseases. When a person is inoculated with the small pox, at first no disorder is perceived, until the morbid matter being agitated and secreted by a fever, then the eruptions appear; the case is precisely the same in the *lues venerea*.

From

From whence it may happen, that the material cause of the very worst venereal disorder may possibly exist in the body without producing any signs, or causing the least injury whilst it remains there.

I was once informed by a friend and eminent physician, that where the most pestilential diseases prevailed, those who were infected with the *lues venerea* were preserved from the violence of the epidemic contagion. But what is much more to our purpose, I have known men in the highest health, who by commerce with their wives of the fairest character, have, after a time, communicated to them the worst venereal diseases, although those men were to all appearance perfectly free; they had, however, been formerly affected, or been guilty of inconstancy.*

This

* That the venereal poison may reside in the body for a course of many years, in some particular persons, without discovering itself by true or even equivocal symptoms, is a matter of fact, supported by a numerous series of evidences. This has long been the private opinion of many practitioners, but I do not remember to have seen it publicly avowed by any writer of credit antecedent to our learned author.

Amongst many instances of this kind, that have fallen under my observation, I shall relate one that is very remarkable, of a man turned of forty, who had been married thirteen years. About two years before he entered into that state, he contracted a clap, attended with moderate symptoms, which, so far as he could remember, was cured in about six weeks. From that time to the present he declares he continued in perfect health, without the least symptom of the venereal or any other disease: nevertheless, his wife, with whom he constantly cohabited,
has

This should be attended to by practitioners, who, whenever they see such disorders, are apt to suppose some late imprudence; but when it is known that present effects may arise from very antient causes, he will not be so liable to attempt that by topical remedies only, which is necessary to be eradicated from the vital humours.

Whilst the disorder continues in this state, without any sensible indications, I denominate it the first species of the *lues venerea*.

See
corrupt
has, for the last twelvemonth, been troubled with true venereal pustules on her head and breast, malignant ulcers on her *tonsils*, *velum pendulum palati*, and top of the *pharynx*, cancrs on the *labia pudendi*, &c. all which were cured by a salivation. The man suspecting nothing of that kind, never abstained from matrimonial embraces, till his wife could no longer admit them, on account of the pain she thereby sustained. After the strictest examination, I could find no one symptom of the disorder on the man, whilst his wife had evident signs of the greatest malignancy. I have frequently inspected him since that time, but he continues to all appearance perfectly clean; notwithstanding which, he is determined to undergo a spitting, in order to prevent further mischief to his wife.

I am not ignorant, that we may be frequently misled by the accounts which married patients especially give us of their own cases; but when the supposed injured party, moved by the feelings of resentment, concurs in her account of frequent connubial freedoms, whilst her *labia pudendi* were covered with cancerous ulcers, and the husband notwithstanding continues free, the whole narrative is then rendered probable, nay, the most important part of it is confirmed, *viz.* that in such a case the disease must be mutual, tho' not equally apparent, affording us a true, and indeed the only satisfactory evidence of the truth of our author's observation.

The Second Species of the Lues Venerea.

AS soon as ever the concealed disorder above described breaks out on any part of the body, and becomes conspicuous, it there produces similar effects to those which arise from the local application of the same poison.

We have before remarked how very subtle this venereal *myasma* is, that it even passes thro' the *penis* in some instances, causing venereal buboes, without leaving the least vestige on the *penis*, by which it was first received. But if this contagion remains any time in the part where it was first received, it there produces those phænomena already related; but let it be remembered, that it may immediately penetrate through the part where it was first received directly into the body, the part itself remaining perfectly free.

The venereal poison, after lying dormant for some time, is extruded by the *vis vitæ*; pustules of a pale red or yellowish aspect appear as its crisis, conformable to what we see in the small pox, measles, &c.

These pustules by degrees spread themselves into spots, as wide as the apex of a little finger, and appear in those parts particularly where there is the greatest warmth, and where the fat is most deficient, as on the forehead and breast.

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They

They are covered by leprous scales, which though they frequently separate and cast off, the part is never perfectly free, for others immediately succeed the former.

When these pustules ulcerate, which they seldom do till after a considerable length of time, they discharge a whitish matter, that becomes yellow when dry. These peculiar properties of this discharge, the resemblance to that of a *gonorrhœa*, and its remarkable difference from what is caused by common inflammatory suppurations, have enabled me now for many years to distinguish this disorder with the greatest certainty.

No sooner does such an ulcer appear, but it becomes serpentine, or phagedenic: this disposition however is not peculiar, for we may observe the same in some phlegmonous and scorbutic ulcers. But what may be esteemed a certain pathognomonic sign, is the devastation they always produce in the *membrana adiposa*, without the least injury to the muscles, betwixt which and the skin they sometimes creep, and spread in a concealed manner for several weeks, before they perforate the *cutis*; after which their lips appear white and smooth, but somewhat depressed, the bottom constricted, and the sides excavated, still spreading more and more laterally, and at length perforate the skin in other places.

Surgery teaches us, that in every well-disposed ulcer a slight inflammation may be perceived

ceived round its margin, but in these there is no such appearance, for their lips are white, hard, and resplendent.

They are no where deep, excepting in parts where there is a large quantity of fat, as in the buttocks, groins, &c.* Other ulcers penetrate deeper,

* It is well known to every practitioner, that there is no-where a greater variety of appearances than in venereal inguinal *buboes*. This variety, however, depends principally on the malignity of the infection, on the number of glands affected, and on the *vis vitæ* of the patient; from each or all of which we may account for that slowness and scrophulous indolence of some, that neither inflame, suppurate, or ulcerate, at least for a long time, and the malignancy and incorrigibleness of others, that still continue to spread, when ulcerated, in spite of the most efficacious topics, in conjunction with a ptyalism: and also why some glands remain schirrous after even a large imposthumated *bubo* is perfectly cicatrised. We have learnt by experience, that the attempt to discuss a venereal *bubo*, in which matter of any kind of fluid is formed, is not only very injudicious, but also (happy for the patient) seldom practicable, except by the warm bath, as we shall afterwards see, or where the *vis vitæ* is greatly deficient; but in both these instances the consequence is very pernicious, and even fatal. When venereal *buboes* are matured, an imperfect opening is not of much less fatal importance than their injudicious discussion; for where the lips remain excavated, as they almost always do after incision, they are not only reverted ~~inward~~, but some of the matter always concealed *inverted* under them is frequently absorbed, and the patient liable to be poxed almost as effectually as if the whole had been discussed; at least, the cure of the ulcer is thereby rendered uncertain and tedious: from whence it is apparent, that the thin, discoloured, and perhaps infected skin, covering the matter, should be wholly taken away by excision, or rather by the caustic, as few willingly submit to so much cutting. When that is done, it is very rare that a *bubo* is attended with difficulty or uncertainty in the cure; but otherwise,

deeper, but these are bounded by the membranes which cover the muscles, by which they are distinguished from all others.

These things being considered, we may observe there is the greatest resemblance between such ulcers, cancrs of the *penis*, and a *gonorrhœa*: for this reason I have always been of opinion, that a *gonorrhœa* is nothing else than a species of the *lues venerea*, discharged from the part in which it entered; and when the *lues venerea* is expelled to the surface, it may be called a *gonorrhœa*, proceeding from the internal to the external parts. This idea gives us a just notion of the cure; for if any one attempts a local cure, he renders the disorder much worse; but if the matter is invited outwards, which can never be done with corrosives and astringents, but by baths and fomentations, &c. the patient will be perfectly cured.

When the venereal poison penetrates into and fixes itself in the *periosteum* and *medulla* of the bones, it excites the most severe pains; yet no sooner are ulcers formed, which discharge plentifully, than these pains abate, and even sometimes vanish entirely. But if these ulcers are constringed by acrid medicines, and so healed, the nocturnal pains return: in proportion to the discharge of the ulcers, by so

otherwise, that deposition of matter, which may be esteemed a venereal crisis, instead of being salutary, becomes, contrary to the kind designs of nature, the common cause of the worst and most malignant poxes.

much is the body disburthened ; so that we ought to esteem such imposthumes not as the disorder itself, but as *fontanelæ*, or *fistulæ*, thro' which the infection is evacuated.

The cicatrices, after these ulcers are healed, are always red, livid, smooth, tense, and concave, adhering to and covering the bones by a new, thin, and adventitious tegument, which never perspires, the fat being wholly consumed ; on which account the ancients knew these cicatrices from those of all other ulcers. (See page 74.) Where the fat is thinnest, the scar is least concave ; and where it is thickest, there it is most depressed, as in the *nates*, &c. *buttocks*. It is therefore of considerable consequence, that we attend not only to the species, but also to the part affected, and whether it is covered by the *cutis* and *cuticula*, or the *epidermis* only ; for when the disorder commences under the *cutis*, it is seated either in the thin soft cellular membrane interposed betwixt the skin, *periostæum*, &c. or in the *membrana adiposa*, which is filled with fat. When the venereal poison is deposited in the former, or where there is a deficiency of fat, as on the forehead, *frontis*, *occiput*, temporal muscles, &c. the cellular membrane is soon destroyed by the influx of poisonous matter, causing livid purple tumors, the size of a nutmeg, of a gangrenous aspect. As far as the tumors extend, so far are the teguments separated from the bone ; so that when they ulcerate, almost the whole *os frontis* is denuded in some instances.

Whenever we are so fortunate as to heal these ulcers, the *cicatrix* forms a kind of heterogeneous integument, which is neither cellular membrane, *cutis*, or *cuticula*, but composed of the extremities of ruptured vessels, compressed by the air, and concreted with the *pericranium*, which ever afterwards remains livid, shining, and immoveable.

Such places also are the *maxilla inferior*, *clavicula*, *sternum*, anterior part of the *Tibia*, &c.

If the venereal deposition happens in the adipous membrane, where the fat abounds, or where it is remarkably thick between the skin and muscles, ulcers of a very different nature arise. It is obvious in the human body that nothing is fortuitous, for where fat is unnecessary none is to be found; for in men who are most corpulent, nothing of that kind is to be seen in the *scrotum*; but wherever there are numerous or active muscles, there is the greatest plenty.

When the venereal poison is admitted into this membrane, it causes, 1. An inflammation and burning heat. 2. A singular tumor, not so much from inflammation as rarefaction. 3. A deep ulceration, especially where the fat is thickest.

The *membrana adiposa* is of three different kinds, 1. Cellulous. 2. Adipous. 3. Sebaceous, particularly in those parts that are most soft, as between the *nates* and upon the *glutæi* muscles.

The

The parts where it preys most on the fat are the shoulders, arms, back, loins, thighs, buttocks, and calves of the legs; when venereal ulcers on these places are healed, the cicatrices are frequently so deep, as to retain bodies of considerable bulk; the causes of such depressions have been already explained.

There is, however, one particular part of the body which has never yet been demonstrated to my satisfaction; it is that substance found under the skin of the neck, which in porters, &c. sustains the heaviest burthens. It appears of a spongy texture, sometimes an inch in thickness, and full of a mild fluid, contained in compact receptacles. It seems to be a kind of heterogeneous body.

When such ulcers happen here, which is but seldom, they are almost incurable.

From what has been said we see the reason of that rigidity succeeding the cure of venereal ulcers, *viz.* from the accretion of the teguments to the subjacent muscles.

When these ulcers are healed in one part, they frequently break out in another; so long as one remains, the rest of the body remains free; but as soon as that is cured, another appears within a few days, and thus successively. I have seen a very handsome man, whose whole back was rendered immoveable by the most unseemly cicatrices.

The Third Species of the Lues Venerea.

WHEN the internal poison, already described under the two last heads, deposits the contagion in parts destitute of true skin, it then creates a new and conspicuous disorder, the symptoms of which demand our nicest attention, as they discover the greatest similarity to what happens within the body, where internal and invisible ulcers arise from the venereal poison.

This disorder consists either in inflammation or in suppuration; whilst it continues in an inflammatory state it is scarcely distinguishable; but when it suppurates it becomes apparent, and also more difficult of cure.

All places where the skin is deficient are intensely red, as in the greater *canthus* of the eye, inside of the nose, lips, *præputium*, &c. The first spot, or *stigma*, is not to be perceived in such places, on account of their natural vivid colour, until it appears under the species of *apthæ*, or beginning ulceration.

It is true, that the redness and heat are at first somewhat increased, but the pain with which they are attended is much less than in other inflamed parts: the only signs therefore of such a disorder are greater redness, heat, resplendency, and pain than is natural; from all which there is sufficient reason to suspect the disorder.

If

If a suppuration succeeds the inflammation, an indolent ulcer is produced, such as we see in the *vagina* and *glans penis*, but very different from those where the true skin is present.

For all these places abound with sanguinary arteries and veins, as in the lips, for instance, where, if the *epithelium* be accidentally separated, a troublesome hæmorrhage immediately succeeds.

In all such parts there is the greatest scarcity of fat, as we see in the tongue, which is composed of an infinite number of muscular fibres, separated into small *fasciculi* of minute muscles, each of which is enveloped by the *membrana adiposa*; but it is so thin, that an unskilful person would conclude that this member was entirely fleshy.

When therefore a suppuration arises here, it chiefly affects the *pinguedinous septæ* of these muscles; for which reason the consequent ulcers have the appearance of *apthæ*. When the *aptha* separates, the surface of the wound has next a flocculous aspect, from whence there transudes a mucous fluid of a yellow colour: the lips of the ulcer continually increase, but at the same time preserve their equality; the same process may be observed in the *velum pendulum*, &c.

The interior parts of the *nares*, which have been already described, are subject to such ulcerations. From the preparations of Ruysch one would conclude, that the Schneyderian membrane was extremely thin; nevertheless,
in

in a natural state it is of considerable thickness in every place, except where it covers the *ossa spongiosa*; there indeed it is as thin as possible.

The palate must be considered, 1. On its interior superior surface, where it is covered by the *periostæum* only, which being expanded backwards, helps to form the moveable *velum pendulum*, or valve of the nostrils; on this part all the *mucus* secreted from the nasal sinuses naturally descends. 2. The inferior surface of the palate is covered by a sinuous, rugous, callous membrane, which, when boiled, appears white. It is so hard and callous as to resist injuries from a variety of external bodies, and sometimes prevents even the venereal poison itself, tho' ulcerated thereby, from penetrating thro' it to the *os palati*. This membrane is nothing else than the *periostæum*, which here also is expanded at its posterior part, and helps to form the *velum* with its two lateral arches. Between the upper and lower expansion of this membrane certain muscles are seated, covered by a cellular membrane, which moves the *velum*. When an ulcer begins on any of these places, there is no immediate danger of the bone; but when the membrane is penetrated, the bone is speedily rendered carious, and the case becomes exceedingly dangerous.

Such ulcers frequently arise on the lips; but they are worst when seated at their extremities,

On

On the gums: These are sometimes ulcerated by the scurvy, but more commonly by the venereal disease. When they spread, they proceed to the cheeks, salival ducts, and *papillæ gustantes*, which last are seated here as well as in the tongue: They were discovered by Ruysch, chiefly in ruminating animals; so that venereal ulcers are of the most pernicious consequence in this part.

On the inferior polished surface of the tongue: This part also has its *papillæ*, and the emissaries of Wharton's glands, both which may be injured thereby.

On the *venter* and *dorsum linguae*: These are covered by a thick callous membrane, different from the *cutis* of any other part. Here those ulcers become tuberos, serpentine, and exceeding painful, because of the continual elevation of the *cutis*, and the erosion of the numerous *papillæ nervosæ*.

The *radix* of the tongue has a great number of membranous mucilaginous *cryptæ*, extending even to the *epiglottis*.

The membrane which ascends over the *epiglottis* is a continuation of the former: It is so extremely thin and irritable, that the least disorder in this part produces the worst effects, because continually exposed to the action of the air.

Next follows that production of this membrane which surrounds the whole head of the *larynx*, abounding with *cryptæ* even to its *rima*.

Behind

Behind this is seated the *pharynx*, covered with a like membrane. When the air is inspired through the mouth, the *velum pendulum* is impelled upward, and the posterior *nares* shut up; then we may perceive this red membrane filled with mucous *cryptæ*, according to the description of Morgagni and Valsalva; it is also furnished with muscles, as the *cephalopharyngæus*, &c. and partly composed of the *periosteum*, lying on the bones and ligaments of the seven cervical *vertebræ*. No part deserves more to be considered than this, as it is the seat of the very worst ulcers, which frequently destroy not only the ligaments but even the bones of the neck, accompanied with dreadful symptoms and excruciating pains.

What has been remarked of venereal ulcers situated on parts covered by the *epithelium* only, and conspicuous to the eye, we may apply to ulcers on the *periosteum*, which arise from an internal venereal cause.

So far as I have been able to discover by the assistance of the microscope, the ulcers above described are always seated in the *membrana pinguetudinosa*, which is frequently so wasted thereby, that the muscular fibres and nerves are left bare.

From hence we may conceive what effects are produced by the venereal poison, so long as it resides in any oleous substance, as the *medulla ossium*, *oleum articulorum*, *interstitial mucus*, *adeps musculorum*, &c. These are the parts constantly affected; for no such disorder

was

was ever perceived in the *saliva, urine, semen, &c.*

There is no part of our bodies but what have commerce with each other by means of the subcutaneous cellular membrane, which insinuates itself every where throughout the whole frame.

The venereal disease assumes this membrane as its proper seat, and here is the scene of all its operation.

The adipous contents have different degrees of tenacity, according to their situation; and they have the property of retaining whatever is volatile, hindering its exhalation, and resisting every kind of aqueous ablution.

When the disorder is once admitted into the oil, it is cherished by the heat of the body, and multiplies itself as we see in the *gonorrhæa*; and by the communication of oleous fluids it is at length distributed throughout the whole habit, even into the cavities of the bones. This opinion is not rashly adopted; it is the result of many years experience, and of a multitude of experiments, from all which I am convinced, that no other but the oleous fluids are scarcely ever affected. The chyle, for instance, in men who labour under the venereal disease is perfectly good: the milk of infected women, who communicate the disorder to sucking infants, contains little or nothing of the venereal poison, especially if fresh; nor is the infection propagated by milk as milk, for then the stomach and intestines would be
first

first disordered ; but it is conveyed by the nipples, and by the contact of the skin ; for such children generally feel the first effects on their lips, which were applied to the nipples.

The blood also of persons who have the *lues* is as good as others. This was observed by some of the first writers on the disease. The *serum* of the blood, lymph, urine, sweat, *saliva*, and even the *semen* itself, are generally free from *virus*, and communicate no infection, unless some portion of the vitiated oil is mixed with those fluids.

Antoninus Benivenius, one of the first writers on the venereal disease, says, that the humours by which the disorder is soonest received and most cherished, are the adipous, mucous, mucilaginous, and unctuous ; as what covers the muscles, articulations, ligaments, &c.

Nicolaus Massa, who wrote in the year 1540, speaking of venereal pustules and other cutaneous affections, which, after imposthumating, terminate in malignant ulcers, says, that by inspection he always discovered a whitish, dense, thick, viscous substance at the bottom of the wound ; and that in dead bodies he ever found a whitish green matter in those parts where the patient when alive felt venereal pains the sharpest, as in *gummi*, &c. so that he conveys the same idea of it with mine, *viz.* that wherever it becomes apparent, it may be known and distinguished by an oleous, viscid matter like melted suet.

These

These ulcers are never deep but where they have a deep origin, nor do they ever penetrate the solid parts otherwise than as they are conducted by the cellular membrane; so that if they begin in the surface of the body, they first act on the superficies of the cellular membrane, and when that is consumed, by degrees they spread still deeper.

The diagnosis is formed, 1. By a well-grounded judgment, concerning the symptoms already noticed. 2. By subsequent ulcers, distinguishable by the symptoms above described; for when they are present, no doubt remains of the existence of the second or third species of the *lues venerea*, or that the fat of the body is contaminated.

The Prognosis may be inferred from what has been said above, wherein I have omitted nothing that I have either seen, observed, or read, concerning the local origin, progress, dispersion, and effects of this disorder; so that every one who is acquainted with this history will see the facility with which it is propagated, unless its progress is stopt; that it soon affects the *periostæum*, *medulla* of the bones, cartilages, bones, and ligaments: yet so long as these continue sound, there is little to fear; but when they are affected, a cure may be esteemed as the most fortunate and unexpected event.

*The Cure of the Second and Third Species of the
Lues Venerea.*

WHEN we have a patient who has received the inward venereal disease, which after a time discovers itself in certain places; it is of the utmost importance to know by what means it may be expelled so entirely, that not the least vestige of it shall remain in the body.

1. This is to be attained by the entire expulsion of the venereal poison out of the body; after which the whole habit recovers its natural state, and the ulcers which before appeared so obstinate and malignant, immediately heal, to the surprise and satisfaction of the surgeon.

2. When most poisons are received into the body, nature affords, and art has discovered, some antidote, by which it is extinguished, and its fatal effects prevented. Thus when a man is bit by a viper, the animal, when bruised and applied to the part, will extract or destroy the poisonous malignity. As to the venereal poison, no one hath yet been able to discover either its innate qualities, or proper antidotes: at present they are known only to him who formed them; perhaps the time may come, when these *arcana's* of nature may be discovered. The venereal poison itself would for ever have remained a secret, but from its effects on the human body.

The fat is supposed to be the best secret cure Some

Some metallurgists tell us that Mercury is its proper specific; but how comes it, that persons have died, whose bodies were filled with that medicine? Others say, it is contained in the *Lignum Guaiacum*; but that is equally false, for in America, where that plant is well known and cultivated, the greater number of patients are cured by a mercurial salivation.

When all other poisons are received into the body, they are either corrected or evacuated; but here no such corrective antidote is yet discovered. The whole cure consists in its expulsion: and as the disorder resides in the oleous fluids, their dissolution is absolutely necessary, in order to render them misceable with water; after which they may be discharged out of the body.

That the whole cure depends on this single circumstance, is confirmed by every phænomenon, and by the practice and experience of the most celebrated and ancient physicians; for whenever they were so happy as to cure, we learn that their patients were wholly emaciated. Happy then is that physician who is able to dissolve all the oil of the body, effect its total evacuation, and so preserve the constitution, that the *vis vitæ* may again recover itself.

This is not so difficult as is generally thought, unless the parts are already so consumed, as to be incapable of recovery. For instance, so long as the disorder affects the *periosteum* only, without destroying its substance, the case is curable; but if it is wholly penetrated, the

I have known the ~~guaiacum~~ ^{bone} taken in large quantities, without least success, I think the boasted effect of guaiacum is erroneous

bone becomes carious, and not to be cured without an exfoliation. If therefore the oleous fluid only be affected, the case is curable without much difficulty; but when the bones are disordered, such an event is not to be expected, without a separation of the caries.

The First Method of curing the Lues Venerea, viz. By Emaciation.

OUR business here is to emaciate the body, and expel the fat. If this disorder be recently dispersed throughout the humours of the body; and if the patient, who was before very corpulent, strong, and vigorous, begins to fall away; I dare pronounce such a one capable of being cured without either decoctions or quicksilver, merely by a macerating diet, such as boiled bread, oats, millet, raisins, prunes, pot-herbs, and ripe mulberries, strawberries, cherries, &c. roots of beet, carrot, &c. On such a diet a man may and ought to live in such a case. I remember an instance of a patient, who had tried all the ordinary methods without success, who having heard that the *lues* was curable by a decoction of crude rape, resolutely persisted in its use for a month, drinking nothing but water, whereby he received a perfect cure.

The drink should be only water, or thin whey, the exercise should be violent, daily, and continual, creating not only weariness, but a plentiful discharge of sweat: in short, it should

should be carried to such an excess, as to evacuate all the oil, and not give it time to regenerate.

And if the constitution be sufficiently strong (for this I mention as what is absolutely requisite in order to sustain this cure) he must be sweated for a quarter, half, or an entire hour, night and morning, sitting in a semicupium of warm water, with the upper part of his body covered with blankets; the time must be proportioned to his strength. By this process emaciation will be greatly forwarded.

The last thing to be done is a friction of the body with dry rough cloths immediately after the bath night and morning.

The medical decoctions of which the patient must drink large and continued draughts, may be made either of the leaves or roots of burdock, China root, either American or Asiatic, Guaiacum, box, juniper, the three saunders, saffrafras, and sarsaparilla, dandelian, watercresses, &c.

If this method is continued for six or seven weeks, it frequently cures, agreeable to what the antients observed of some particular patients, who by labour and constant perspiration were so much macerated, that they received a perfect cure. *Nicol. Massa*, page 51. *Alexand. Petronius*, page 1308, *lit. D.* says the same; as also *Barnard, Tollutanus*, &c.

We know there are a class of men, who, being condemned to the oar, are obliged to persevere in the most violent exercise, without

any other sustenance than biscuit and water: the keepers of these miserable wretches neither regard nor help those amongst them who have the venereal disease: they are nevertheless perfectly cured by emaciation, in consequence of their way of life.

This method of cure, where practicable, is preferable to that by mercury; for the body is never so much injured thereby, but it soon recovers itself, which cannot always be said of Mercury.

By what signs are we sure the disorder is cured? If all the symptoms entirely disappear, and every cicatrix continues firm, although the patient return to a liberal diet, we may be certain the cure is performed radically.

There is no indication more certainly to be depended on of an approaching cure, than when an ulcer, which before yielded a sanious discharge, begins to generate a good *pus*, like common ulcers, and when the cicatrix forms itself in a smooth equal manner: but if, notwithstanding these specious appearances, the disorder again returns, the preceding process must be repeated: there is, however, too much reason to suspect a repetition of the cause of this disorder, instead of a relapse.

The Second Method of curing the Second and Third Species of the Lues Venerea. — By Purgatives.

WHEN the degree of infection is such as requires a more vigorous process than the preceding, we must have recourse to purges, by which indeed the same effects are produced, but with a greater force, *viz.* the oleous fluids are dissolved, render'd permeable to the vessels, and discharged by the *rectum*.

There is no point of greater consequence, than to know when the venereal poison is wholly expelled; nor is there any thing more difficult to ascertain, as it depends on the entire evacuation of the humours; so that a cure can never be compleated, unless the body is 1. Emaciated as much as possible, and, 2. Filled with new and good humours. If the venereal *tabes* be not wholly discharged, no sooner do the juices of such an exhausted person begin to replenish, but the least particle of the remaining poison is cherished, increased, multiplied, and dispersed.

Whenever the medullary oil contained in the recesses of the bones is contaminated, it is scarcely to be dissolved by the most extreme emaciation, the most drastic purges, nor even by Mercury itself.

Whilst they continue under cure, or remain thin, they appear to be well; but whenever they return to their usual diet, the disorder

breaks out again, and obliges them to submit to a frequent repetition of this necessary but painful process. Christoph. Bonetus, in *Theatro Tabidorum*, justly observes, that so long as such persons blood is by art reduced into a watery state, they feel nothing; but when enriched by a carnivorous oleous food, the disorder again discovers itself.

Amongst the whole class of medicines there are only two, by which our design may be accomplished, viz. Lignum Guaiacum and Mercury.

Paracelsus acknowledges, that the Ebulum Indicum, or Guaiacum, is a sufficient and effectual remedy for this disease; and in his *Chirurgia* he every where prescribes Mercury, nor does he mention any other besides. Most writers have adopted the same opinion, though some have disputed the efficacy of Guaiacum; it is, however, very certain, that Quicksilver alone is not sufficient.

There is one exception to be made, viz. when a *gonorrhœa*, or any other of the above-mentioned symptoms accompanying it, are complicated with a *lues*, then neither so great a degree of maceration, or expulsoy force is necessary.

Besides the above medicines, there are certain vegetables and fossils which have been demonstrated by certain experiments to be of service in the expurgation of this disease, as strong cathartics, and powerful sudorifics.

What

What are the best and most powerful purgatives may be seen in our treatise of the *gonorrhœa*: they must be repeated till the whole oil of the body is dissolved and expelled.

Severe as these methods are, nature at present affords us no other materials from either the fossil or vegetable kingdoms, that will cure this disease, but as they salivate, sweat, or purge, and thus dissolve all the infected humours. How or by what particular medicines that is done, is of little consequence, if they act in proportion to the *vis vitæ*; but as such patients are frequently hectic when they apply to us, we must first, by a nourishing diet, restore their lost strength before we undertake the cure.

We now come to the Spanish or Italian cure by exsiccation, or extraction of the corporeal humours. This is done, 1. by Sweats; 2. by Ptyalism.

The Third Method of curing the Second and Third Species of the Lues Venerea.—By Sudorifics.

THE patient's body ought to have sufficient strength to sustain this method, for it reduces the strongest habit to the utmost relaxed state; for as the whole mass of blood consists of a decoction of the *Lignum Guaiacum*, if the vital *viscera*, the lungs, liver, spleen, stomach, &c. are unsound, it is appa-

rent they can neither sustain this repletion or its action.

If therefore such a person stands in need of this cure, he should first live for some weeks on a milk diet, bathe daily in warm water, rendered soft by the addition of emollients; rub his body gently with a flesh-brush three times a day, and refresh himself with a little genuine Canary, Palm, Cape, or Spanish wine.

By this course, with the addition of country air and proper exercise, we must endeavour to restore the strength of the constitution, at the same time strictly prohibiting the use of meat, for fear of increasing the oil, which already prevails too much.

2. The time required for this process is at least six or seven weeks, without which it is in vain to expect success; for if the fat is not wholly dissolved and expelled, the remaining poison becomes superior to the strength of the emaciated person, and rages with greater fury.

3. The air should be preserved by a thermometer in a proper degree of warmth, agreeable to the season of the year. A want of attention to these circumstances occasions great errors: In winter the heat should be raised to 60 degrees, which is more than a man in health can well bear. In summer it may arise to 70; the natural heat of the season raises it sometimes to 80, but then it becomes unhealthful; so that in extreme cold the heat should be a little diminished, and in the midst of summer somewhat increased,

If these rules be neglected, and the body is filled with decoctions to promote sweating, the operation will be fruitless. The chamber ought to have a southern aspect, and to be furnished with a stove, but no chimney, which, by drawing in the wind, makes the room too cold.

4. He must abstain from fermented liquors during the whole course, and be permitted to drink only milk, whey, ptyfans of barley, oats, &c. the whey should be made twice a day, for if it is not very fresh, it soon becomes acid. To these may be added dry currants bruised, liquorice, red saunders, and sugar, so as to render these drinks not only refreshing but pleasant.

5. The food ought to be such as most resists putrescency, and is freest from oleous particles. The cure consists principally in the use of thick farinaceous decoctions, sweetened with sugar, to which may be added prunes, raisins, ripe apples or pears reduced to a pulp; biscuits also boiled, with raisins or with figs, and a little saffron or nutmeg, was the only diet allowed by Ulricus Huttenius.* It is most in use with the practitioners of Amsterdam, and affords a solid nutriment to the stomach. Milk also diluted with water may be admitted, but is too oleous to be drank alone. For the

* Except a little butter and Liquorice, which he recommends by way of allaying hunger: but notwithstanding this severe regimen, which that noble German submitted to himself, we find he afterwards relapsed, and died in a miserable manner.

same reason all preparations of eggs, fish, and flesh are to be avoided.

6. There is need of constant frictions, as a supplement to that exercise of the body which is prevented by its necessary confinement.

7. A medicament must be prepared after the following method : Take either the bark, (which is best of all,) or the green ponderous wood of Guaiacum next the bark, reduced to an impalpable powder : ℥viiij , of which must be infused in water for twelve hours, the vessel being close stopped ; after this it must be boiled for one hour, pouring in fresh water : when it is settled, and cold, let it be strained through Hippocrates's sleeve. This makes the first decoction, and is very strong : to the residuum, add ℥viiij . of river water ; boil to one half, and filtrate as before, by which you have a second or dietetic decoction. That Guaiacum which is either very yellow or carious, must be discarded as useless,

The METHOD of CURE.

THE patient must drink one pint of the first decoction about six o'clock every morning and evening ; as this is very strong, it is apt to excite an inflammation on the *fauces*, which ceases in about three or four days, after which it is no longer disagreeable. The abovementioned inconvenience, however, may in good measure be prevented by the patient's chewing some stoned raisins or a fig before he takes the decoction.

He

He must also drink two ounces of the dietetic decoction every hour, at least for the space of eight days, taking care to prevent its escaping through the pores till he is filled, and rendered as it were hydropic from the decoction; for if a sweat comes on before the body is thus filled, the sound humours only are expelled, and a fever succeeds, which puts an end to the process, and prevents the cure.

So much is necessary to the impletion of body.

8. In the next place it must be agitated in such a manner that it may pass thro' the pores by way of sweat, to be excited at first every other day, or oftener, in proportion to the patient's strength, by covering him with warm and thick bed-cloathes.

9. He is then to be placed in the craticula, or sweating-chair. This is a kind of wooden cell, from whose quadrangular basis the body of the machine ascends in a piramidical form, terminating at top by an opening sufficiently large, and of such a height, as to admit the patient's head to emerge thro' it at liberty.

When the patient is placed in the chair, a lamp furnished with spirits of wine and cotton is introduced into the machine. This lamp should be made of brass, of a cylindrical form, five or six fingers breadth in height, with an orifice about an inch diameter: its basis should be sufficiently broad to prevent its falling, for by such an accident the patient would certainly be suffocated; and the spirit ought never

to rise higher than an inch below its margin. By these precautions too great a fire is prevented, and the spirituous fumes rise with superior advantage.

As soon as the spirits are set on fire, the patient is immediately involved in a warm bath of spirit of wine, changed into a volatile penetrating water: the Guaiacum is thereby attracted outwards, a perspiration begins, and increases to that degree, that was it continued for the space of two hours, there would be such a resolution of the body by sweat, as to endanger life itself.

The patient should remain in the craticula at first only once a day, and but just so long as his strength will admit, which we may learn by attending to the pulse of his carotid arteries. When therefore he has for the first time sustained this sweat for a quarter of an hour at the most, he is then to be put into a warm bed, and well covered for two hours before he gets up.

Some who have thought this method inconvenient, place the patient naked in a warm bed, covering him with a craticula made of hoops, into the bottom of which a metal pipe continued from the lamp is introduced: thro' this the spirituous exhalations are conveyed into the craticula, which being well and closely covered with bed-cloathes, the patient is as effectually sweated, without the disadvantages of the chair; for when the operation is finished, we have only to remove the craticula,
and

and the patient is immediately covered with the bed-cloathes, without being exposed to the external air.

After this is done he may be allowed a little flesh-broth with rye bread, Canary or Rhenish wine, as a necessary refreshment. When the patient has sustained this operation night and morning for ten or twelve days, he is thereby so much debilitated, as to require a little broth, or rhenish wine, as soon as the sweat begins.

In desperate cases we must persevere in this process for three or four weeks, after which the operation should be repeated once a day for another week, when the cure becomes absolute.

This method, which is now reduced to the greatest degree of certainty and perfection, cures the disease when it affects even the *medulla* of the bones, where it is inaccessible to the force of Mercury.

Those persons are mistaken who imagine the force of the sanguinary system sufficient to actuate and move *argentum vivum* with a velocity necessary to the cure of this disorder; but by this repletion and evacuation it is effected in a manner superior to any other: I have seen the humours transude with such force, excite such a fever, heat, and external *impetus*, that venereal ulcers were raised on the forehead during the sweat, and thereby so entirely separated from the bottom as to be perfectly healed.

We

We know when a cure is performed by the disappearance of all the symptoms ; as when the ulcers are healed, the nocturnal pains cease, and the tumors subside and vanish entirely.*

After

* There is one caution of the utmost importance omitted by our author, and that is, never to enter upon a course of sweating, or indeed any other internal process, where the patient has any venereal swelling, as a *bubo inguinalis* ; for there is nothing in the world that will so speedily disperse such tumors, as baths, vapours, &c. and the consequences of that discussion are most fatal. I remember an instance of a celebrated courtesan, who by entreaties prevailed on her surgeon to use every method to disperse an almost matured *bubo*, that she might be freed from the deformity of a cicatrix. He made use of almost every evacuation, accompanied by large mercurial frictions; but these not succeeding to his wish, he at last had recourse to, and persisted in the use of the hot bath, and sweating in bed, for a considerable time, by which he so perfectly discussed the tumor with its contents, that nothing remained. His patient no sooner recovered a little strength, than the disorder appeared again in a different and multiplied form ; for innumerable ulcers broke out on her head, neck, *anus*, *labia pudendi*, palate, tonsils, and *septum narium*, and proceeded so fast, that though she was immediately put into a ptyalism, the disease raged with such fury, as to end her life before it could be raised to any salutary height.

Even in common abscesses that are not venereal, the worst consequences sometimes succeed their accidental discussion, when matter is either partially or perfectly formed. I remember a man in the year 1752, who had a little boil on his face, covered by so thick a skin as to prevent its eruption ; he would by no means permit it to be opened either by the caustic or lancet ; so that at length it wholly dispersed. Not long afterwards he broke out in large abscesses all over his arms, belly, and legs : when these were either opened or burst of themselves, they turned to malignant

After which we must strictly caution such patients not to return immediately to a gross and fat nutriment, for thereby whatever of the disease remains will be so increased as to manifest itself again.

This process is effectual in that very worst species of the *lues*, which fixes itself on the thinnest bones covered by the *periostæum* only, as the *maxillary*, *frontal*, and *sphænoideal sinuses*, the *ossa palati*, *spongiosa narium*, and *ossa unguis*. When the *periostæum* of these very thin bones is destroyed, the subjacent part of the bones is not only uncovered, but thereby deprived of nutriment, and of consequence becomes carious: the poison once admitted, easily spreads, and diffuses itself through their spongy texture, where it excites a most purulent *fætor*, especially in the *ossa spongiosa narium*.

If one such bone be deprived of its *periostæum*, it will never be cured but by its entire separation, because the *periostæum* is never re-

lignant creeping ulcers, like those on the legs of scorbutic patients, and as some healed, others broke out, by which he was so wasted, that he appeared like a skeleton, and at length died tabid.

From this absorption of matter may be traced a variety of the most afflictive evils human nature is exposed to.—From hence the *scrophula*, succeeding the measles, small pox, and dentrification of infants: from hence the *lues*, after a bad managed or neglected *gonorrhæa*: tumors in the neck, from imposthumes of the ears, &c. &c.

Reverius tells us, a Carmelite Fryer was seized with a continual fever, in the height of which he died, only from some pimples in his face suddenly receding.

generated : but in other and larger bones, which are constituted of a considerable number of *lamellæ*, the superficies may exfoliate, and its membrane regenerate.

Where the disorder has produced local effects, it may not be amiss, during the operation to conduct the spirituous exhalations to those parts by the mediation of a brass pipe, and at other times apply a cataplasm of the decoction.

So great is the force of this sweating operation, that I have sometimes cured paralytic persons, whose disorder was topical, or owing to a *vice* of the muscles, tendons, or *involucra* of the nerves ; nor is there in all medicine a process by which we have a more absolute command over the body than by this method.

If we read the books of Franco and Ulric Hutten, which last wrote very well and candidly, we shall see in his epistle to the Bishop of Mentz, that he prefers this method to a salivation.

Let me once more remark, that thin, dry, weak bodies can never sustain this operation without the utmost danger. It is designed chiefly for those that are robust and full of blood, in whom it will cure even the *spina ventosa*, and procure a separation of the *caries*.

The whole time of sweating nothing must be applied to the ulcers, for thereby their transudation might be impeded ; but after the operation they may be covered with *emplastrum*

plastrum diapompholigos, to keep them from the air. *

The Fourth Method of curing the Lues—By Salivation.

PREVIOUS to a salivation it is requisite,
1. That the patient should have competent strength to sustain that operation. If therefore his body be enfeebled, it should be postponed for a time; and as humanity forbids us to abandon such a one to despair, we must first try if we cannot restore him by frictions, milk diet, and country air; at the same time curing his ulcers by external applications of mercury. †
If

* This process of our author is somewhat like, though much superior to, that which cured Henry III. King of France, to whom the secret was afterwards communicated, and is as follows: — *Rx Rad. Bardanæ in telleolas sectæ ℥viij. Vin. alb. & Aquæ font. ana lbj. bulliant ad mediæ partis consumptionem addendo; sub finem Sennæ mandet ℥j. vel ℥ifs. pro dispositione ægrotantis capiat mane lbs.*— Warm flannels were then wrapped over the bottoms of the feet, legs, and thighs, and great sweats promoted in those parts. About the evening the internal medicine generally loosened the body. In the mean time the patient drinks freely a decoction of China or Sarsaparilly with his usual diet, and continues in this course for fifteen or twenty days, after which he takes a decoction of Bardana, without Senna or any other regimen, for a whole month, or forty days.

† This caution is of singular importance, especially in ulcers of the *tonsils, velum, uvula*, posterior part of the *fauces*, &c. for ulcers in these parts seldom continue any time without causing a *caries* of the bones, or spreading to places inaccessible to external applications, the cure of which depends wholly on the subsequent process of salivation,
X

If these expedients do not recover his strength, a salivation would be improper. The instances
I have

tion, which we find by experience does not always succeed. The fumigations of Cinnabar, medical vapours, gargles, lotions, phagedenic waters, &c. in common use, are not so effectual as could be wished; they seldom digest or heal these ulcers, or even stop their progress; so that there is little or no hopes of restoring the health and strength of a patient who is in continual pain and uneasiness, accompanied with a perpetual nausea and sickness. The ulcers ought to be in some measure healed before a salivation can with any propriety be attempted: some refrain from it when the least malignity appears on the palate, &c. lest the patient should be disgraced with a flat nose, which, we are told, is more frequent in England, than any other country. A medicine then that will digest and heal these most troublesome ulcers before a salivation, would be highly desirable, and such I take the following preparation, after many years experience, to be.

Take Argent. Viv. and Corrosive Sublimate, of each lbs. mix till perfectly incorporated in a marble mortar; then put it into an alembic with a strait orifice, and cover it with distilled vinegar four fingers in height. The whole must be well shook or stirred several times a day, and in eight or nine hours the vinegar will be strongly impregnated from the residuum, which may be known from its acrimonious taste, or by pouring a little Spirit of Sal Ammoniac, which will, if the medicine is sufficiently strong, produce a large quantity of White Præcipitate. This vinegar must be poured off, and fresh put on, which will require a longer time for its impregnation. We may thus repeat the infusion, till the sediment will no longer impregnate; after which, the greater part of the residuum may be revived into pure Quicksilver by distillation, and serve again. If a little of this lotion be applied to those ulcers on the point of a probe, armed with lint, their whole surface becomes instantly white, and continues several hours, when it may be seen to separate in the form of an exceeding thin slough; the wounds appear more clean, and by repeating it three or four days, night and morning,

I have seen of the fatal mischiefs of an unreasonable salivation, particularly in an English gentleman,

morning, we may perceive their bottoms to granulate, and their edges to subside; after which the medicine should be omitted, and the ulcers will quickly heal.

Nor are venereal ulcers the only species where this lotion is of such service; it is equally effectual in the worst scorbutic ulcers of those parts; in ulcerations behind the ears, fissures in the chinks of the body, *herpes exedens*, scorbutic ulcers of the legs, cancerous ulcers of the lips, inveterate humours of any part, scrophulous tumors in the lips and noses of children, *œzenas*, chaffed nipples, and even in a gangrene. In short, it is by far the most valuable phagedenic water ever introduced into practice, the proofs of which do not depend on my own experience only, but on the testimony of many very eminent surgeons, to whom I have at different times communicated it. *ozæna*
Chapped

I noticed, that the lotion changed the surface of the wound white, which soon after separated in the form of a slough; from whence it is apparent, the preparation is somewhat corrosive. The whiteness, however, is not the consequence of its action on the solids, but of its coagulating the fluids; nor is this change peculiar to a venereal ulcer, for it produces the same on all others, and upon every human fluid, even when separated from the body. I should not have mentioned this circumstance, which is common from the application of almost every mineral acid to any species of ulcer, even a cancer, but as I think it subverts the notion of the venereal poison being an acid, according to the opinion of Dr. Cockburn, who says it turns the tincture of violets into a bright red, and the juice of the sun-flower to a copper colour: but if the venereal poison were acid, surely a coagulation would not follow from the application of another acid; for if alkaline spirits are applied in the same manner to ulcers, they have no such effects; on the contrary, they render the wound livid, and the discharge thin and sanious: they will also attenuate any pure or diseased human fluid, when separated from the body; from whence it is that all alkaline medicines, used externally or internally, are the most powerful resolvents; for there is scarcely a tumor, however hard,

gentleman, who lost his life on this account, have given me the greatest concern.

2. A fix weeks leisure. I have but a very indifferent opinion of cures that are performed in a less space of time.

3. A warm air. The warmer the air, the more powerful will be the Mercury; but at the same time the more hazardous: nevertheless, by this means a cure may be accomplished in ten or twelve days. In the Indies they heat the stoves to such an incredible degree, as to give the highest salivation to their slaves, by which means their fate is speedily determined. Mercury never acts without the heat of the body, the want of which may be supplied by external heat; but when they both act together, the Mercury rages in the body, and brings on a putrefaction. If new benign fluids be administered, and the strength be sufficient, the cure will be easy.

4. Abstinence.

5. Meat and drink, as before.

6. Frictions of the whole body. Let the patient be put in a bath vapor three or four days before he takes the Mercury, and after this let him use moderate exercise; for the cure never advances more happily, than when the body is so disposed as to suffer the Mer-

but what may be softened, and sometimes even dispersed entirely, by persevering in the use of alkaline spirits. By these I have very frequently dissolved small schirrh of the breast, ganglions of the wrist, &c. On the contrary, I have found, that acid spirits used in the same manner will sometimes diminish the tumor, but they always leave it more hard and fixed than before.

cury to act equally in all parts without any resistance ; for the action is the greatest, where there is the most resistance.

7. If the patient be young and plethoric, and the weather warm, it will be adviseable to bleed, because the salivation will throw the body into a fever of itself. By this means the inflammatory swellings of the *fauces*, hæmorrhages, fevers, and dysenteries, often attending salivations, will be prevented.

8. The body should be purged ; for, during the whole time of salivation, the belly is scarce moved once : what impropriety therefore can there be in exhibiting daily Manna, Cassia, and Cremor Tartar ; or, if greater speed is required, to inject a clyster three or four times a day, in order to take away the *feces* from the body, which is the principal thing to be aimed at in these preparations.

9. For a week before, the patient should use a liquid, emollient, and moderately refreshing diet, that there may be a sufficient quantity of humours in the body for the mercury to work upon, and keep it from hurting the vessels. The food therefore should consist of milk, panada, raisins, figs, or such as contain no matter tending to putrescency ; for the effect of Mercury is to dissolve the humours, and to change the oils and salts into a state of putrefaction, like those of a dead body exposed to the warm air ; by which the tender vessels are sometimes dissolved, and rendered incapable of containing their fluids. Hence arise mortifi-

cations and consumptions of the liver, lungs, &c. which is only to be prevented by the exhibition of such antiseptic aliments.

It may be asked, If any thing more than these be necessary? I answer, not in a healthful person; but if the constitution be scorbutic and atrabilious, and especially if there be any apprehension of internal ulcers, then farther caution is necessary, for the mercury never operates so unkindly as in these cases, because the humours are then so disposed as to flow spontaneously. The *gingivæ* being pressed, discharge blood, and livid spots appear all over the body. When therefore the Quicksilver is given in such habits, it dissolves the tender vessels instead of the humours.

In such circumstances,

10. The patient should take, for the space of a week, a demulcent decoction. The best ingredients for this purpose are Guaiacum, the roots and leaves of Burdock, the roots of China, Eringo, and Liquorice; any of which may be chose; to these some add the roots of Fennel and Parsley, Bitter-sweet, and stalks of Sarsaparilla. Let these be boiled to the consistence of milk, and taken $\mathfrak{z}\text{j}$. or $\mathfrak{z}\text{ij}$. every hour, during the week preceding the Ptyalism. By these means the humours will be diluted, meliorated, and fitted for the mercurial discharge.*

11.

* In cases where salivation aggravates the disease instead of curing it, upon enquiry we shall find that the patient was

11. It will be adviseable to use the bath once or twice, and to stay in it a quarter of an hour, rubbing his body well afterwards. Thus the skin will become more perspirable. This was the reason why the ancients always directed bathing before salivation.

12. When there are *tophs*, *apostemata*, or ulcers, the patient should put on such covering as will be sufficient to keep him warm and clean all the time; for during the operation neither the cloathes nor the bed must be changed.†

was of a scorbutic, scrophulous, or depraved habit; in all which temperaments, especially the former, the blood is generally thin, and perhaps acrimonious: from whence we see the reasonableness and necessity of the preparation our author prescribes in such cases, and why a salivation so frequently fails through its being neglected. It will be asked, what is to be done when salivation fails in such cases? I answer, There is even then a safe and easy cure; so easy, that it has for the last age enabled the most ignorant empirics, old women, and nurses, to triumph over the whole faculty, of which I could produce many instances. One that happened very lately will be sufficient.—A certain lady, whose husband died about two years ago of the *lues*, was left most severely afflicted with the same disorder, for which she was deeply salivated by an eminent surgeon of this city. As she recovered strength, the disorder broke out with greater fury; afterwards he used frictions and purges, and thus kept the disease under, but never entirely cured it. The patient, weary with fruitless applications, and having lost her appetite and strength, began to despair: but an old nurse in the family had influence enough to prevail on the lady to take a diet drink, under the character of a never-failing specific, by which she was perfectly cured in three weeks.— I shall relate this method of cure after the Ptyalism.

† Our author means, that the cloathing should be so contrived, that the surgeon may have access to those complaints, without taking off or changing those coverings.

These are the principal things to be observed in the preparation. We come now to the

Operation of the PTYALISM.

MERCURY having been found so effectual in the cure of the venereal disease, many persons of great authority have attempted to substitute something of supposed similar properties in its stead, but without success. I have seen the root of wild Pelitory, given in mastick or with pepper, raise a salivation, by which the humours were discharged, without curing the *lues*; and Mercury itself does not prove effectual merely by raising a salivation, but in dissolving the humours in such a manner, that the *virus* may be carried off along with them.

2. A salivation cannot be produced unless the Mercury enters the body, and the *vis vitæ* has a sufficient force to sustain it.

3. Mercury ought to be given in such a quantity as to raise a painful salivation, without which I never saw it succeed.

4. It ought to be continued so long, and in such a degree, as to dissolve all the infected humours, and extirpate all the poison. When this is done, the remaining part of the cure consists only in supplying the body with fresh juices,

Mercury raises a salivation in whatever form it is given, and in the soundest bodies. The vapors of boiling Mercury, crude Mercury
applied

applied to the skin externally, or mixed with ointment, or in a plaister, and taken without any preparation, will all of them salivate. It is sufficient if it does but enter the vessels. If it be taken in too great plenty, it purges the belly. Those who work in the mines, handling it imprudently, scarce live three years, and die miserably.

Quicksilver salivates when mixed with those things which take away its fluidity at first, and afterwards suffer it to recover again. If Cinnabar be taken into the body, and meets with a very acrimonious bile, alkaline or saponaceous humours, the operation of the mercury is suspended. Hence it happens, that *Æthiops Mineral* seldom salivates, unless in bodies that have the power of dissolving, or with dissolving medicines, such as alkaline salts, which dissolve the sulphur, and set the Mercury free. If I take Mercury, and rub it with a little bread and some Galbanum, I make the *Pilula Barbarossa*: when the bread and Galbanum are digested, the Mercury is set at liberty, and then operates, but not otherwise. Mercury præcipitated acts in a different manner. This was first discovered by John Vigo, from whom it was called *Vigo's powder*; and Troches made of this, *Trochisci de minio Vignis*. This powder is made by taking some Mercury with the same quantity and half as much more of spirit of Nitre, or common Aqua Fortis, and putting them in a retort, so close

close that nothing can escape ; at length, exhale every thing but what is red ; then let the retort be broken, and there remains a powder of various colours, which is red Precipitate. Now take this powder, says Paracelsus, and add seven times the quantity of new Aqua Fortis ; urge it with an intense heat, and you will have the strongest red Precipitate, to which you must add something mild whenever you exhibit it. Helmont says he concealed the most important article of this preparation, viz. the Elementum Ignis Veneris, which he made no secret of to his pupils. But I doubt this, as I have not been able to find it in his books. He says, in *Libro Nosocomio*, that from this powder of Vigo may be distilled the Oil of Vitriol, after which the whole medicine is changed, and you have in an instant the Turbith Mineral. ʒij. of Mercury thus prepared has twenty times the effect of crude Mercury.

Mercury will only mix with a fossil salt ; the alkaline salt of vegetables will by no means touch it. This mixing is called by the chymists the extraversion of the sulphur of Mercury. I have changed Mercury into a red, penetrating, and acrid body, by the addition of pure gold only.

There is inherent in Quicksilver a certain latent body called the Sulphur of Mercury : if this be taken away, the Mercury will neither unite with Aqua Fortis, Aqua Regia, nor Oil of Vitriol.

Pure

If pure Argentum Vivum, which is a genuine, simple, uncompounded mineral, is mixed with common Spirit of Nitre, (which has not been discovered above three hundred years,) it will be fixed so as to sustain a heat of sixty degrees, without flying off. Homberg calculated how much of this solid quality he could give in proportion to a pound of the most fluid Mercury, and found, that when it was thus prepared, it acts at least twelve times more powerfully than simple Mercury, five, six, or seven grains only being equal to sixty of the other.

If you pour upon this, Oil of Vitriol, it will expel all the fixed acid, and penetrate into its place. If I unite 3j. of Spirit of Nitre with 3j. of Mercury, and then pour upon them the Oil of Vitriol, ninety grains of the Spirit of Nitre will instantly fly off; tho' they would before have withstood the heat of sixty degrees: the oil will enter, and make a white powder more fixed than red Precipitate; the virtue of which will be found invincible: one grain being sufficient to move the whole body upwards and downwards.

If this preparation be washed with water, it puts on a citron colour, when it is called Turbith Mineral. This acts with three times the force of the above Precipitate.

If the acids are taken from these powders by distillation, a mild body of Mercury is left behind, which is called Mercurius Dulcis. This is the remedy to which Paracelsus recurs

as the last resort. The next process is Sublimate of Mercury. In the nature of things, say the chymists, there are but two created perfect, sea-salt and gold.

Now Corrosive Sublimate of Mercury is a sovereign remedy, and a sovereign poison; for here Mercury is united with sea-salt. In order to make it you must take the Calx of Vitriol, which is the most fixed Oil of Vitriol, incapable of being expelled by fire. With this mix Mercury and sea salt; then by a slow fire the Vitriol approaches the matrix of the sea salt, making it volatile, and depurating it so as that it unites itself with the Mercury; the fire in the mean time having corroded the salt, and the Mercury makes them volatile, and hence is produced the Sal Ammoniac of the philosophers. Thus Corrosive Sublimate of Mercury is the purest sea salt sublimated from all dross, and intimately mixed with Mercury. One grain of this Mercury causes a severe salivation. This was formerly a profound secret; they dissolved one grain in water, and mixed it with syrup, to render it more palatable.

This sublimated Mercury united with an equal quantity of Quicksilver, and sublimated again, loses much of its strength, and comes forth Mercurius Dulcis, 3j. of which will not raise so strong a salivation as a grain of the former; therefore the power of Mercury in a great measure depends upon art.

If Mercury thus prepared be rubbed with Quicksilver, and then sublimated again, we shall

shall have the Panacea Monspeliensium, but a remedy of small efficacy; for you must use 3℥s. of it to raise a salivation, for which a grain of the former will be sufficient.

Having premised these general observations, I add, that all of them will salivate, or otherwise they would not cure. I admire the skill of him who boasted of being able, by a mercurial arcanum, to cure without a ptyalism; and I will take upon me to pronounce, after a correspondence throughout all Europe, that it is impossible. I have known, indeed, a salivation suppressed after it was first excited, by a determination downwards, and *vice versa*; but this is nothing to the point.*

Such a salivation ought to be excited as shall render the humours very fluid; but if by preparatory decoctions, evacuations, or an extreme poverty of blood, they have been made too thin, no salivation can take place; from whence it happens, that many persons after a relapse are incapable of receiving a salivation. *Vid. Lemery in actis Regiis Acad. Scient. Paris.*†
When

* Herein our author agrees with the most experienced and eminent physicians, as the great Sydenham, &c. who declare that a confirmed *lues* is not to be cured by Mercury, unless it salivates: nevertheless, of late years it has been discovered, that the less malignant species of the *lues* especially is frequently curable without a ptyalism, by almost any mercurial medicine, continued a considerable time, with a proper regimen, evacuations, &c. See Locher's account, at the end of these notes, *Medical Essays, &c. observations*

† The common way of raising a salivation is by rubbing in the pure Argentum (killed or divided with Axung. Porcinæ) on the surface of the body. Our author does the same

When there is a debility of the humours, the Mercury passes through the body, and consequently it is not always a certain medicine; for the efficacy of it depends upon its salivating. If this end be accomplished, it signifies little in what form it is used. It ought, however, to be a caution to us to try that Mercury which debilitates the least. I have been greatly concerned, that many surgeons, especially the British, so rashly pour Mercury into every juvenile body. 2. Attend to the age of your patient. 3. Take the exactest method of calculating the quantity of Mercury you give; for no good physician tries dangerous experiments on the human body. 4. Let the quantity be no more than necessary, for Mercury destroys the human body by its own mechanical power.

These principles being laid down, you may judge what is proper to be chosen, and what to be rejected, and particularly to omit those acids which render its use dangerous; or, on the other hand, what requires to be taken in

same thing by giving the above-mentioned preparations internally. It is of no great importance by what preparation the ptyalism is excited, if we take care to prevent its being too sharp and corrosive; for as I have before observed, the only difference betwixt them is only as they are rendered more acrimonious by chymical processes and mixtures. However, where the constitution is weakly, I think one would rather prefer the method by unction, as the stomach is less affected thereby. Or if the habit be sufficiently strong, those that are quickened by art, as the Calomel, &c. are preferable to the *Pilulæ Mercuriales*, Keyser's, or Belloste's, &c. all which are very slow in their operations and effects.

too large a quantity. Hence those are mistaken, who attempt to expel the venereal poison by the Parisian Panacea, Sublimate, or Æthiops Mineral.

The White Precipitate, or the common Dulcis, are preferable to all other medicines; for if these fail in salivation, all others will be without effect, unless there be a peculiar idiosyncrasy in the body; therefore, rejecting all boasted arcanas, let us rely solely upon these two medicines, the first of which is White Precipitate, prepared by hand in this manner: Let Quicksilver be rubbed with Spirit of Nitre, till dissolved into a very limpid liquor; upon this pour the brine of sea salt till it becomes white: hence arises Aqua Regia, which with difficulty retains the Mercury, so that the greatest part is precipitated. Then the liquor is to be strained through paper, and there remains the whitest powder of Mercury, which must be washed with warm water till it becomes insipid: this, when dry, is the White Precipitate of Mercury. Take 3ß of this powder, with 3j of sugar, and rub them together in a glass mortar, and it will be an incomparable medicine.

If this is thought too laborious a process, take 3jß of common Mercurius Dulcis, and 3j of sugar, and rub them to a fine powder. Divide it into twenty-four doses, and in every dose there will be $3\frac{3}{4}$ grains of Mercury. This does not differ materially from the preceding, excepting that a little only of the spirit

rit of salt is united with the Mercury. These two remedies I have never known to fail, where the disease was curable.*

The patient should be kept in one room, and wear woollen cloaths all the time, nothing being more necessary, than that every part be kept in a perspirable state, on which caution our success greatly depends.

A dose should be taken at six, nine, and twelve in the morning, and at four, six, and nine in the afternoon. I have mentioned the largest at first, that it may be gradually diminished; the least dose is the fourth part of this quantity. Afterwards it will be proper to take a narcotic, to prevent vomiting or a dysentery. Paracelsus, in *Nosocomio*, adds ʒj. or ʒij. of Theriaca to vi. or vii. grains of Turbith Mineral; nor does he give any Mercurials without Theriaca, which is a bland narcotic. Hence we would advise ʒj. or ʒij. of the following composition.

R *Aq. Cort. Citr.* ʒiv.

Laud. pur. gr. ij.

* For when the crasis of the blood and other humours is already dissolved, as in scorbutic persons, if you attempt to salivate, every symptom will be aggravated, and the ulcers, instead of digesting, &c. will continue to spread with greater apparent malignity, as I have before observed. The design of Mercury is to dissolve the tenacity of the juices; but that being already effected, a salivation in such cases is highly improper. Our business is therefore, in the first place, to restore their lost consistence by proper diet, &c. by which only such a patient will sometimes be perfectly cured; but if the disease continues, he may afterwards be salivated with success.

If

If nausea, vomiting, pains in the belly, and looseness come on the first or second day, according to custom, they ought by all means to be stopped. After two, three, or four doses there sometimes arises such an intollerable sickness, that every kind of sustenance becomes loathsome, and the patient falls into a *deliquium*. This happens chiefly to those who are easily moved, to whom nothing can be more serviceable than the following medicine.

R *Terebinth. recent.* ℥℔.

Vitell. Ov. nov. i.

His penitus subactis adde Theriac. Androm. ℥℔.

Lactis recent. ℥vi.

M. f. clyfma, by which these complaints will soon be removed.

The salivation, which comes on about the second or third day, is generally preceded by a troublesome fever, attended with anxiety and thirst; therefore it is highly proper for the patient to drink at least ℥ij. of liquor every hour, which will by no means resist the action of the Mercury, but rather dispose the vessels to bear it better. Raisins boiled with barley in water, with one third of milk, and some honey or sugar, make a good decoction for this purpose.

These symptoms are owing to the tenacity and density of the blood, which makes it resist the Mercury; more especially if there be an acidity and dryness of the body.

The Signs of an Approaching PTYALISM.

AFTER the fever and anxiety before-mentioned, there follows a cadaverous smell from respiration. I never knew this symptom fail ; for even children who have taken Mercury for the worms, have the same *fætor* ; it is therefore a palpable error to imagine that it proceeds from the poison : for if you mix fresh hartshorn, veal-broth, human blood, and that of a young calf together, and expose them to the warm air, yet in twenty-four hours a like putrescency arises, so as to become intolerable.

This smell lasts all the time of salivation, and is the worst when the Ptyalism is at the height. Some have told us, that dogs have died from licking the *saliva* ; but this is a mistake ; however, it is more prudent to spit it out, than to swallow it.

2. The teeth are elevated. This elevation is felt by pressing one jaw against the other.

3. The *fauces* begin to stiffen, and soon after to swell ; the gums also are red, and exceeding painful when touched. The Mercury then begins to dissolve the blood and other humours, rendering them volatile, and fit for evacuation : hereby the oils in particular become putrid and cadaverous, and are the principal cause of the putrid *fætor*.

4. As soon as the blood is by this means dissolved, violent inflammations come on, which

which would prove fatal without drinking a large quantity of diluting liquids.

5. As soon as the *fætor* begins, I have examined the ulcers with microscopes, at which time every inequality disappears, the *sordes* is removed, the lips, which before were swelled and corroded, become plain, and the bottom of the wound red as coral; from whence I conclude, that though the Mercury dissolves all the humours, it acts mostly upon the fat.

6. If there be a determination of the humours to the mouth and *fauces*, the tongue swells enormously, and becomes exceeding painful; the cheeks are violently inflamed at the salival glands, where there often remains large ulcers for six months after salivation.

If the Mercury does not ascend to the mouth, it produces pains and nausea in the stomach, &c.

7. The gums and lips are affected in the same manner as the other parts of the mouth, and the whole countenance becomes tumid and ruddy.

The Signs of a Present PTYALISM.

A Liquor begins to flow from every part of the mouth, which, if not spit out, runs spontaneously over the lips. It is called a salivation on account of this flux of the *saliva*. The discharge, however, is not of *saliva* only, but of all the humours of the body, attenuated by putrefaction; for the *gastrocnemii* muscles

are equally relaxed with those of the cheeks ; and where it proceeds regularly, the patient has not one evacuation by stool in the space of twenty days.

The *saliva* is more tenacious and foetid than at other times, daily increasing in quantity and putrescency ; the mouth ulcerates, and the greater that ulceration is, the better are the other ulcers of the body.*

All the humours, even the fat itself, are resolved into a fluid sufficiently thin to be discharged by the mouth. The determination of the dissolved humours to that part I impute more to the irritating, inflammatory, ulcerating qualities of those humours, than to the force of the Mercury.

If it be asked, What is the just height or point that renders a salivation salutary, without being dangerous, or insufficient ? I answer, that in an adult and strong person the discharge may amount to 36 or 48 ounces in the space of 24 hours, more or less.

It should be continued till every symptom disappears, at least 28 or 30 days, in which time lb.cxii. Troy of spittle is discharged : so that, according to Keil's demonstration of the proportion of our fluids and solids, it will appear, that all the humours of the body must have been exhausted, had not fresh ones been added. Now suppose only one half to be oil,

* There are some exceptions to this observation, as the reader will see hereafter.

it is evident the whole fat must have been dissolved and expelled ; and that if a very corpulent man was to be thus cured, not the least vestige of his fat would remain.

The ptyalism, however, must in some cases be protracted longer, as we shall presently see ; in the mean time it is apparent, our object is the evacuation of the old humours, and filling the body with new.

By such a copious discharge there is reason to believe that more of the old humours are evacuated, than of those which have been recently received ; because at first there is frequently a large hæmorrhage from the gums, so that not only the lymphatic but sanguinary fluids are determined this way, and a man who had a florid complexion at the beginning of this course, always becomes pale when it is finished.

What now can be expected from those practitioners who neglect preparatory diet and repletion before the application of Mercury : from hence may be deduced the reasons why their patients so frequently die under their hands.

We know when the discharge is sufficient in quantity and continuance.

1. From the time, which I generally protract to 40 or 42 days for the greater security. It is much better to insure a certain cure to the patient, at the expence of a present inconvenience, than subject him to repeated salivations, which I have seen many undergo without ef-

fect, and by which they were almost destroyed.

2. From the quantity and violence of the ptyalism. In many, about the third or fourth day, so great a tumor and ulceration arises, that would prove mortal unless it was relieved; after this an acute salivation comes on, that discharges even pounds in a day. In such instances we are authorised to finish the course in thirty days.

3. From the disappearance of all the symptoms which indicated the existence of the disease, and for which the process was intended. Against this rule lie two objections, *viz.*

1. Where an ulcer is seated on an infected bone, as the *os palati* for instance, it digests, granulates, and heals, within the thirty days, with such apparent soundness, as might deceive the most acute practitioner; nevertheless, in three or four weeks it will again discover itself. In such a case the topical applications of mercurials will avail nothing; for the true cure, if possible to be obtained, depends wholly on the outward effects of internal operations.

2. If the disorder occupies parts inaccessible to the impetus of Mercury, and the ptyalism has been continued 42 days, somewhat will still remain, as in ulcers of the palate; for as they have their origin from the infected bone, no sooner does the patient return to his usual way of living, than the apparently firm cicatrix breaks out again. Such a disorder is absolutely incurable, and those who are presumptuous

tuous enough to promise a cure, are generally more unsuccessful than others.*

In strong, young, and plethoric bodies, the Mercury frequently causes such an inflammation, as to endanger an actual suffocation; it is absolutely necessary, 1. That such drink very plentifully of thin liquors, and gargle their mouths with a decoction of mallows and milk, or of the flowers of violets, elder, and mallows; and apply warm fomentations of the same on flannel to the outside of the *fauces*, ears, and *maxilla*, taking care to exclude the air, and avoid cool liquors. If we attempt to discuss these by repercussives, the tumors are thereby increased, and rendered more dangerous; for though these emollients really increase the tumors, they also relax the vessels, and enable them to sustain their burthen.

2. The air must be rendered temperate; for nothing increases a salivation more than warmth.

3. We prescribe Opium; one fourth of a grain every hour takes off the sense of pain, and moderates an excessive salivation.†

When the inflammation, ulcerations of the mouth, and spitting are diminished, they must

* We ought not to despair in such a case, since we have learnt, that if even then the Sarsaparilla drink, &c. be properly administered, the bone will exfoliate, and the cure be perfected.

† I have also found the Julep. e Camphora, used by way of gargle, to be very efficacious in moderating these symptoms, and in lessening the discharge. For this I am indebted to the informations of an eminent physician.

be again excited by the mercurial drink with Opium. 2. The heat increased one or two degrees by the stove. 3. The head fomented, and cherished by dry-cupping; and thus the salivation is to be protracted till the cure is completed.

3. If the old juices are evacuated to the amount of lb. 150, or at least lb. 112; for if so much has been discharged and regenerated, it is apparent the old humours are passed out of the body.

4. If all the fat be consumed; for then even the marrow of the bones appears to be resolved; for such men perceive an unusual rigidity and immobility about the larger joints.

All these effects arise from the *vis vitæ*; for when such patients fall into a *deliquium*, the salivation ceases; so that where the *vires vitæ* are deficient, Mercury will not cure: a putrescency indeed happens; but this medicine is not expelled without a fever.

External heat also contributes to this effect, without which there is a suffocation, but no salivation.

Thin drinks are necessary: if the patient does not drink more than he discharges at the mouth, it will not succeed, since much passes off by urine; for what is thus expelled by the mouth contains the venereal poison, and conveys it out of the body.

To these may be added a thin diet, sufficient to nourish, but not to produce any great motion in the body.

By

By these things the habit is macerated, purified, washed, weakened, exhausted, and cured.

If a part of the disorder remains, no symptom of it appears while the patient continues thin and weak; but when he takes solid nutriment, and recovers his strength, it breaks out again in its original form.* In some cases this is not to be prevented, particularly when the disease is seated in the *medulla* of the bones, for there the Mercury cannot act.

There are many instances of Quicksilver being found in the bones after death; it remains in the same manner in the *diploe* of the *cranium*: in such cases as these, therefore, the cure by Guaiacum is preferable to that by Mercury.

When the disease occupies these small and very thin bones, serving to form certain cavities, as the *orbits*, &c. it is hardly curable by a salivation; for all these are furnished with a *diploe*, into which the Mercury can never penetrate; so that in *caries* and *exostoses* of the orbits, internal parts of the *nares* and mucous *sinuses*, *gummi* of the cartilages, of the *larynx*, &c. we ought to form no great expectations from this method, because the *vis vitæ* is not sufficient to impel the Mercury to those parts. The same thing is true with respect to the

* Except prevented by the timely exhibition of some proper diet-drink in large quantities; by which the remaining poison is either blunted, destroyed, or carried out of the body.

medulla and *lamellæ* of the bones in general, and to the membranous *cryptæ* of the nose, *fauces*, mouth, *œsophagus*, stomach, and small intestines; and though there have been some cures of this kind, it never happens but where the ptyalism has been carried to the utmost height, by which the membranes are deterged, expurged, and abluted.

From what has been said we may understand the reasons why the disease is so difficult to cure when the glands of the generative parts, *perichondrium* of the *larynx*, root of the tongue, *epiglottis*, and arytenoid cartilages of the *larynx* are affected. Topical applications, as *Oleum Vitrioli*, *Spiritus Sulphuris per campanum*, *Mercurius Sublimatus*, *Pulvis Præcipitatus Vigonis*, *Lapis Infernalis*, or indeed any other corrosive medicine, by which an eschar may be made as deep as the infection, are here of great service; for when the eschar separates, the ulcer heals, and the part becomes sound. But as such medicines cannot be applied to the various *sinuses* of the *nares*, the disorder remains absolutely incurable, under the form of a venereal *æzema*.* Where the bones
œzema indeed

* In the year 1755, a lady came to me with a large ulcer and swelling on the *septum Narium*, and on each *ala* of her nose, which emitted a putrid *fætor*, and prevented her breathing through her nostrils. It had been supposed to arise from an old venereal cause, for which she had been salivated many years ago; it nevertheless grew worse gradually, and finding no benefit from frequent advice, she applied to Dr. Ward, who gave her some temporary relief.
 As

indeed are not affected, there are some instances of cure by Cinnabar fumigations; nor are proofs wanting of its ill success, and of its injuring the interior part of the *nares*: it should therefore be administered with the greatest caution, *viz.* where the bone is neither carious, nor deprived of its *periosteum*.

Condylomata, calli, and venereal *schirri* also are never cured by a salivation. These require emollient vapours, after which they must be totally consumed by mercurial escharotics: if they be not first softened, they will prove impenetrable to corrosive applications.*

Fistulous sinuses require compleat dilatation, without which they are not to be cured either by ptyalism or decoctions. *Exostoses* should be laid bare, and the infected part of the bone separated by the rugin, terebra, chissel, or some corrosive application; but this is impracticable in the smaller bones.†

Another

As I did not doubt the cause, so I put her into a deep salivation, which not succeeding, I had recourse to the Mercurial Lotion, which she snuffed up her nostrils twice a day: the swellings abated, the ulcers healed, and her breath passed freely through her nostrils; from which time to the present she has never had any relapse. I have frequently cured venereal and other *æzenas* by the same medicine. *æzena*

* The preceding use of emollients are very proper, and long since made use of by Joannes Benedictus for the same purposes.

† Having already observed the salutary effects of revulsion in this disease, whether produced by nature or art, I come now to the advantages which may be gained from an immediate derivation in some particular cases, as in *nodes*, *tophs*,

Another method of curing this disease is by giving Mercury internally, till the blood is so much resolved as to discover the first indications of a ptyalism, or till the breath becomes foetid, &c. Purges are then continued till those symptoms disappear. Both these processes are persisted in alternately, until the disorder is cured. This method is commended by Vercellonius and Pitcairn, and much practised in France; it is not, however, sufficient to cure

tophs, gummatæ, exostoses, &c. If, for instance, a blister be applied to one of these tumors, and then followed by another, as soon as the former is healed, there is hardly a species of tumors that can resist it. This was the practice of the great Riverius, who frequently renewed them three or four times, where the induration proved obstinate. When the bone is carious, the cure must depend on an exfoliation; nevertheless, a very large *exostosis* may exist without a *caries*; for we frequently see them subside in proportion as the cure advances, and at length wholly disappear, without any separation of the bone, and at other times continue for life, without any inconvenience. When we are sure the bone is diseased, a separation becomes necessary, and may be effected by the means our author recommends. If a fluxile purulent matter be formed in such tumors, it is apparent a blister would neither be proper nor effectual. Repeated blisters are the most efficacious of all other remedies in venereal *fungi* of the joints; for as the contents of these tumors are almost always of the lymphatic kind, more or less inspissated, according to the time of their retention, it easily pervades the skin, when excited by the strong, stimulating, and derivatory force of the blister.

I might here further observe, that in most cases where the perpetual blister is usually recommended, the repeated blister would not only be more convenient, but more effectual, since the discharge of three repetitions is not much less than twenty times the quantity procured by the perpetual in the same space of time.

bad cases, or those where the bones are affected.*

Lewis XIV. than whom there never was a prince that more liberally encouraged the arts,
purchased

* This method, which one may call the Compound, is very sufficient to cure most of those cases that are not of the worst kind; it is therefore best suited to common practice, since the majority of patients are affected in a kind of middle degree. It is also the most convenient, as it may be continued a long time without injury to business or reputation.

There are some who sweat, salivate, and purge their patients all at once, or alternately; which we may call the Greater Compound method. This is, however, no modern invention, for it was practised soon after the disease prevailed in Europe, particularly by Aug. Terrerius: both these methods, however, are varied according to the humour of the practitioner. I know a surgeon of eminence, who orders his patients to use the hot bath once or twice a day till near twenty times, and then to rub in near an ounce of the common Cerule every evening, beginning at the toes, and proceeding to the ankles the first time; on the second, to the knees, and so on, till he arrives at the neck. As soon as the spitting appears, he prescribes Sal Nitri ʒj. three or four times a day, to carry off the Mercury by urine; sometimes Sal Mirab. to do the same by stool. The patient is furnished with an astringent gargle, to prevent its affecting or discharging by the mouth. By this means he forces in a great quantity of the Ung. and again expells it by the pores, urine, and stool, denying it a passage by the salival glands. By this method, he says the patient is cured with less pain, inconveniency, and uncertainty, than in the common way of salivating.

I shall now fulfil my promise with respect to the cure of such patients whose blood and juices are wholly depraved by scorbutic humours, or in whom Mercury has only tended to aggravate every dreadful symptom to the highest degree of malignancy. Such persons shall frequently be cured by a diet-drink, which is pretended to be a specific, but in reality

purchased a celebrated arcanum for the cure of the *lues*, called the *Mercurial Panacea*, of an

327 reality derives its virtue only from a peculiar habit of body, or the preceding processes. The blood and juices, which perhaps before were dissolved by a scorbutic disposition, are rendered perfectly sharp and acrimonious by the frequent use of Mercurials; so that the more of that mineral is received, the patient becomes the worse, and persisting in it too long would be fatal to him. In this exhausted state he only wants to be supplied with a large quantity of benign bland juices; so that a decoction of Sarsaparilla, (or perhaps any mild drink whatever) immediately recovers his strength, disperses every symptom, and restores his whole habit almost miraculously. But if the Sarsaparilla be given ever so long, and under the strictest rules, to a man of a florid, sanguinary temperament, it will not have the least effect, as I have very frequently experienced. I believe it is owing to such cures that Sarsaparilla has gained an unjust reputation, not only among the vulgar, but the profession, who in their manner of speaking seem to attribute its salutary effects to a kind of specific antivene-real virtue, which, if true, would discover itself generally in one and the same uniform manner, in very different habits of body. For want of a right notion of this medicine, it is often misapplied, to the great disappointment of the practitioner, and the discredit of this root, which has varied in estimation in different times. In the year 1667 it was highly prized, and sold in London for 12s. per pound. Sarsaparilla therefore ought to be considered as a nutritive restorative medicine, that when received into the vessels, blunts the acrimony of the old, and affords new and mild humours; so that although a little of the venereal poison should exist, it may thereby be diluted, meliorated, and at length carried out of the body thro' the pores, kidneys, &c. This effect cannot be expected when given to a body already full, and as it were flowing over; it either gets not into the blood, or is soon expelled by the vigour of the *vis vitæ*. On the contrary, if the body be empty, the *vis vitæ* weak, and the fluids in a poor or acrimonious state, which is generally the consequence of a salivation, it seldom fails; but

an empiric, and gave it to 800 men, under the inspection of his own physicians. The recipe,
as

but the same effects might be expected from the *Lignum Genistæ*, *Bardana*, &c. which, with many others, have at times gained great reputation.

Fallopious tells us, that the *Sarsaparilla* cured the Emperor Charles the Fifth, after every thing else failed; and we have already been informed, that King Henry III. of France was cured chiefly by decoctions of *Sarsaparilla*, *China*, and *Bardana*; no doubt *Mercurials* had been long and frequently administered before.

But what is more to the purpose, I have known many instances of poor persons, whose habits were greatly reduced by salivations, and whose diseases continued with apparent malignity, go into the country; where milk, whey, and other such simple food and drinks, restored them to perfect health.

I shall now relate two or three remarkable cases, in order to shew the true use and efficacy of *Sarsaparilla*, &c.—A young gentleman, who, from repeated infections, was almost always under some mercurial process or other, had a large ulcer, which began in the *tonsils*, and extended itself over the *velum pendulum*, *uvula*, back part of the *fauces* as high as the *sella turcica*, and the posterior part of the *nares*, discharging a large quantity of putrid cadaverous *pus*; his nostrils were also full of scabs, and frequently bled. On the *olecranium* of his elbow there was a large painful *exostosis*; the joint also was apparently swelled, and so stiff, that the smallest motion occasioned extreme pain: a fluid might be perceived sometimes to flow over the joint, when agitated by a counter pressure; at other times, the fluid and swelling would suddenly vanish, and the pain abate; nevertheless, the rigidity and *exostosis* continued without variation. In other bones and joints also he had severe nocturnal pains, and temporary swellings; his complexion was fallow, and his body reduced, weak, and languid. I first healed the ulcers in his throat with the *Lot. Mercur.* above-mentioned; upon which the other symptoms grew more violent, but were relieved by a return of the ulcers, and *vice versa*. A slight *ptyalism* was raised, and continued for a fortnight, by
which

as communicated to me by the learned Homberg, is as follows.

1. Take

which somewhat more than a pint of saliva was discharged each day ; but as the ulcers visibly increased, and his other complaints were not in the least mended, and as his remaining strength was almost expended, I resolved to have recourse to Sarsaparilla, viz. three ounces in two quarts of water boiled to one, which quantity was appointed to be taken every day, and more if possible : this was the only liquor allowed him, except a glass of wine at his meals. In a few days the patient was surprisingly restored, his spirits were enlivened, his complexion altered, his pains abated, his *exostosis* and swelling at his elbow diminished, and his throat almost well. In short, the cure was completed in three weeks, from which time he has continued entirely sound. I intended to have continued the course a fortnight longer, to which the young gentleman would by no means submit, when he found himself, as he expressed, so perfectly cured.

In the year 1761, a gentleman about thirty years of age was recommended to my care by an eminent physician, on account of a carious *os frontis*, proceeding from an old infection, and an ill-managed venereal bubo, which being suffered to heal of itself, still continued fistulous. When the orifice of the bubo contracted, and was first covered with a scab, his forehead swelled considerably ; but as the tumor varied, and at some times almost entirely disappeared, it was neglected for several months, when at length it was discovered to contain a fluid, after which it increased considerably. It was now two years from his first infection. I opened the most prominent part of the tumor by caustic, and it discharged a large quantity of ill-digested foetid pus, which lay on the bone. I found the *os frontis* carious, the teguments separated almost its whole breadth, and the surface of that bone scabrous. The swelling however subsided, and the teguments appeared to be disposed to re-unite themselves with it. This was encouraged by compress and bandage ; but all was found in the end to be fruitless, fresh tumors arising. I then resolved to make two long incisions, one on each side the *linea frontis*, as dependant

1. Take native Cinnabar finely powdered,
and wash it in vinegar and water till pure ;
add

as possible, after which no more matter was retained. I must observe, that from the beginning of the disorder this patient had taken a variety of mercurial medicines, and not less than five hundred of Keyser's pills, which, together with his sufferings, had reduced him to a low and emaciated state of body ; his face was pale, but somewhat puffed, especially his eye-lids ; every thing indeed denoted a relaxation of the solids, and a poverty of the fluids, and that he was a proper subject for the Sarsaparilla. A strong decoction was his only drink, and from the use of it he was restored to health in three weeks. He persevered in this course for at least the space of nine months, during which time the whole external table of the frontal bone separated in several distinct portions, at different times ; of consequence the frontal sinuses were destroyed, and the forehead depressed in the place of its former elevation. The cicatrix, which is less unequal than might have been expected, continues firm, and the patient has enjoyed perfect health from the period above-mentioned. I should have observed, that the fistulated bubo, though it was never opened, healed sound, before he had advanced a month in the course.

In the latter end of the year 1761, a young woman applied to me on account of an ulcerated throat, painful *exostoses* on each elbow, and a very large one on the right *tibia*. On examining her husband, to whom she had been married three or four years, I found his head and breast covered with true venereal blotches, and a large foul ulcer on his back ; otherwise he was in perfect health, and felt no pain ; but his wife gradually declined and wasted for want of rest. The case was obvious ; I treated them both with Mercurials for about six weeks ; the ulcer on the husband's back healed, the pustules disappeared, and he has continued well ever since : but the wife was not in the least mended ; her pains increased, and she grew rather weaker. I then tried the solution, with the Sarsaparilla diet-drink, for six weeks more, to as little effect ; and after giving her some respite

add to this double the quantity of steel filings ; mix these together, put them into an alembic, and commit the vessel to a strong sand-heat, and the Quicksilver will ascend pure.

2. This Mercury is dissolved in somewhat more than an equal quantity of Spiritus Nitri ; the solution is distilled from the residuum at the bottom of the retort, which when taken from it by breaking the glass, it is changed into a white Precipitate, then to be rubbed and mixed with marine salt and Colcothar of Vitriol, and the whole gently sublimed from a retort, when it becomes as it were a kind of crystalline or sublimated Venetian Mercury. The advantage of this process is, that the Mercury will mix more easily after it is thus dissolved.

3. After this the whole is once more sublimed.

by way of recruit, put her in a regular spitting, which left her more weak, without any abatement, either in swellings, ulcer in her throat, or nocturnal pains. She was now very much weakened, and grew extremely thin, pale, and languid. I then had recourse to the Sarsaparilla drink only, enjoining the strictest abstinence from all other liquors. Her throat healed in a week ; her nocturnal pains in the *exostoses* and other parts went off in about a fortnight ; and by the time she finished her course, which was six weeks, she was perfectly recovered of her disorder, and regained her health and strength. The swellings in the bones, however, never abated, and continue to this day without any inconvenience. From these cases we see that the time for giving the Sarsaparilla with benefit, is when the body is reduced, and the humours dissolved and broken by mercurial medicines.

4. In the next place it is mixed with Quick-silver revived from Cinnabar, in order to cleanse it from what is heterogeneous; after which the remainder is pure Mercury, nor is there need of farther sublimation.

The discovery of arcanas lessens their value; for when we have Mercurius Dulcis, what need of this preposterous preparation, whose effects are in no respects superior to that medicine.

I have now communicated all that I know concerning this disease, not with a view to your profit, or the encouragement of irregular passions, but in order to enable you, as good physicians, to relieve human misery.

A P P E N D I X.

AS of late years it has been discovered, that Mercurials cure in many instances, without operating by ptyalism, I shall here subjoin an account of the success attending the solution in a great number of such cases, as before they usually salivated for in the same hospital: the patients were frequently inspected, and this account examined and confirmed by the celebrated Baron Van Swieten.

Particulars relating to the Cure of the Lues by Sublimate dissolved in Malt Spirits, as exhibited by Maximilian Locher, Physician to St. Mark's Hospital at Vienna, and communicated to me by the learned Dr. Schlosser, Physician at Amsterdam, S. R. L. S.

R Mercurii sublimati corrosivi ʒss.

Spiritus vini rect. ex frument. præp. lib. v.

Relinquantur in lagena vitrea donec sponte solutus fuerit Mercurius, agitetur bene phiala, & detur usui.

This prescription was given to Dr. Locher by Baron Van Swieten, at whose request it was made trial of in the manner and form following.

The common dose one large spoonful night and morning; in some cases that quantity was doubled.

After

After the medicine the patients drank one or two pounds of barley, mallow, or liquorice water.

2. After they had taken the decoction of liquorice, &c. they were all sweated in a stove.

3. They were allowed only the common diet of the hospital, *viz.* white meats, lean broths, small beer, &c.

4. The ordinary drink was of the above decoctions; those that were of a thin dry habit were permitted a draught of milk now and then, and all were commanded to drink a large quantity of allowed liquors.

5. A purge was taken at proper intervals, and found to facilitate the cure; in others that were moved with difficulty, an *enema* was exhibited.

6. In some the solution operated by stool; in others by urine, and produced in most a copious sweating: in short, it generally excited all the secretions and excretions, but more especially where the patient drank plentifully.

7. It seldom promoted salivation, scarce once in a thousand instances, and then only when mercurial preparations had been taken before. When that accident happened, the solution was suspended, and the decoction continued alone till it ceased, or was carried off by *enemas* and purges, after which the medicine was resumed.

8. The continuance of the solution was never interrupted but by a spitting, and that very rarely.

9. Most

9. Most were cured in six weeks; but where the disorder was fixed deep, or accompanied with malignant creeping ulcers, it was continued two or three months.

10. Men were more speedily cured than women, in whom, as the disease is longer discovering itself, so it required a longer time for its extermination. So much for the method.

It resolved indurated buboes, which, till ripe, were covered with Emplastrum de Galbano, vel de ranis cum Mercurio; or, if inflamed, emollient cataplasms, &c. after which they were opened, digested, &c. for this purpose he found the solution an excellent Aqua Phagedenica, especially when mixed with a decoction of the woods, as recommended by Dr. Stork, in *Anno Medico Secundo*, p. 223.

If a *phymosis*, *paraphymosis*, &c. was accompanied by a gangrene, he treated them with the Bark, and thus stopping its progress, preserved the *penis*. When the mortified eschars separated, he began with the solution, in order to eradicate the *lues*.

By the antivenereal spirit *tophs* were resolved; or if the bone was carious, it promoted exfoliation, and healed the ulcer.

It was effectual in ulcers of the *tonsils*, palate, nose, &c. using at the same time a gargle of some decoction, in which a little honey and spirit of salt was admixed.

In the worst *ozæna's* an *errhine* was snuffed up the nostrils, prepared *ex aqua major. mell. chelid.*

chelid. oleo amyli, & tinct. aloë, in order to promote digestion or exfoliation.

The solution was not less beneficial in the most obstinate venereal *ophthalmies*; nevertheless venesections, revulsions, blisters, and searons, were not neglected, nor proper internals, as Nitre, &c.

A Collyrium also *ex aqua rosarum, nitro, camphora, & croco*, was used to the eyes; where, if the inflammation was not speedily stopped, the whole globe was consumed by a suppuration.

The *albugo, pannus*, opacity of the *cornea*, and cataract itself, were cured by the spirit, using at the same time some saponaceous opthalmic,—a little Mel Rosar. or, where the opacity was great, some Mercurius Dulcis mixed with sugar, and applied to the eye twice a day.

Fici and *condylomata* were cut off, or touched with a caustic, after which they never revived, if the spirit was regularly taken.

The inflammations in the *phymosis, paraphymosis*, and swelled *testis*, were allayed by bleeding, fomentations, cataplasms, &c. before the solution was exhibited: the same rule was observed in a *gonorrhœa*, in which also he recommends a large quantity of emollient liquors to be drank, as of the greatest importance; and when the spirit was given, the patient was purged occasionally, by which he tells us the *gonorrhœa* was sometimes cured, but confesses the

the *urethra* was frequently left with a gleet ; * for the cure of which he recommends corroborants, as *Cortex Peruvianus*, *Rheum tostum*, or *Essentia Pimpinellæ*, one spoonful of which was taken night and morning, in some aqueous vehicle, &c.

Venereal scabs and pustules are better known to practitioners by inspection than description ; these yielded to the solution, even if they covered the body like the leprosy ; the depuration of the skin was, however, greatly forwarded by the use of the warm bath, and the following liniment recommended by Baron Van Swieten.

℞ *Mercurii vivi* Unc. ij.

Aquæ font. Unc. iij.

Let these be boiled in a glazed vessel almost to dryness, or until it begins to emit red fumes, which must be prevented by mixing it immediately with *Sevum Porcini* lbijj. and kept for use. This was well rubbed in the skin on one part only at a time, and the patient purged more frequently, in order to prevent its salivating ; ʒss. *Ocul. Cancr.* and some grains of sulphur were of service in hastening the cure.

The solution cured the venereal gout ; at first indeed it aggravated the pain, but in a little time it became the best anodyne ; and

* This account seems to confirm my own observations, that the solution is by no means adapted to the cure of a *gonorrhœa*.

When

when the joints were rigid, they were relieved by the warm bath.

When the blood was affected, which was frequently the case, it was nevertheless cured by the solution, when continued a sufficient time.

No one ever lost his life by this remedy, or did it ever bring on any severe symptoms; on the contrary, it was efficacious in the worst cases, and taken with safety by women with child, and even in the month after delivery: but what need is there to say more in behalf of this medicine, the character of which is already established by the learned Doctors Haen and Storck, who have distinguished it by the appellation of the *Antivenereal Liquor*. *see error*

That it was so successful in this hospital, he attributes much to the skill of Antonius Rechtberger, one of the surgeons, who administered the topical remedies.

It now remains to recount the number of persons cured in this hospital by the Antivenereal Liquor, beginning from

May 1, 1754	————	413
1755	————	670
1756	————	653
1757	————	687
1758	————	732
1759	————	711
1760	————	546
1761	————	468
		————
		4880

This medicine succeeded with all, except those who would not submit to the rules prescribed; some of whom, convinced of their error, were afterwards cured by a repetition of the medicine. It induced spasms upon some women of relaxed and depraved habits; but that effect is also common to the Dulcis, or any other mercurial preparation. In such cases he had recourse to a decoction of Lignum Guaiacum, Bardana, &c. recommended by authors in the worst species of this disease.

All that I shall observe, in answer to this account, is, that other mercurial preparations have been as strongly recommended to the world, and all equally succeeded in the hands of a judicious practitioner.

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