

“His family physician attributing all these disorders to a state of plethora, caused blood to be drawn several times without benefit.

“In March, 1834, M. de B— engaged himself to a young lady, who lived about two leagues from his estate; and in order to visit her without neglecting the care of his property, he was obliged to make long and frequent journeys on horseback; shortly before his marriage these journeys became so frequent that he might be said to pass the greater part of his time on horseback. His constipation now increased to such a degree, that he passed forty days without fecal evacuation; during his efforts at stool he passed semen in large quantities, and in jets, although the penis remained flaccid. He had previously, several times, noticed the same occurrence, but as he attributed it to his long-continued continence, he paid little attention to the circumstance. His urine was constantly muddy; it was passed slowly and with difficulty, and threw down a large quantity of thick and flocculent deposit.

“M. de B— awaited the period of his marriage with a vague uneasiness, of which he could not imagine the cause; he was much attached to his betrothed, but nevertheless he experienced more embarrassment than pleasure in her society.

“I have already stated what occurred after his marriage. I should add, that having examined his genital organs, I found them, contrary to my expectations, of unusual development; the testicles were large and firm, but the scrotum was slightly relaxed. The patient experienced a strange tingling in the organs, and at times felt as if they were compressed by a band of iron. These sensations increased when near his wife, and the penis diminished in size and became retracted toward the pubes, in proportion as he endeavored to excite erection.

“The union of all these circumstances could not permit any doubt to remain on my mind as to the nature of his disease; it became evident that all idea of cerebral affection must be abandoned, and that the diurnal pollutions, with all the symptoms of which they were the cause, must be referred to the patient's constipation.

“The first indication to be fulfilled, therefore, was to relieve the constipation; indeed, I hoped this was all that would be necessary. The youth of the patient, the development of his genital organs, and the strength of his constitution induced me to suppose that his cure would be prompt and easy. Things did not, however, follow so simple a course.

“The next day the patient began to use ascending douches, and was put on a vegetable diet with iced milk.

“The first douches caused the evacuation of an immense quantity of fecal matter, in lumps as hard as bullets, and it was not until after the sixth douche that the feces were of normal consistence; I then caused the temperature of the water to be lowered to about 88° of Fahrenheit, and afterward to about 81°. The last few douches were given at about 68°. After the twelfth douche had been administered, they were omitted, the bowels having acted regularly every day, without the necessity for the slightest straining.

“By this time, the patient's countenance had lost its purple tint, and presented a more natural appearance; the stunning sensations, of which he had complained, diminished by degrees, and at length disappeared entirely; his legs regained their strength, and he was able to continue in a standing posture for a long time without fatigue, and to take long walks without inconvenience; his voice resumed its natural tone, his eye regained its expression, and all his motions acquired firmness.

“At the expiration of a fortnight, the spermatic discharges during defecation had

ceased entirely, but his urine still continued thick. His erections had already acquired sufficient energy to make him believe himself cured, but ejaculation took place almost instantaneously. The use of ice and cold lotions did not ameliorate his condition.

“Such was M. de B—'s state at the end of a month, when, in order to act directly on the orifices of the ejaculatory ducts, I determined to cauterize the prostatic portion of the urethra. As soon as the inflammation had subsided, his erections became more perfect and energetic, yet ejaculation still took place too rapidly. The period for using the mineral waters having arrived, I sent M. de B— to Aix, in Savoy, where I visited him shortly after. He had experienced very little benefit from the use of the waters, either externally or internally.

“I now prescribed douches, alternately very warm and very cold, on the perineum and loins, the spout being changed when the sensation, either of cold or heat, became very intense. The bath was ended after about twenty or twenty-five minutes, by the cold douche, and the patient's skin remained highly injected for some hours afterward.

“The effects of these douches were conclusive; after the first, the patient's erections acquired a degree of vigor and duration which reminded him of his early torments. He continued the use of the douches for some days after his re-establishment, and when he left Aix the functions of his genital organs were perfect. Ejaculation was a good deal protracted by the use of the douches.

“I have entered into a somewhat lengthy detail of this case, because the subject affects gravely the most serious interests of society, as well as the happiness and peace of families. Besides, I confess that I was much interested by the unhappy position of a young man whose misfortune was undeserved, and could not have been foreseen, as well as by that of his wife, a young woman scarcely of age, who was obliged to enter into the most unpleasant details.

“It is evident that in the case of M. de B—, the constipation was the cause of the involuntary seminal discharges. The patient had practiced masturbation, it is true, and nocturnal emissions followed; but he had continued the vice only three months, and his health, though disordered for a short time, was soon re-established by the use of violent exercise. M. de B— was even tormented during several years by erections, which must have been very energetic, if we may judge by the means he took to subdue them. From this time he had never committed any kind of excess, and he had never suffered from either blennorrhagia or syphilis. There is then no circumstance in the history of his life, except his constipation, which would account for the involuntary discharges.

“But to what is this constipation to be referred? After all I could learn from the patient concerning his mode of life, I could only refer it to his constant horse exercise. In fact, M. de B— sometimes passed whole days on horseback, either for the purpose of hunting, or of superintending the management of his property. Shortly before his marriage, his rides became more frequent and longer, and his bowels at this time did not act during forty days. The weakness of his legs, the stunning sensations, etc., increased in proportion as his costiveness became more confirmed.

“This case recalls to my mind the well-known observation of Hippocrates on the impotence of the Scythians, and I have no doubt that his opinion was founded on analogous facts. I shall treat this subject more fully in another place; but since at present I am considering the causes of spermatorrhœa which act on the seminal vesicles through the influence of the rectum, I report this striking case showing the effects of long-continued horse exercise,

"M. de B— was of a well-marked sanguineous temperament, and accustomed to nutritious food; he had a large chest, powerful muscles, and a highly injected countenance; it is therefore by no means extraordinary that he should have been bled frequently for the relief of the cerebral congestions to which he was subject. On the night of his marriage, the blood rushed to his head with greater force than ever, so that an attack of apoplexy was much feared; the weakness of the legs, the frequent falls, and the attacks of vertigo, were therefore afterward attributed to an advanced stage of disease of the brain. This was a very natural opinion, but it was an incorrect one; I doubted it from the commencement, although the patient was brought to me in consequence of a supposed cerebral affection. I formed a different impression, because I had previously seen many analogous cases. There exists in all these patients something peculiar in the expression of the eyes, in the position, in the voice, and in the general appearance—something of timidity and bashfulness—which I am unable to express, but which is instantly recognized by the experienced, although perhaps it is incapable of explanation. However this may be, the relation of the above case should draw attention to the subject.

"I admit that venesections *seemed* to be clearly indicated in the case of M. de B—, but the loss of blood never produced good effects, either immediate or remote; and by analyzing the case carefully, his attendants would have seen that under this treatment the attacks increased in frequency. But preconceptions throw a thick veil over the most acute perceptions.

"The ascending douches put an end to the constipation; but freedom of fecal evacuation did not suffice to cure the disease. The seminal discharges, during the passage of feces, diminished, indeed, or perhaps entirely ceased; but the patient's urine remained thick and muddy, and his erections were incomplete. The application of ice and of the nitrate of silver, and the use of sulphurous waters, were not sufficient to effect his cure; yet there could not have existed any organic change in his genital organs. We can therefore only attribute the continuance of the seminal discharge, during the emptying of the bladder, to relaxation of the ejaculatory canals, produced by their long habit of allowing the semen to escape in a passive manner, showing how necessary it is to put an end to the habit as early as possible."

It is obvious to my mind that, in this case, as in many others, the great cause of M. de B—'s troubles was his *enforced continence*. The constant fever of suppressed sexual excitement, and the engorged state of the spermatic vessels, could not fail to cause serious organic derangement.

The next case shows the effects of *worms* in the rectum, both in producing and keeping up the spermatorrhœa, and also in first leading to *masturbation*, in childhood.

"M. R—, a student of medicine, enjoyed good health in his childhood, but about the age of fifteen was tormented by frequent and prolonged erections. One evening, for the relief of the itching, of which the extremity of the penis was the seat, he rubbed the organ violently between his hands. This led to the establishment of masturbation as a habit, or rather as a passion, the patient practicing it sometimes as often as eight or ten times a day. His health by degrees became so altered that one of his friends suspected his practices, and told him the dangers of his situation. By degrees he corrected himself, though not entirely before he had attained his twentieth year. On his renouncing masturbation, nocturnal emissions supervened, and often occurred two or three times a night. They diminished after

a time, but without ceasing entirely, and seminal emissions during defecation and the emission of urine were added to them. Thus his health became daily more and more disordered for nine years, notwithstanding absolute continence, a severe regimen, and the use of sedatives, tonics, and anti-spasmodics. At length he grew incapable of any mental exertion. In 1837, he came to Montpellier, at the age of twenty-nine, in the following condition:—Extreme emaciation; face pale; appearance stupid and confused; intellect dull; reasoning powers much affected, the patient being incapable of connecting two ideas on the most simple topic of conversation; loss of memory; constant headache, referred to the forehead and temples, and increased by any mental excitement, being then accompanied by nervous tremors and an almost idiotic state; sleep broken and unrefreshing; constant sighing; frequent attacks of congestion in the head, especially at night; violent noise in the ears, resembling the sound of a waterfall; vertigo; stunning sensations, giving rise to a constant fear of apoplexy; timidity carried to a ridiculous extent; panics of fear even during the day; character gloomy, taciturn, restless, and irritable; horror of the least noise and of all society; irresistible restlessness; great weakness; abundant sweats after very slight exertion; almost constant coryza; frequent dry and hard cough; pains in the base of the chest, the region of the heart, and along the spinal column; appetite voracious; dragging at the pit of the stomach; difficult digestion, accompanied with the development of flatus; grinding of the teeth during sleep; burning at the point of the tongue; darting pains in the bowels, especially in the rectum; obstinate constipation, alternating with violent attacks of diarrhœa; stools containing much mucus, and sometimes streaked with blood; periodical pains at the margin of the anus, in the perineum, penis, and testicles; urine passed in large quantities, and very frequently, always throwing down a whitish, thick, and very abundant deposit; involuntary emissions during defecation, both when constipated and relaxed; frequent and prolonged erections by day as well as by night, with constant presence of erotic ideas.

"On sounding this patient, I found the urethra very sensitive, especially toward the neck of the bladder, and I consequently thought that the nocturnal and diurnal pollutions were kept up by a state of irritation arising from masturbation. I therefore proposed cauterization. This was performed on the following day, and produced the usual *immediate* effects, but its *curative* effects did not take place as I had anticipated. I then directed the patient to notice his feces, and a few days afterward he told me that he had observed numerous little worms, passed in his stools. I now ordered enemata of cold water, and salt and water, which, however, produced only a momentary effect, probably because the ascarides inhabited the upper part of the intestine. A few doses of calomel, however, caused them to disappear without returning; and from this moment the involuntary diurnal emissions ceased entirely, the nocturnal emissions became more and more rare, and the patient's re-establishment progressed very rapidly. M. R— returned to his studies with ardor, and long afterward all functions were perfectly well performed.

"It appears evident that the irritation caused by the ascarides in the rectum first led this patient to practice masturbation, and afterward kept up involuntary seminal discharges. I did not discover this at first, because the history of his case, sent me by the patient, was so long, and was characterized by such disorder and want of clearness, that I was unable to arrive at any satisfactory conclusions from such a chaos, his answers were still more vague and unconnected, so that my attention had been

chiefly attracted to the state of his intellect, and the abuses he had committed. But after seeing the little success of cauterization, and again reading his notes, I paid more attention to the circumstances attending the commencement of his practicing masturbation, and I noticed several symptoms to which I had not before attached importance, such as grinding of the teeth during sleep; burning pain in the point of the tongue; pain in the rectum, and at the margin of the anus; the stools always containing mucus, and sometimes being streaked with blood; and especially the frequency and duration of the erections, and the constant presence of erotic ideas."

I have met with many instances in which great irritation of the genitals was produced by worms, and I have no doubt but that the tendency to masturbation is often caused by them, *in both sexes*; a fact that parents should bear in mind.

That the tendency to spermatorrhœa is often *hereditary*, I have no doubt, and I have met with some remarkable proofs of it in the course of my practice; but as they are not of a nature to be readily understood by those not accustomed to observe them, it is not necessary to give the details. I have known many instances of brothers—in one case of *five*—all of whom suffered from excessive involuntary emissions, *at the same age*, and without being addicted to abuses of any kind.

Peculiar congenital predispositions often exist, particularly in those of a nervous character, though few practitioners are aware of their real extent. M. Lallemand gives some excellent illustrations of this kind of cases, and I can select many such from my own note-book. The following will, however, be sufficient:

"In general, such patients were of sickly constitution and more or less marked nervous temperament; they had been delicate from childhood, and subject to various spasmodic disorders. Some of them presented involuntary twitching of the muscles of the face, hesitation of the speech, etc.; their imagination was active, and their moral and physical sensibility very acute. They were very restless and bore contradiction, or mental excitement, badly.

"In childhood they presented local symptoms, which indicated peculiar susceptibility of the urinary organs, every impression of fear or anxiety showing itself in this direction. What would have produced shuddering or palpitation in other children, in them caused a secretion of clear watery urine, which they were obliged to discharge frequently; a sense of constriction of the hypogastrium, and a sense of titillation generally accompanied its discharge. This condition of the urinary organs continued more or less severe in all the cases until after puberty, when it became joined with other symptoms. One of these patients one day experienced at the age of sixteen a fit of irritability and impatience, which, however, he succeeded in repressing; and he then felt sudden and impetuous desire of micturition: whilst emptying his bladder he perceived a large quantity of pure semen discharged with the last drops of urine. This occurrence was the forerunner of nocturnal and diurnal pollutions, which at the age of twenty-seven, had entirely ruined his health. Another, at the moment of competition for a college prize, was unable to find an expression he wanted: at the same time he felt a want to make water, which he resisted by firmly crossing his legs; but his impatience increased and he shortly experienced an abundant emission, without either erection or pleasure. A third patient suffered in the same way under similar circumstances; he saw the moment approach for sending in his thesis; the more he endeavored to hurry, the less freely his expressions flowed; at length, on hearing the clock strike, he suffered from so great mental disorder that he nearly fainted; at this moment emission took place. A fourth having mounted

or a high gutter of a house to take some sparrows' nests, looked down into the court below, and was suddenly seized with such terror that he fainted; on recovering and escaping from his dangerous situation he found that he had had an abundant seminal emission. The same circumstance occurred to a fifth, who, in descending a ladder missed his footing and fell. Another patient told me that if he looked down from a height, or only fancied himself on the brink of a precipice, he felt a sense of contraction in the genital organs, which passed rapidly to the base of the penis, and ended by causing emission. The motion of a swing produced the same effects in a seventh.

"Almost all these excitable persons were exposed to erection, and even to pollutions, whenever they rode on horseback.

"Although all these involuntary discharges were caused by extraordinary circumstances, I should not have paid much attention to them if they had not been followed by nocturnal and diurnal pollutions, which the most trifling circumstance rendered very profuse. The disease, however, did not always put on a serious aspect immediately after these singular accidents; very often, indeed, it only injured the patient's health long afterward; but as its gravity could not be explained by any *occasional* cause, I feel myself compelled to admit the existence of a congenital increased nervous susceptibility of the genito-urinary organs. Everything indicates, in fact, that the organs of these patients were rather excitable than weak and relaxed; and this condition was congenital, because manifested from the earliest infancy. This excessive sensibility of the genital organs is, however, not always preceded by a similar condition of the urinary apparatus.

"In all these cases, tonics and excitants always produced bad effects; proving that the genital organs were not suffering from atony or weakness."

#### SYMPTOMS BY WHICH THE SPERMATORRHOEA MAY BE DETECTED.

In addition to the effects already enumerated, there are several other symptoms of spermatorrhœa that are very useful to note, for the use both of the physician and patient. Some of them are such as are observed in various diseases, but others are peculiar to this affection, and enable us to ascertain its existence when positive evidence is not to be obtained.

Many persons suppose that in *all* cases the involuntary discharge of semen is indicative of disease, and it alarms them very much. In many cases, however, the emissions occur in those that are continent, from excess of semen, and may then be beneficial rather than hurtful. This is often the case when they are in great quantity, though this peculiarity is apt to alarm, from the idea that the injury is proportionate to the quantity lost. M. Lallemand remarks that:

"The most abundant nocturnal pollutions are far from being always the most hurtful. When they arise from true spermatic plethora, they often relieve erotic excitement, with its accompanying agitation, anxiety, uneasiness, and indefinable trouble in all the functions. They are followed by a general feeling of comfort; the head becomes clearer, the ideas more rapid, and the motions more nimble; there is more inclination to amusement, and to every kind of occupation. I admit that nocturnal pollutions do not often produce such good effects, but then they are not often the result of spermatic plethora; they may, too, easily lose their character, so that habit alone tends to make them more and more frequent. In the greater number of cases, however, these evacuations are of very little importance.

"But this state of excitement is too violent to last long: by degrees the organs become fatigued. Deprived of their natural functions, and consequently being unstrengthened by regular exercise, they may at last fall into a state of atony, or the seminal vesicles may preserve the habit of contracting, under the influence of slight or indirect excitement. The evacuations now produce effects quite opposite to those experienced in the beginning. There are on waking, feelings of discontent, idleness, weight in the head, disorder in the ideas, etc., but this condition passes off in the course of the day, and the patient is quite well on the following morning, if no further emission take place. After a time, these effects become more serious and lasting, and two or three days are required to remove them completely. There is, however, no disease as yet, because the economy is not permanently disordered, but there is a degree of instability in the patient's health, a valetudinary condition, the progress of which it is necessary to arrest."

Lascivious dreams are usually considered only as causes of nocturnal emissions, but they are in fact produced, in most instances, by the excitement existing primarily in the genital organs, and are therefore symptoms of excessive vigor, in the first stages, rather than of weakness, or disease. So long as they only present pleasant images, without any disagreeable sensations, and are not followed by lassitude and weakness in the morning, they are not indicative of anything serious. But when these dreams are filled with filthy and disgusting ideas, horrible sensations, and night-mare, during which the discharge occurs without any pleasurable feeling, and is followed by distress next morning, they are sure signs of disease. As a general rule, the danger commences when the pleasurable accompaniments of the dream begin to fail, and when the discharge occurs without any sensations at all, or with disagreeable ones, it is truly a bad symptom.

Diurnal, or daily losses of semen are in general worse symptoms than nightly ones, and they are especially bad if they occur spontaneously or from mere exercise. When they occur during the movement of the bowels, or while urinating, though they are usually indicative of a diseased state of the parts, yet they may be made much worse by constipation, gravel, and other affections of the neighboring organs, a fact that should be borne in mind when estimating their value. From not having these circumstances explained to them many persons lose semen in this way, perhaps for years, without knowing anything about it. When their attention is directed to the occurrence, however, it will generally be easy for them to detect the escape, whether it occur with the urine or after defecation. When with the *urine* there is a sensation as if something *heavier* than usual is passing, which creates a slight pricking or tingling sensation, and the urine looks thick and cloudy, with globules floating in it like half-dissolved gum-arabic. If the escape occurs during the movement of the bowels, a similar sensation is felt, and the end of the penis will be found covered with a glutinous fluid, which sometimes drops, but rarely runs away. More frequently the flow does not take place till the movement of the bowels is over, and perhaps not till the patient is dressing himself; it then comes suddenly, the whole quantity being discharged at once. This is preceded by a kind of shock, felt in the perineum and neck of the bladder, and sometimes with slight erections, accompanied by pleasure. In some cases a discharge occurs in this way of simple mucus, mixed with the fluids of the prostate and vesicles, and this should be suspected when losses of this kind are complained of, till a proper examination is made. These mucous discharges, however, never consist of more than a single drop or two at most, and

are quite thin and transparent, while the seminal emission is both thicker and more opaque, and in greater quantity. If the patient empties his bladder before going to stool, the appearance will be more obvious, and if he observes a thick gummy discharge, during or after the passage of the bowels, there can be no mistake as to its being real semen.

It is more difficult to ascertain the presence of the semen when it escapes in the urine, because it is so diluted, and undergoes several changes. I shall therefore be particular to give all the indications that can be relied upon in such cases. In the first place, it must be recollected that the semen never escapes during the first flow of the urine, but always with the last few drops, or even after the bladder is fully emptied. There is in general the peculiar sensation already described, with slight pleasurable feeling, and a few spasmodic jerks of the neck of the bladder, by which the expulsion of the last drops is effected. This is quite sufficient to distinguish spermatorrhoea from gleet, or a discharge from urethral inflammation, as in such cases the mucus always escapes with the first flow of urine, and is not accompanied by any of the sensations above described. The appearance of the urine also, if carefully noted, will nearly always be sufficient to indicate the nature of the affection. The presence of the semen is nearly always indicated by the gum-like globules mentioned above, and also by numerous little irregularly-formed granules, somewhat like bran, which settle to the bottom of the vessel. These granules are soft, and fall down before the urine cools, without ever adhering to the sides of the vessel, which distinguishes them from gravel. In short, no other discharge furnishes anything like these granules, so that their presence is a sure proof of involuntary emission.

Sometimes patients have peculiar sensations in other parts of the body whenever a pollution occurs; thus some experience a pain in the nipple or back of the neck, some a cold chill and shivering, while others feel a burning heat round the anus, and after these sensations they always observe the flocculent deposit in the urine.

As the disease progresses the bran-like granules become fewer in number, and smaller, and at last almost totally disappear, so that the existence of the spermatorrhoea has to be ascertained by other symptoms. The urine is still clouded with the gum-like deposit, and there settles to the bottom a number of little brilliant *points*, something similar to what is seen in newly-boiled *mush*. Like the granules, they are soft, and do not adhere to the vessel. These different appearances result from the altered condition of the semen, which, as the disease progresses, gradually loses its usual character, and eventually becomes totally changed.

I have known patients, much engaged in study, in whom involuntary emissions occurred in a very singular manner. They would experience, while sitting perfectly still, a sensation in the perineum or at the root of the penis, as if the parts were suddenly drawn together and pinched. So distinct and strong is this felt sometimes that the person immediately starts and compresses the part in his hands. The sensation lasts but a short time, however, and nothing further takes place, if he remains still, but immediately he begins to exercise, or the next time he urinates, a quantity of semen escapes. This shows that the emission really occurs when the sensation is felt, but there is no action of the muscles to expel it till the parts are in some way made to act for other purposes.

#### IMPOTENCE FROM INVOLUNTARY EMISSION.

Whenever impotence is not obviously owing to any of the causes enumerated in

another part of this work, it is nearly always the result of pollution, and perhaps, as a general rule, it arises from this oftener than from anything else. There are two modes in which it may be brought about by this cause: first, by the destruction of the powers of the genital organs, from general weakness; and, secondly, from a peculiar change which it leads to in the semen. For erection to take place, there is always needed the presence of healthy semen in the seminal vesicles, and if this does not exist, of course no erection can occur, and impotence necessarily follows. Any cause, therefore, which impairs the vitality and health of the semen must lead to impotence, and nothing does this more surely than long-continued involuntary emission.

The mode in which involuntary emission, or spermatorrhœa, from any cause, affects the semen appears to be this: It has already been explained how the seminal animalcules are produced from certain little grains or vesicles found first in the semen of the testicles, which break open and allow the animalcules to escape.

Now these little beings are the most essential part of the seminal fluid, and without them it can neither act properly on the male organs, nor impregnate the female ovum. If, therefore, their development is prevented, impotence and sterility must result, and this is what really follows from spermatorrhœa. It is necessary for the semen to remain a certain time in the vas deferens, and vesicles, after it leaves the testicles, so that the granules may burst, and the zoosperms become perfect, and if it is expelled from the body too soon, this has not time to occur. The precise time requisite for the semen to remain in the body, after being formed by the testes, is not known, and it probably varies, both with different individuals, and also under different circumstances in the same person. For a time, the organs can, if healthy, perfect the semen rapidly, so that a man can expel it very frequently, and yet have it healthy, but if this excess is continued too long, the power of the parts gradually weakens, and the semen is at length discharged imperfect. This is precisely what follows eventually, both from licentious excess and from involuntary emissions; the semen has not been allowed to remain in the organs sufficiently long, and when it is expelled no animalcules are found in it, but only the granules from which they would have been developed had it remained. These are what are seen in the urine, in cases of long-continued involuntary emission, like little shining points, and probably also the bran-like grains, observed at an earlier period, are the granules in an undeveloped state. In many cases of long-continued spermatorrhœa, both from excess and involuntary, the change is still more decided, so that the semen is merely like thin gum-water, and utterly incapable either of stimulating erection or of impregnating. This is the true explanation why those who are exhausted by excesses, and those who have long suffered from involuntary emissions, become impotent and sterile, and it shows us what is really needed to effect a cure. If we can arrest the discharge, and restore a certain degree of tone and vigor to the organs, the semen may again be retained sufficiently long, and may become perfect, so that the power of erection and impregnating may be again enjoyed. The chances of this are lessened, however, in proportion to the time the flow has continued, and at a certain stage all our efforts are fruitless. I have, however, known some remarkable instances of restoration, even under the most unpromising circumstances. In one instance, a man aged forty-seven came to consult me, who had been perfectly impotent for *nine years*, during which he had not experienced the slightest manifestation of sexual power, nor scarcely ever been free from a discharge, which, however, was almost like water. According to his own statement, this unfortunate

condition was owing to former licentiousness, his indulgence having been excessive till the wretched state of his general health, and finally his complete loss of power, compelled him to abstain. I was obliged to say to him that the chances of restoration were so small as scarcely to be worth calculating upon, and that I should not be justified in giving him any hopes at all. He was so exceedingly anxious, however, and pressed me so earnestly to take him under my charge, that I did so, though with considerable reluctance, and with great misgiving. Fortunately, he was a man of wealth and leisure, and disposed to follow out implicitly all the directions given him. The particular plan of treatment that was followed is not necessary to be described here, as I shall speak upon it generally further on, but the result is stated as an instance of what can be sometimes accomplished, even under very unpromising circumstances. I had this patient under my constant care for fifteen months, at the end of which time his sexual powers were sufficiently restored to allow of his *marrying*, which he did, and became a father. It took three months to stop the constant emission, and after that six months more elapsed before animalcules began to appear in the semen, after which his improvement was very decided, though in all probability his powers will never be equal to what they were before, nor will they endure so long as they otherwise would have done.

In cases where impotence is but partial, or has existed only for a short time, proper treatment can nearly always effect a decided improvement. Every moment, however, is precious in such cases, and no man should feel indifferent even to a slight falling off in his sexual vigor, *if it continues*, and if he desires to preserve his powers. A short delay may lose all chance of restoration; and it should be recollected also that, in most instances, the derangements which cause impotence have often serious effects, and generally so impair the health as to endanger life.

I am almost daily seeing instances of weakened power from spermatorrhœa, and though I am compelled to admit that in some of them relief is hopeless, yet in many the result of the treatment is most satisfactory, and highly encouraging to those similarly affected. There is occasionally one result of spermatorrhœa different from any of those above described, and which is sometimes of considerable importance, both socially and as a point in medical jurisprudence. Some patients, of vigorous habits of body, will continue to secrete the semen, and retain their powers of association even after the disease has existed for a considerable time. They may, however, be *sterile*, though not altogether impotent, and the fault of barrenness is ascribed to the female, because no defect exists, so far as can be seen, in the husband. These men are able to associate, as before remarked, and to emit semen, but on examining that fluid, none of the animalcules are found perfect; they being either all dead or half-formed. The semen, in short, is perfect enough to stimulate the male organs to a certain extent, but not perfect enough to impregnate the female ovum, and I have no doubt but that many cases of supposed barrenness in females are owing merely to a defect of this kind in their husbands. I have known men affected in this way, who were remarkably active and vigorous, and in whom no imperfection whatever could be suspected till pointed out by the microscope. M. Lallemand was the first author who alluded to this important subject, and his remarks are well worth reading:

*“Infecundity.*—Impotence is an absolute cause of infecundity, because it prevents the conditions necessary to fecundation from taking place; but although the act of coitus may be accomplished, it does not follow that the person should always be able to perpetuate his species. Stricture of the urethra may prove an obstacle to the

discharge of seminal fluid, or the fluid may be directed toward the bladder, or the parietes of the urethra, by deviation of the orifices of the ejaculatory ducts. The secretion may be altered in its nature; it may only contain imperfect spermatozoa, etc. A man may, therefore, be unfruitful without being impotent. On the other hand, I have met with many patients suffering from diurnal pollutions, who had children exactly resembling them, even during the duration of their disease. Indeed, I have seen several cases in which the disposition to involuntary discharges was hereditary, and they affected both father and son. The disease is, however, essentially irregular in its progress; it may continue long without doing serious injury to the health; long remissions may be experienced, or even a perfect cessation of the complaint for a longer or shorter time. We may easily conceive, therefore, that in the first degree, or during one of the periods of remission, fecundation may take place. When the disease is further advanced, however, many causes concur to render coitus unfruitful. Ejaculation is weak and precipitate, so that the seminal fluid cannot be thrown into the cavity of the uterus; it is not sufficient in order to fecundate, simply to spread the fluid over the vagina; it must be projected with sufficient force to pass through the orifice of the uterine neck. Besides, in these cases the erections, even when they permit sexual intercourse, are incomplete and of very short duration; emission takes place without energy and very soon, so that during such rapid acts the uterus and Fallopian tubes have not sufficient time to experience the excitement necessary to carry the semen to its destination, even when it passes the neck of the uterus. The semen itself also undergoes great changes, to which perhaps the loss of the fecundating power is chiefly attributable. Microscopic researches have elucidated this formerly obscure subject; I have discovered, for instance, that the spermatozoa undergo changes similar to those of the fluid which serves as their vehicle; these changes are exceedingly important, and are owing to defective formation. Spermatozoa may be met with in a less thick and less opaque fluid than natural; for they are not produced by the same parts, or in the same manner; but when the secretion is perfectly thin and watery, the functions are so seriously affected that the animalcules are altered; they are less developed, less opaque, and less active than natural; indeed, they are so transparent that peculiar precautions are necessary in order to make sure of seeing them; their motions are weak, slow, and cease very soon; and they rapidly undergo decomposition. All these characteristics show how much their texture is relaxed, and how imperfectly they are organized.

"It is evident that the least arrest of development in the spermatozoa must prove an insurmountable obstacle to fecundation, even if the only function of the animalcules be to carry the *liquor seminis* to the ovum. When, however, their imperfect development only arises from a too rapid formation, it may soon be obviated. It suffices that the involuntary discharges should cease for a few days only, in consequence of some accidental cause, or of one of the spontaneous changes of this extraordinary disease, in order for the desires to become more lively, the erections more energetic and prolonged, and for the function to be accomplished in a natural manner. Fecundation is therefore possible, as I have previously stated, during the whole duration of one of these intermissions.

"This is not the case when the spermatozoa are malformed, rudimentary, more or less deprived of tail, etc.; for these changes only take place when there is a serious alteration in the structure of the testicles. I have taken every opportunity of dissecting the testicles altered in these cases, and I have always found the secreting

structures paler, drier and denser than natural, and the cellular tissue more resisting, and with difficulty allowing the secreting ducts to be separated one from another. Sometimes half or two-thirds of the testicle was transformed into a fibrous or fibro-cartilaginous tissue, mixed in a few cases with tuberculous matter. It is the same also in the epididymis, where I have even seen traces of ossific deposit in the midst of cartilaginous indurations. These changes, caused by previous inflammation, perfectly explain why the development of the spermatozoa can no longer proceed normally.

"Although, in such cases, the secretion of semen may be more or less diminished, pollutions may still be present if the seminal vesicles have shared the inflammation by which the testicles have been affected, as happens in most cases of orchitis arising from blennorrhagia. I have at present a patient who presents a remarkable example of both these effects arising from this cause: he is now forty-one years of age, and had blennorrhagia, followed by inflammation of both testicles, at twenty-five. Soon after his recovery, he married, but has never had children, although the act has been performed regularly, if not frequently. He became subject to nocturnal and sometimes diurnal pollutions, which increased by degrees. His health became disordered, but coitus was still possible. The semen passed, and even emitted its characteristic odor, but never showed under the microscope other than very small and brilliant globules, without any appearance of tail, but easily distinguishable from globules of mucus, the dimensions of which are five or six times larger. The epididymis of both sides is voluminous and irregular. One testicle is adherent to the skin of the scrotum, and the other appears smaller than natural.

"Malformation of the spermatozoa, therefore, arises from deep-seated changes in the tissues of the testicles, changes which do not permit the animalcules to assume their normal form, and, therefore, render infecundity permanent.

"To sum up then. Involuntary seminal discharges may oppose fecundation previously to actually producing impotence, by diminishing the energy of all the phenomena that concur to the accomplishment of the act, and by preventing the complete development of the spermatozoa, as well as the elaboration of the fluid which acts as the vehicle for them.

"These conditions may be rapidly altered by the simple diminution of the involuntary discharges, and fecundation may again become possible.

"This cannot be the case when infecundity depends on malformation of the spermatozoa—such malformation arising from permanent alteration in the organs that supply them."

*Microscopic Examination of the Semen.*—This is a subject of great interest to every one, and of immense importance to the physician and patient. The proper mode of pursuing such examinations has been so well explained by M. Lallemand that I cannot do better than copy his remarks, to which I will add here that with good instruments there is no difficulty whatever in the process.

"*Microscopic Examination.*—Since the discovery of the spermatozoa, their presence in the seminal fluid has attracted the attention of all who have sought means of distinguishing it from other fluids. Microscopic examination of the spermatozoa, however, not only requires an excellent instrument, but certain precautions which may be dispensed with in the investigation of coarser objects. As the spermatic animalcules can be seen only by means of transmitted light, it is necessary that the glass on which the fluid to be examined is placed should be of uniform thickness,