the full control of the lower nerve centers, these act in accordance with the idea presented by the brain, and the sexual orgasm occurs. Such an event happening once in two or three weeks does no harm. But if by the reading of obscene books, looking at lascivious pictures, or what is perhaps still worse, immodest conduct or conversation with individuals of the other sex, the frequency of the emissions is materially increased, then the case is different, for not only may there then be general and nervous debility, and other evidences of bad health, but impotence more or less complete may be the result. If, in addition, masturbation be performed with all its accompaniments of lascivious images, nocturnal emissions are quite certain to ensue and to pass beyond a healthy standard as to frequency.

Sleeping on the back, by allowing the blood to settle in the spinal cord and medulla oblongata, so as to produce a state of passive congestion, and also by allowing these parts to become over-heated increases the reflex excitability of the generative organs, and hence predisposes to the occurrence of nocturnal emissions.

As stated, emissions during sleep are usually preceded or accompanied by lascivious dreams, but this is not always the case, as they sometimes occur without any such excitation. This, however, only happens in cases of advanced sexual debility, or in those instances in which the desire of the individual is extinguished.

In regard to *diurnal emissions*, physicians hear much from patients of their passing their semen when straining at stool and of its escaping with the urine. Though perhaps such cases are possible, they are certainly exceedingly rare. In my opinion not one case in a hundred of alleged escape of semen during defecation or urination is in reality an instance of such an event. In states of great constipation, in which the fecal mass is large and hard, a little prostatic fluid or urethral mucus may be squeezed out during severe straining, but the emptying of the vesiculæ seminales by such a cause is the rarest of occurrences, and when it does happen it is no great matter. In the whole course of my experience I have seen but one case in which there was an escape of semen during defecation, and in that there was some approach to an orgasm. The patient, a middle-aged man, had practised masturbation since childhood, had in adult years been excessively addicted to women, and had, moreover, further reduced his strength by an inordinate indulgence in the use of alcoholic liquors. In this instance, when defecation took place, great muscular efforts were requisite in order to effect the process, and almost invariably an imperfect orgasm with an emission of semen took place.

In regard to the passage of semen with the urine, an event which is supposed by some to occur in consequence of the secretion flowing back into the bladder and then being discharged during micturition, I am quite sure that this never happens in the way mentioned. It is not uncommon to find spermatozoa in the

urine first discharged after sexual intercourse, for the emission accompanying the orgasm always results in a little of the semen remaining in the urethra, to be washed out with the next passage of urine. But the notion of the semen, gradually and without orgasm, flowing back into the bladder and then being evacuated is the veriest nonsense in the world.

Among points interesting in this connection, Sir James Paget * discusses the one now under notice, in the following words.

"As to semen passing with the urine, I am nearly certain that it never does so unless when an emission has lately taken place, or where there has been disease of a seminal vesicle. In the former case, some semen remaining in the walls of the urethra, or possibly having passed into the bladder, is washed out with the next stream of urine, and may be found in it with the microscope. I once examined, for many days in succession, the urine of a patient who was persuaded that he passed semen with it, and semen could always be found when he had had a nocturnal emission, but never on any other occasion. A former colleague of mine assured me that he had often observed the same thing after copulation, and this I believe is the whole truth concerning semen passing with the urine; whatever may chance to be left in the urethra after an emission is washed out. But that which frightens the ignorant

* "Clinical Lectures and Essays" (Sexual Hypochondriasis). New York, 1875, p. 271.

and the hypochondriacal is not even this: it is mucus of the urinary passages either quite healthy or in some trivial manner changed. This form of what is called spermatorrhœa, therefore, should be treated by instruction, which the merely ignorant will receive, and the hypochondriacal very likely will not.

"Not much unlike this misunderstanding about vesical mucus is another in which some people, chiefly middle-aged and elderly, with diminishing sexual powers, make themselves miserable. They find in their urine little flakes or threads of floating mucus, which they say are always washed out of the urethra at the beginning of the urine-stream, especially in the morning. They watch these with the greatest anxiety, and send them to you on bits of paper or of glass, begging you to examine them very carefully. I believe that they are bits of prostatic mucus secreted in the night and washed out with the morning urine. But whatever they may be they are not of the least importance. You may find them passed by men who neither know nor care anything about them and whom they never harm, and even hypochondriacs go on month after month passing them and yet suffering nothing but their mental misery."

Cases in which this delusion is entertained are common enough in the practice of every physician, and the subjects of it are encouraged to believe in its truth by the various quacks who pretend to cure them, while at the same time exaggerating the importance of every

little out-of-the-way circumstance that may exist. They know well that their chief way to illicit gains is by frightening the patient in making him believe that he is on the high road to impotence, and softening of the brain, and that they alone recognize the danger he is in. In this way the patient is brought to a condition of what may be called "false impotence." He is afraid to make the attempt at sexual intercourse lest in failing he should have his worst fears realized.

Again, the patient supposes that he is subject to emissions of semen without the orgasm, and solely as the result of venereal excitement. It is true that in most persons, there is, under the condition in question. a slight glairy exudation from the meatus, but this is simply mucus secreted by the lining membrane, and its excretion is nothing more than a physiological phenomenon without the least pathological importance. In regard to this subject Sir James Paget says:*

"Another subject of gloom and alarm to some is, that during sexual excitement, and, as they suppose, worse still, when they wake in the morning, they find a clear colorless fluid flowing from the urethra, or easily pressed from it. Here, again, the complaint is of that which is natural, and it will be quite as just if directed against tears during grief. The urethra naturally secretes mucus during sexual excitement; it secretes more or less in different persons, but some, I believe, in all: and as for the morning secretion, it is due either

* Op. cit., p. 273.

to some sexual excitement during sleep, forgotten before waking, or to the general condition of turgescence or erection of the sexual organs which in most healthy persons exists during sleep or some part of it. In no case is this clear urethral mucus a sign or consequence of disease, unless, indeed, where an excess of it is a residue of gonorrhœa. It is, I think, most abundant and most quickly formed in those whose sexual organs are more irritable than potent, but this is the worst that can be said of it; and even in these it is not the sexual organs, but some part of the nervous system, the brain or the spinal marrow, that is in the wrong. In no case does the secretion deserve to be called or treated as a disease."

These cases are almost as bad as those in which the subjects think they are becoming impotent because they have discovered that one testicle hangs lower than the other.

But there are involuntary diurnal emissions in which the semen is discharged with an orgasm in consequence of friction of the penis against the clothing, or as the result of lascivious thoughts or acts. But these conditions show loss of power with increase of irritability, and are usually the results of great excesses. The individual in whom they occur is generally impotent to the physiological stimulus to sexual intercourse.

In the first-named class of cases the patient may have emissions while walking, or especially while riding horseback. The emission is accompanied with an im-

perfect orgasm, and the erection is usually very feeble. Indeed, in most cases there is nothing that can with propriety be called an erection, only a slight turgescence of the penis being produced.

In the second the like series of events takes place in consequence of some impression of a voluptuous character being made upon the mind, not as in the cases described in the previous chapter, by his concurrence and action, but against his inclination. Indeed, in some instances the slightest reference to sexual matters in the presence of an individual of the class referred to, is sufficient to cause an emission. In one case that came under my observation, the patient, a man about forty years of age, who had exhausted his powers by great excesses, and had also brought the generative system to a state of great erethism, the sight of a woman getting into an omnibus and thus showing an inch or two of her ankles, or of another with bare neck and arms, was sufficient to cause an emission without erection and with scarcely the semblance of an orgasm.

Both these causes may lead to impotence, though often they are accompaniments of this state, and like it, are evidences of the weak condition of the generative system.

There are other factors besides excess which are capable of producing such a loss of virile power as to lessen or altogether abolish the capacity for erection, and consequently to render the individual impotent. Among these are various conditions and diseases both

of a general and local character, of the generative system specially, or of other parts of the body.

Obesity, due, as it often is, to defects in the processes of assimilation and elimination, may be accompanied by a feeble condition of the generative system. I have seen this fact markedly shown in the cases of two gentlemen, each of whom, though not exceeding five feet eight inches in height, weighed three hundred, and two hundred and eighty pounds respectively. There had never been excess in either case, both were married, and both, with the inception of the obese state, began to fail in the power of erection, till eventually sexual intercourse was, from this condition, rendered impossible. It will be understood here, that the difficulty was not a mechanical one of a protuberant abdomen—that question will be considered in the ensuing chapter—but one which related entirely to the power of erection.

Eventually both these gentlemen were cured, and the result established the correctness of the opinion given, that the impotence was the result of a constitutional cause. By enjoining a diet from which sugar, starch and fat were rigidly excluded, the weight was reduced sixty pounds in one case and forty seven in the other, not only with the effect of restoring the virile power, but with greatly improved health in other respects.

Emaciation, when extreme, is, even more than obesity, due to derangement of the nutritive system, and like it, may be productive of impotence. This condition is

still more liable to result when, in addition to general emaciation, the testicles and penis become the subjects of atrophy. Then the loss of virile power becomes a permanent condition, to remain during the life of the individual. Fortunately for the patient, there is, in these cases, a loss of desire as well as of power, so that in general the state is not one in which there are endless chagrins and disappointments. Exception, however, must be made in the cases of some married men who are unable from the first to consummate the marriage, or whose wives are *exigéant* of their uxorial rights. Thus, I was consulted in the case of a Hebrew gentleman in good general health, although somewhat emaciated, and who found it impossible to escape from a matrimonial engagement into which, while in the possession of full virile power, he had entered. Trusting that his condition might not be as bad as it seemed, and indeed ignorant of the extent to which it reached, he married and came to New York with his wife on his wedding tour. The morning after his arrival he came to see me in a state of great mental distress and with the information that he was absolutely incapable of doing the duty of a husband. Upon examination I found the testicles in a state of extreme atrophy, being soft and not larger or thicker than a twenty-five cent piece, and the penis cold, thin and extremely flaccid. The general emaciation was not extreme, and while it was evident that the absorption of the tissues of the genital organs had been more rapid than that of other parts of the body, I could

discover no nervous or other affection of the parts to account for the state in which they were. I gave an unfavorable prognosis, and shortly afterwards the marriage was annulled in one of the Courts of Pennsylvania, from which State the couple came.

In another case, the patient, a gentleman who had been married several years and had had three children by his wife, became the subject of phthisis and of rapidly advancing emaciation. With the decline in his health there was also a rapid loss of sexual power, due, as I found on examination, to atrophy of the testicles. These organs were soft, flabby and not more than one half the natural size when the patient first came under my observation. The penis was also greatly reduced in size. In this instance there were extensive demands made on the patient's generative power, with which he was both indisposed and unable, even with the best intentions in the world, to comply. The prognosis was bad, and the patient died some two years afterward without the least recuperation of the procreative faculty.

Local emaciation of the generative organs may exist without the participation of the system at large, and is then due to some cause cutting off the nervous influence to the parts or depriving them of their due supply of blood. Certain brain affections, as, for instance, cerebral hæmorrhage, are sometimes followed by atrophy of the testicles. This result has been asserted to be particularly apt to ensue from injury or disease of the cere-

bellum. Gall* observed several cases of the kind, and numerous other instances are referred to by Combe,† and other writers. Larrey,‡ in an elaborate paper, sustains Gall's theory, and adduces several cases in its support. In injury or disease of this part of the encephalic mass he asserts that, though in the beginning there may be an exaggeration of the sexual feeling and power, yet, as the morbid process advances, there will be a state of decided asthenia of the genital organs, combined with atrophy of the testicle of the side corresponding to that of the diseased lobe of the cerebellum, or of both if the whole of this part of the cerebellum be affected. In support of his remarks Larrey cites the case of a young soldier who, in Egypt, was struck on the back of the head by a large splinter of wood. Inflammation, supposed to be located in the cerebellum, supervened. He eventually so far recovered as to be sent back to France. Several years elapsed before he again came under Larrey's notice. It was then found that his genital organs were reduced

* "Cerebello vulnerato partes genitales sympathiam trahuntur. Gall, Vindobonnæ Austriacorum, duos milites, e vulnerato occipite, impotentes fieri observavit, quorum unus, duobus post annis, veneris appetentiam et copulandi potestatem iterum recepit, puerosque genuit. Formey, Berolinensis narravit nobis historiam cujusdam qui, occipite vulnerato, primum priapismo, dein impotentia vexatus est. Veruntamen sex post mensibus virilitatatem recuperavit." "Phrenology; or, the Doctrine of the Mental Phenomena." By J. G. Spurzheim. Boston, 1833, vol. 1, p. 150.

† A "System of Phrenology." Boston, 1834, p. 110.

‡ "Observations on Wounds." Translated from the French by E. F. Rivinus, M.D., Phila., 1832, p. 199.

in size to those of an infant a few months old. The power of erection was lost, and sexual desire had disappeared.

In another case a soldier was struck by the ball of a blunderbus, which, grazing the occipital protuberance, tore away the extensor muscles of the head in its passage from one side to the other. The patient immediately felt a violent pain in the occiput, and a sense of weight in the whole head, together with numbness of the lower extremities. His vision and hearing were so much impaired that he could hardly discern any large objects or understand the most piercing words. His testicles became reduced and wasted away, and his penis diminished in the same proportion and lost the power of erection.

The third case was that of a man who had received a sabre-cut through the occipital bone and dura mater, so that the right lobe of the cerebellum could be readily seen and touched. When the finger was pressed upon it ever so gently, vertigo, syncope and convulsions were induced, but no pain was experienced. After the first few days the patient lost the faculties of vision and hearing on the right, or opposite, side. At the same time there were violent pains along the course of the spine, and a kind of formication in the testicles, the size of which rapidly diminished, so that in less than a fortnight they were reduced to the size of small beans. The sexual passion became utterly extinguished.

In the fourth case the patient was struck on the back

of the head; among other consequences the right testicle became atrophied and the power of erection was lost.

In the fifth case, in consequence of a blow on the head with a piece of wood, an abscess of the right lobe of the cerebellum was produced, of which, in about three months, the patient died. The post-mortem examination showed entire disorganization of the right lobe and marked atrophy of the testicle of the opposite side.

In the sixth case, disease of the cerebellum was the consequence of erysipelas. The patient lived two months. Subsequently the post-mortem examination revealed the existence of an abscess, which had entirely taken the place of the left lobe of the cerebellum. The scrotum and penis were so much reduced from their original size as to be in the second stage of atrophy.

Three remarkable instances, showing the connection between cerebellar lesions and atrophy of the genital organs have been reported by Dr. John D. Fisher,* of Boston.

The first was that of a man aged forty-five, who was seen soon after his death, which took place from pneumonia. The penis was small; the glans had evidently seldom, if ever, been uncovered. When exposed it was small, pale and pointed; all the parts of the organ resembled those of a boy not yet arrived at the age of

* "Contributions Illustrative of the Functions of the Cerebellum." *American Journal of the Medical Sciences*, Feb., 1839.

puberty. The scrotum was soft and flabby, and was empty. No testicles were anywhere to be found.

The head was large, measuring 22 inches in circumference. The brain was healthy and very large, weighing 51½ ounces. The relative proportion of the cerebellum to the cerebrum was much reduced, for while the latter weighed 47 ounces, the former weighed but 4½ ounces. According to Meckel and others the average weight of the cerebrum and cerebellum united is 48 ounces, and the weight of the cerebellum to that of the cerebrum is as 1 to 7 or as 1 to 8. In this case the cerebellum measured in its transverse diameter 2½ inches, and in thickness 1½ inches; antero-posteriorly 2½ and perpendicularly 2½ inches. It was therefore one-third less in size and weight than is ordinarily the case in an adult male, and was the exact weight of that of a female child six years old, whose body was examined at the same time.

The history of the patient is very interesting. The deficiency of testicles was discovered by Dr. Warren. The voice was like that of a woman; he had no beard; he never exhibited any amorous propensities, or desire for female society; as his mother expressed it, he was a virgin in feeling and conduct to the day of his death.

The second case was that of a man aged forty-one, who, while a passenger in a railway train, was injured by a collision, so that the back part of his neck was struck violently against the window frame of the car. The blow was so severe that he remained for some