

tained that in the normal condition of flaccidity the glans is about one fourth as sensitive to touch as the end of the index finger. On the latter, the two points of the æsthesiometer can be distinguished at the distance of $\frac{1}{12}$ of an inch. On the glans, they cannot be discriminated at a less distance than $\frac{4}{12}$ of an inch. During erection the sensibility is exalted to such a degree that the two points can be distinguished readily at the distance of $\frac{2}{12}$ of an inch. I presume that during the orgasm the sensibility is still further increased.

Now, in the cases under consideration, in which friction of the glans against the walls of the vagina does not suffice to induce the orgasm, I have found that the points of the æsthesiometer require to be separated to the extent of $\frac{7}{12}$ of an inch before they can be distinguished as two distinct impressions in the flaccid state of the penis, and that during erection there is not a greater advance towards increased sensibility than such as is shown by the points being distinguished, though in some cases not very clearly, at $\frac{5}{12}$ of an inch apart.

Moreover, in the healthy condition of the flaccid penis, it is very easy for differences of temperature of five or six degrees to be distinguished, and in the state of erection half this difference can be readily determined.

In the anæsthetic condition, however, of the flaccid penis, a glass cylinder of water at 98° could not, when brought in contact with the glans, be distinguished from one containing water at 108° . During erection

one of 98° could not be recognized as different in temperature from one of 105° . At 106° a difference could be detected.

The condition in question is, therefore, I think, certainly one of anæsthesia.

Electricity in any one of its forms generally suffices for the cure of this derangement of the normal state. Franklinic electricity is to be preferred; but, if it is not available, either of the other varieties may be employed, and in the manner recommended in the previous chapter.

Hyperæsthesia of the glans may be so intense as to cause the emission and orgasm to take place before entrance is effected. In such cases it is, of course, a true cause of impotence. Usually this state is induced by excesses either of masturbation or of intercourse, and the glans is thrown into such a condition of irritability that the reflex actions necessary to the orgasm take place on the slightest provocation. This derangement, as well as that of anæsthesia, has already been considered under another head in the previous chapter. It only requires notice here, not as a cause of lack of power, as it is in those instances in which friction against the clothing, even without sexual excitement, is sufficient to produce an emission with scarcely any other sign of an orgasm, but as a cause of impotence when attempts are made at sexual intercourse and the emission takes place externally to the vagina. Of course, pathologically, the two conditions are nearly identical, that now under notice being only an early stage of the other.

For its treatment I have found that the bromides taken internally, and lotions of a solution of tannic acid in water, in the proportion of ten grains to the ounce, constituted the best method of treatment, abstinence from sexual intercourse for several months being a necessary adjunct. The effect of the tannic acid is to decrease the sensibility of the terminal extremities of the nerves in the glans, and thus to render them less apt to be excited by slight impressions. Sometimes the affection is difficult of cure, and if not taken in time is exceedingly prone to pass into that more advanced stage in which frictions without venereal excitement are sufficient to cause an emission.

In addition to the vices of conformation, and diseases to which attention has already been directed, the penis may be the seat of various affections which prevent intromission, and hence are causes of impotence. Such cases are, however, rare, and for the reason that before that point is reached the patient generally consults a surgeon, who performs whatever operation may be necessary.

THE TESTICLES.—Diseases of the testicles are more apt to lead to sterility than to impotence. Often, however, both conditions exist. In so far as they produce impotence with or without sterility, they require notice in this connection.

Absence of the Testicles.—Complete absence of the testicles as a congenital condition probably does not exist, though numerous cases of the kind were re-

ported by the older authors. Thus Cabrol* describes the case of a young man hanged for robbery at Montpellier, and whose autopsy he conducted. "Among other things," he says, "the most curious was, that nowhere were there any testicles, either externally or internally, although we found his vesiculæ seminales as full of semen as those of any man I had ever anatomized. The fact astonished all who assisted in the examination."

It is now the generally received opinion that when the testicles are not found in the scrotum they are retained either in the inguinal canals or somewhere within the abdominal cavity. In such instances it is usually the case that they are atrophied and that the sexual power of the individual is very materially lessened. In those cases in which only one testicle has failed to descend into the scrotum the ability to have intercourse is not usually markedly diminished, but when both have been retained it is almost invariably the case that the individual has neither desire nor power, neither orgasm nor emission of the semen. In fact, he assumes in many respects the mental and physical attributes of the female sex. These phenomena are due, not to the original absence of the organs, but to the fact that owing to the abnormal position they occupy, they have not undergone the development which occurs at puberty, and that consequently they fail to secrete semen. Besides this, the organs suffer

* Quoted by Roubaud. Op. cit. p. 543.

a positive atrophy, as indeed does every organ, the development of which may be from any cause arrested.

But if the individual should, after puberty, or even shortly before that period, be deprived of his testicles, though of course sterility is the consequence, it is not always the result that absolute impotence supervenes. As we have seen in the immediately foregoing chapter, desire may exist. It is equally a fact that in certain rare cases erections and the ability of intromission, with the emission of a fluid—composed of the prostatic secretion that from Cowper's glands, urethral mucus, etc.—may take place in individuals who have been deprived of their testicles. In some instances there is a mild kind of orgasm, accompanied by a certain degree of voluptuous feeling. Thus, Sir Astley Cooper * removed both testicles from a man, and the patient four days after had an emission of a fluid from the meatus resembling the seminal liquid.

“For nearly the first twelve months he stated that he had emissions *in coitu*, or that he had the sensations of emission. That then he had erections and coitus at distant intervals but without the sensation of emission. After two years he had erections very rarely and very imperfectly, and they generally ceased immediately upon the attempt at coitus. Ten years after the operation he said he had during the past year been only once connected.

“Twenty-eight years after the operation he stated

* “Diseases of the Testes,” London.

that for years he had seldom any erection and then that it was imperfect, that he had no emissions from the first year of the operation; that he had for many years only a few times attempted coitus, but unsuccessfully; that he had once or twice dreams of desire and a sensation of emission, but without the slightest appearance of it. The penis was shrivelled and wasted. He was in the habit of shaving once a week and sometimes twice. His voice, naturally very feeble, remained as at the time of the operation.”

Such cases are, however, only exceptional, and though in the East, chief eunuchs may have harems and may experience the shadow of desire, it is not at all probable that they are actuated by any much stronger feeling than the wish to make a display of their wealth.

Arrest of the Development of the Testicles.—After their entrance into the scrotum the testicles may at any period of infantile life—that is, before puberty—cease to grow, or at least they do not grow in size or in the tendency to assume their proper function as rapidly as should be the case. As a rule such a state, if profound, passes to complete impotence, but there are cases in which, notwithstanding the non-development of the organs, sexual intercourse has been begun, and under its influence the organs have grown until they have almost reached the normal size. Thus Wilson * relates the case of a gentleman twenty-six years of age who applied to him for advice relative to the advisability

* Lectures on the Urinary and Genital Organs, London, p. 424.

of his getting married. On examination it was discovered that his penis and testicles were not larger than those of a boy of eight years old. He had never experienced sexual desires till he became acquainted with the lady whom he desired to marry. Then he had had erections and nocturnal emissions. He married and had several children, and two years afterward it was found that his testicles were nearly as large as those of an adult man.

Such cases are, however, quite exceptional. I have never seen one of the kind. On the other hand, I have frequently been consulted by men who were suffering from an arrest of development of the testicles, but not to an extreme degree, supervening, in fact, at about the age of puberty, in whom there was some sexual power and which was capable of being still further developed by proper therapeutical measures. Doubtless such cases, if left to themselves, especially with the habits of masturbation or other sexual excess into which the individuals have fallen, would terminate in active atrophy and complete loss of power.

But, by improving the habits, administering cod liver oil and the hypophosphites or phosphorus, together with a full and nutritious diet, and, above all, by the use of electricity, in the form of galvanism to the testicles, after the manner described, the relief of the patient is not a matter of much difficulty. But it is essential to this result that there should still be some desire or some power. If both be utterly exting-

uished, there is nothing to be gained by subjecting the patient to treatment, as the case is certainly hopeless.

Atrophy of the testicles is, when established, a cause of impotence, for which there is no successful treatment known. In the beginning, if the cause can be ascertained and removed, there is some hope of arresting the degenerative process.

The average weight of the adult human testicles is about five drachms, but it is difficult, if not impossible, to determine the weight, during life, to even an approximation. A testicle, however, weighing less than three drachms, would certainly be in a state of atrophy; more is to be determined by the size and the consistency.

The most common cause of atrophy of the testicle is orchitis, and especially, according to my experience, the disease supervening on parotitis. The inflammation of the testicle accompanying gonorrhœa is not usually situated in the body of the gland, and hence is not so apt to be followed by atrophy. Blows and injuries of various kinds are, however, comparatively prolific causes of atrophy from the inflammation which they produce.

Injuries or diseases of the brain or spinal cord are sometimes followed by atrophy of the testicles. Many cases in support of these facts are given by authors and several have come under my own observation. In one instance a man was struck on the back of the head with a cart-rung and although the blow inflicted no very

severe injury on the part, atrophy of the testicles supervened. In this case the degeneration went on so rapidly that at the end of two months there was nothing in the scrotum but two masses of soft amorphous substance.

In another case a man fell from a perpendicular bank over fifteen feet high, and struck his head violently against the earth below. He was taken up senseless but soon recovered from the immediate effects of the injury. Six months afterward he came under my observation and I found that both testicles had almost entirely disappeared.

In the previous chapter, I have adduced several instances of injury of the cerebellum causing atrophy of the testicles and impotence. In certain *injuries of the spinal cord* atrophy of the testicles is liable to supervene. Cases have been reported in which blows on the nape of the neck and on the lumbar region of the spine have led to this result. Two cases of the kind came under my notice several years ago, in one of which a dragoon fell from a stable loft and struck the lower part of the spine against a stall-partition. Paraplegia was the immediate result, and in a few days the testicles began to atrophy. In the course of less than three weeks there were no vestiges of them to be perceived.

In the other case, a man was shot in a street fight, the ball grazing the spinous process of the fourth lumbar vertebra, but not inflicting any damage to the bone beyond

taking off about half an inch of its end. No other injury resulted except atrophy of the testicles which began soon afterward, and in four or five months had become complete.

Diseases of the spinal cord are sometimes followed or accompanied by atrophy of the testicles, but as the subject has already been referred to in the preceding chapter, it is not necessary to go over the matter again, further than to say that in some cases of organic diseases of the spinal cord, those in which there is great reflex excitability, as in antero-lateral sclerosis, and in some instances of congestion, I have seen patients suffering from atrophy of the testicles in a marked degree and yet exhibiting very decided sexual desire and power of intromission. In one case of the kind—lateral sclerosis—the testicles were not to be distinguished, but the patient was subject to the most ungovernable desires, with erections, which repeated acts of masturbation and of intercourse failed to relieve. The condition was quieted by the administration of several doses of the bromide of sodium of one hundred grains each.

The other diseases of the testes do not require special consideration. If they are of the nature of malignant disease they require the removal of the affected organ, and even if they are not, the treatment comes under the head of general surgery. The like is true of the annexæ of the testicles.

Bodily Deformity or Peculiarity. The body may be so deformed as to render intercourse in the ordinary man-

ner impracticable, owing to the impossibility of bringing the penis into close relations with the vagina. Certain diseases of the spinal cord may cause such extensive contractions of the lower extremities as to produce this result. Thus, in a case of spinal meningitis of a chronic character under my charge, the right leg was flexed to its utmost extent on the thigh, and the thigh on the pelvis in such a manner as to cross the lower part of the abdomen, while the left leg and left thigh were similarly contracted, though not to as great a degree. The consequence was that it was impossible to approach the female according to the natural method, or indeed after any position so far as I could determine. The patient was troubled with intense sexual desire and he had frequent emissions, but intercourse was impossible.

In another case the patient, a young man, married about two years, became the subject of lateral spinal sclerosis, and among the symptoms exhibited were violent tonic contractions of the lower extremities. These contractions would last sometimes for two weeks at a time and during their existence sexual intercourse was impossible. They were not accompanied with pain, and as his desires were strong and he was attached to his wife, he bitterly lamented his condition. While in the condition referred to, the lower extremities were drawn up strongly against the abdomen, and at the same time adducted to the utmost extent. Many attempts were made at intercourse, but the situation

was such that it was quite impossible for the penis to enter the vagina. At first there were frequent intermissions during which the parts were straightened out, but eventually they become permanently contracted and pressed forcibly against the abdomen, rendering sexual intercourse a physical impossibility.

Tumors of the neighboring parts might act in a similar manner, as would also extensive elephantiasis of the scrotum.

Excessive corpulency, as it affects desire and power, has already been considered, but it still remains for me to notice it so far as it presents a physical impediment to sexual intercourse. It is obvious that with men of very enormous abdomens intercourse is impossible. In speaking of this subject Roubaud* says: "The sense of propriety and of morality seems to revolt against medical prescriptions on the subject, and in justification I must support myself by the authority of Lisfranc. 'We can,' he says, 'to make things easy for married people, permit the positions which are most agreeable. Religion does not interpose when the object in view is the multiplication of the species. It is more contrary to the spirit of the dogmas of religion to enjoy sterile pleasures than to seek to render them fruitful by means which nature and the instinct of all animals indicates. I am not to be understood as recommending to married people those postures invented

* Op. cit. 205.