But when I performed my first experiments, it was a generally received doctrine that mercury should be applied to *all* cases of syphilis, an opinion which I do not personally partake of. For those physicians who still conceive that mercury is the only treatment applicable to syphilis, it is evident that they must first have a positive and incontrovertible test of the nature of all primary ulcers, and the only test of that character is, I do not hesitate to say, inoculation.

OBSERVATIONS ON SPERMATORRHOEA;

OR

THE INVOLUNTARY DISCHARGE OF THE SEMINAL FLUID.

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(For the *Provincial Medical Journal*.)

That important and most afflicting class of affections of the sexual organs, which is characterised by the frequent involuntary discharge of the seminal fluid, although sufficiently familiar to the majority of practitioners engaged in the large towns of this and other countries, has not met with such public notice on their parts as it should seem to demand. For this reason, and to the great detriment of society, the treatment of the effects of sexual abuse or excess, exclusive of syphilitic and blenorrhagic affections, is too generally consigned to a section of that horde of unprincipled pretenders, which the government of this country, to its shame, by tolerating continues to patronise, and from whose obscene advertisements it condescends to derive a portion of its revenue. It thus happens that a subject, fraught with the deepest interest both as regards the individual and society at large, is rarely in all its extensive details submitted to honest and scientific investigation. It is to be hoped, however, that as the eye, the ear, the teeth, have one by one been rescued from the unclean grasp of quackery, so in its turn this most wretched of all the curses which man's imprudence entails upon him, may be thought worthy the attention of the educated practitioner. He only who has been able to restore the despairing and unmanned being, whose very life is a burden to him, to the full possession of physical and mental vigor, can form an estimate of the lasting gratitude with which a medical man may sometimes be regarded by his patient; and truly, whether gratitude alone content him, or whether his soul long for more substantial recompense, he will never regret the having paid attention to this neglected subject.

If a person after the age of puberty, and more especially if he have previously indulged in regular sexual intercourse, be from any cause induced to lead a life of perfect continence, he will experience involuntary emissions during sleep in greater or less frequency. The secretion of semen being continuous, and not, as is by some believed, incidental upon erotic excitement, nature adopts this mode of disembarassing the system of a product which is not got rid of in sexual intercourse. Emissions, therefore, occurring under such circumstances in robust individuals, so far from being injurious, must be regarded as a salutary provision.

These nocturnal emissions, however, though beneficial, or at least harmless, at first, may, if the conti-

nence be prolonged, be, by an acquired habitude of the parts concerned, repeated to an extent which becomes positively injurious, and, as in the case of other habitual discharges, then produce inconveniences proportionate to their frequency, and the original constitution of the individual.

But the cases in which spermatorrhœa is consequent upon prolonged continence are comparatively rare. The involuntary emissions which occur in such abundance as to constitute a really morbid phenomenon, are usually to be traced to one or other of the causes hereafter to be mentioned.

Symptoms.—From the almost insurmountable disinclination to speak of their ailments, which is generally observed in the unhappy subjects of this complaint, it is difficult to procure a complete account of its origin. The history of a case of seminal pollution will, however, be found to be somewhat as follows:—After a greater or less amount of abuse of the genital organs, either natural or unnatural, the individual makes the discovery that he has become infested with seminal emissions during sleep. The emissions at first are accompanied by erection, but soon occur with diminished rigidity of the penis. If he at this time indulge in sexual intercourse, he experiences more than usual difficulty in consummating the act, he is frequently disappointed altogether, or, if not, erection is incomplete, and ejaculation more than ordinarily precipitate, and, as some patients have informed me, even painful, rather than accompanied by the usual sensations.

As the disease advances, the nocturnal emissions increase in frequency and abundance, at length occurring without either erection or pleasurable sensation; in fact, the patient is often only made conscious of them by the sense of feebleness upon waking, and by the marks upon his linen. In sexual intercourse ejaculation becomes more and more hurried, till at length mere contact with, or even sight of, the female will induce it, and complete impotence is thus established. The pernicious effects of these discharges upon the genital economy is soon evidenced. The mind becomes enfeebled and incapable of protracted attention, the memory fallacious and uncertain, and the patient feels that he is no longer fitted for his usual avocations. His disposition undergoes an equal change; he becomes morose and suspicious, fond of solitude, lachrymose upon trivial occasions, and exhibits those apparently causeless contrarieties of temper which are commonly received as evidences of hypochondriasis or eccentricity. Cerebral and thoracic symptoms—as giddiness, noises in the ears, palpitation, and cough—present themselves in greater or less intensity; the body gradually emaciates, especially about the lower extremities; the aspect becomes dejected; the patient seldom raises his eyes to the person he addresses, as if conscious that the expression of his countenance would reveal his wretched condition; digestion is impaired, and accompanied by pain and flatulence; the bowels are almost invariably costive—indeed, I know of no other disease, short of mechanical obstruction, in which they so obstinately resist the most powerful cathartics. That this state of the bowels is intimately connected with the emissions is shown by the fact that, upon the suspension of the latter, the bowels at once resume

their normal action. A case has lately come under my notice in which the bowels resisted two minim doses of croton oil, but acted spontaneously and regularly after the cure of the emissions by cauterisation of the urethra. The urine is passed frequently—three or four times, perhaps, during the night; the aspect of the genitals is generally, though not always, enfeebled. I have seen the most complete impotence coexist with genital organs of large size and vigorous appearance, but usually the penis is flaccid and without elasticity, and the scrotum pendulous and destitute of rugæ.

After the lapse of a certain time, if the disease progresses, the nocturnal emissions cease, and the patient is buoyed up with the hope that his ailments are removed. His increasing feebleness, however, soon proves that his hopes are without foundation. If, at this time, the patient's attention is directed to it, it will be found that an alteration has taken place in the character of his urine. It has become turbid, and nauseous to the smell. The turbidity is not, as in chronic affections of the bladder, persistent throughout the entire act of micturition, but appears chiefly towards the end, the urine being passed clear at the commencement. In other cases the seminal fluid is not emitted till the bladder is emptied, when a glutinous fluid is observed to accompany the last few drops of urine. The evacuation of the bowels is accompanied by the same discharge, so that, in fact, there is a daily draining away of the seminal secretion.

The case is now complete, and in that condition which, until Lallemand directed our attention to it, was utterly misunderstood. The medical attendant being misled by the fact of the absence of nocturnal pollution, was invariably in such instances occupied by those more prominent features of the case, which he considered as cerebral, gastric, or cardiac disease, accordingly as one or other organ happened to take the lead in the symptomatology.

This is doubtless the description of an extreme case. The majority present themselves, while the emissions are nocturnal, before, in fact, the disease has assumed its worst aspect; but it is of importance to be aware that the semen may pass away with the urine, and that it is not to be concluded in a suspicious case that spermatorrhœa does not exist, because a nocturnal emission has not occurred for a long time. The tendency of every case of morbid nocturnal pollution, if unchecked, is to become diurnal; the nocturnal emissions cease for the plain reason that the semen is removed continuously in the evacuation of the bladder and rectum.

Pathology—Morbid Anatomy.—We shall now proceed to notice the pathological appearances which have been observed in fatal cases of spermatorrhœa. When it is considered how great is the difficulty of recognising seminal pollutions after they have become diurnal, as is generally, if not invariably the case, before they induce the death of the patient, and also how numerous are the instances among fatal cases in which the causes of the more prominent symptoms referable to the head or abdominal viscera are all that are looked for, the real nature of the disease having been entirely overlooked, we shall not be surprised that few records are to be found of the essential anatomy of spermatorrhœa. The doctrine

most in vogue concerning the pathology of the affection is that it depends upon an atonic condition of the seminal apparatus, and the treatment has, therefore, consisted of attempts to strengthen the system by local and general tonics and stimulants. The frequent failure, however, of the means calculated to effect this end, and the not uncommon aggravation of the mischief under the use of iron and similar remedies, must convince us that in many cases the pathology is misunderstood. On this point, as well as in the treatment of the complaint, we are much indebted to Lallemand.* The morbid anatomy, as given by him, displays the following lesions:—

1. In the seminal ducts.—Dilatation of the orifices, with erosion or ulceration; the ducts themselves dilated, and, as it were, dissected out by suppuration of the prostate; in some cases they have been found to be cartilaginous or even ossified.

2. Vesiculæ seminales.—In some cases filled with pus, in others with tubercular matter—mixed with ill elaborated semen; their lining membrane has been found dark, ulcerated, or sloughy.

3. Vasa deferentia.—These vessels have exhibited tortuosity and irregular dilatation into pouches and intervening structures.

4. Testicles.—These organs are usually soft and white, and more or less diminished in size.

From a consideration of these changes, taken in connection with the symptoms, it is clear that the proximate cause of the disease is chronic inflammation, or, at least, irritation of the whole track of the seminal apparatus, but more especially of that part of it situated near the prostatic portion of the urethra. Had we not direct proof of this in the ulceration, &c., of the parts, the analogy of the same state of other organs would be sufficient to direct us to a correct opinion. The effect of chronic inflammation of mucous tissues is to excite in them a mixed state of functional debility and irritability, or increased sensibility to ordinary stimuli. We see this in the stomach and bowels, but more frequently in the bladder, either of which organs, in a state of chronic inflammation, become impatient of and reject a small quantity of their contents, of the presence of which, in their ordinary healthy condition, they would not be sensible. Precisely the same train of circumstances is observed in that condition of the prostatic portion of the urethra and the neighbouring parts, upon which the disease in question depends. The parts concerned in ejaculation are morbidly irritable; the vesiculæ seminales contract upon the smallest quantity of semen, and are induced to the discharge of it upon the slightest irritation; and thus follows, in the first instance, precipitate ejaculation in coitus, and eventually pollutions, with their invariable concomitant, a greater or less degree of impotence. I think, from these circumstances, it is fair to conclude, with Lallemand, that spermatorrhœa has, in the majority of cases, for its essential lesion chronic inflammation of the organs concerned in formation, conveyance, and expulsion of the seminal fluid.

There is, however, a form of the complaint which is produced solely by debility of the parts. This form is generally to be traced to congenital causes, and comes on, in many cases, without the least suspicion

* *Des Pertes Seminales Involontaires.* Paris, 1839.

of excess or abuse on the part of the patient. I shall hereafter speak of the characters by which this form is to be recognised. The treatment is comparatively simple.

Causes.—It has been the custom with most writers, from the time of Hippocrates downwards, to attribute seminal pollutions in all cases to previous abuse of the sexual functions. More recent investigations have determined that, although such indulgence is the more common cause, there are other circumstances capable of producing the disease, independently of any blame on the part of the patient.

It is well known that some individuals support with impunity a degree of sexual irregularity, which inevitably plunges another into the miserable condition in question. We must, therefore, admit, in the case of spermatorrhœa as well as in other diseases, the existence of predisposition. This predisposition is to be found in a congenitally feeble state of genital organs, rendering them early susceptible of injury from over excitement. Lallemand, who has paid considerable attention to this branch of the subject, remarks, that sexual feebleness is indicated by congenital phymosis, varicocele, and incontinence of urine. Of the first, phymosis, he has given several cases in which the disease was established without either abuse or excess of the sexual power. Incontinence of urine during childhood, according to the same author, is of the worst augury for the subsequent vigor of the genital organs, especially when it persists during the day, and continues until puberty. In the greater number of patients of this class, whose cases are detailed by him, nocturnal emissions occurred from the very commencement of puberty, and without any appreciable exciting cause; moreover, the slightest circumstances sufficed to invest them with the character of great severity, and they were speedily replaced by the most obstinate diurnal losses.

The exciting causes of spermatorrhœa are now known to be far more numerous than was formerly supposed. The most common cause is, doubtless, the exaggerated excitement of the organs, either in a natural or unnatural manner, but more especially the latter. The next in importance is gonorrhœal inflammation of the urethra. The disease may likewise be induced by affections of the rectum, the presence of sebaceous matter under the prepuce, and perhaps by continence. I shall notice each of these causes separately.

The cases in which spermatorrhœa is induced by venereal excesses solely I believe to be rare. The organs will sustain a great amount of natural excitement without permanent injury. Where such instances do occur, it has, according to my experience, been in the cases of young married men. In those individuals who have indulged in promiscuous intercourse to an unusual extent, there are generally the concomitant circumstances of intemperance, late hours, gonorrhœal affections, and other incidents in the life of a debauchee, by which it is rendered difficult to determine to what degree the mischief is to be ascribed to the sexual excess. But in the unnatural abuse of the genital organs we have the most common cause of the disease, and one which there can be no difficulty in allowing. This cause existed in the great majority of the cases reported by Lallemand, either

alone or combined with others; and in twenty-four cases out of thirty-three treated by Mr. Phillips,* it was plainly avowed. So common do I believe the vice of masturbation to be in the present day, that I do not hesitate to accuse every case of seminal pollution of addiction to the practice.

Blenorrhagic affections are the next most frequent exciting causes of spermatorrhœa. We should be led to anticipate the effect of urethral inflammations in the production of the malady from the close anatomical connection between the urinary and spermatic apparatus. We find accordingly that gonorrhœa, and its consequences, stricture, enlarged prostate, &c., are frequent precursors of the disease. Lallemand has particularly noticed the great effect of stricture of the urethra in inducing seminal discharges. He expresses himself thus:—"Depuis lors j'ai eu de nombreuses occasions de me convaincre que les pollutions diurnes étaient encore plus fréquentes, à la suite des retrecissemens de l'urètre, que je ne l'avais pensé moi-même. Dans bien des nécroses j'ai rencontré à la suite des retrecissemens anciens, les vésicules seminales, les canaux deferens, les testicules, et même leurs enveloppes aussi malades que la vessie, le ureteres et les reins."

Pollutions are likewise attributed to causes having their origin in the rectum, as constipation and the presence of ascarides. In the former case it is probable that the effect has been often mistaken for the cause, since, as has already been remarked, an obstinate state of the bowels is a very constant symptom of the disease in question. It may, however, be readily supposed that if the vesiculæ seminales be already in an irritable condition, the passage of hardened fæces may induce their contraction, or expel their contents by simple compression. Lallemand believes that hæmorrhoids, fissure of the anus, and stricture of the rectum produce seminal emissions—namely, by inducing constipation. It appears to me, however, much more likely that the chronic inflammation which always exists in those instances has extended by continuity of structure to the seminal apparatus, as is the case in inflammatory affections of the urethra. Be this as it may, the presence of ascarides in the rectum appears to have a direct influence in producing and maintaining seminal emissions, as in many cases the expulsion of the worms is the only thing necessary to effect a cure of the disease. Every one who has seen a moderate share of the diseases of children must be aware of the influence exercised over the genital organs even in them, by the presence of the worms in the rectum. Frequent erection of the penis, even in very young children, so often co-exists with these animals, as to be considered in the relation of cause and effect by mothers and nurses. It is not surprising, therefore, that an agent so powerful before puberty, should after that period be productive of the worst effects. There is one peculiarity about the seminal emissions arising from this cause, which deserves to be noticed, and which may even be considered diagnostic of its operation. It is the obstinate character of the erections which accompany the pollutions, and which even persist for some time after the occurrence of the ejaculation. This is not observed

* Observations on Seminal and other Discharges from the Urethra, by B. Phillips, F.R.S., Med. Gazette, May, 1843.

in pollutions from other causes; on the contrary, the vigor of erection diminishes *pari passu* with the severity of the complaint, and eventually disappears altogether.

Among the occasional causes of this complaint may be mentioned the presence of sebaceous matter between the glands and prepuce, and absolute continence. The operation of the sebaceous matter is probably indirect. By keeping up a constant irritation of the part, it leads in those who have not been forewarned of the danger to the practice of Onanism, to which in reality the malady is to be attributed.

Absolute and prolonged continence is supposed by Lallemand to be sooner or later followed by spermatorrhœa and impotence, in all cases; and he gives numerous consultations by Romanist clergymen in confirmation of his opinion. He states that in these cases the nocturnal emissions, which in the first instance relieve the system of the seminal secretion, become by a species of habit frequently repeated, and eventually are replaced by diurnal losses. It appears to me that Lallemand, in the ardor of his investigations into a malady for the elucidation of which he has done so much, has been guilty of unconscious exaggeration in attributing the actual, or, as it more frequently is, the imagined, impotence of persons who have long led a chaste life, to the presence of diurnal seminal discharges. My experience leads me to the conclusion that "impuissance" of such individuals is due to a want of muscular power—a kind of semiparalysis, in fact, of the erector muscles—rather than to the absence of seminal fluid. The genital organs, as may naturally be suspected, like other muscular organs, deteriorate in power from disuse; and as the deltoid, if it were to remain perfectly inactive for a given time, would shrink in volume and diminish in power, so will also the erector penis and the other muscles necessary to keep the organ in a state of rigidity. Actual experience, moreover, will convince us that such is the fact. Every one must be aware how imperfect are the first acts of intercourse, even if there be no mental disquietude in the case, where access to the other sex has been long suspended, and how the perfection of the act is advanced by its repetition.

The *modus operandi* of these different causes is next to be considered. It is scarcely necessary to point out in what way excessive coitus and masturbation induce chronic inflammation of the spermatic apparatus; suffice it to say that all organs in which mucous membrane is largely distributed, if frequently stimulated, are liable to a condition of chronic hyperæmia. The effect of blenorrhagic affections is still more obvious. The whole urethra is, in them, more or less in a state of inflammation, which, when long continued or frequently repeated, leaves the orifices and canals of the excretory ducts in the condition which we have seen to belong to the disease in question.

Phymosis acts by producing external inflammation of the glans, which is propagated up the canal of the urethra. The presence of sebaceous matter operates in the same way, or by inducing the habit of masturbation. The diseases of the rectum, which are occasional causes of emissions, I believe to operate

through the extension of the inflammation, by contiguity of structure, and not, as Lallemand imagines, by inducing constipation.

[To be continued.]

CASE
OF
SEVERE FRACTURE OF THE RIBS,
WITH
EXTENSIVE EMPHYSEMA.

By GEORGE NORMAN, Esq.,
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[Read at a Meeting of the Bath and Bristol Branch of
the Provincial Medical and Surgical Association.]

I was induced to read the following case of severe fracture of the ribs, and of extensive emphysema, which occurred under my care at the Bath United Hospital, at the meeting of the Bath and Bristol Branch of the Provincial Medical and Surgical Association, on the 28th of September, because a practice was pursued which, although recommended many years ago by Mr. John Bell, and before by Mr. Hewson, surgical authors have not spoken decidedly of since, nor has the practice, so far as I know, been generally resorted to.

John Mills, aged forty-five, a carter, was brought into the hospital on the 26th of April last, about ten in the forenoon, having received a severe injury of the chest. He stated to Mr. Cannon, the house-surgeon, who saw him on his admission, that, whilst adjusting the harness, the horse he was driving with a cart took fright, and started away; that, in endeavouring to stop him, he was forced between a wall and one of the shafts of the cart, and the end of the shaft was pressed forcibly between his back bone and his left shoulder. As soon as he was extricated from this position he was brought to the hospital.

Mr. Cannon found, on examination, a large emphysematous tumor over the fifth, sixth, and seventh ribs, on the left side, between the posterior costa of the scapula and the vertebræ, which rose and fell alternately at each inspiration and expiration. There was also emphysema over the whole of the left side as low as the os ileum. He found that the ribs were broken and depressed, so that his finger could be pressed into the cavity of the chest, but there was no external wound. The man's breathing was hurried, and very laborious; his pulse very small and weak, under 60. The man, after trying every position, requested to be placed on his face, in which position he said that he felt less distress in breathing.

About twelve o'clock I first saw him; he was then lying on his face, and his body somewhat raised on his arms. He was breathing with the utmost difficulty, his pulse very weak, and his extremities cold; both sides of the chest expanded in breathing, but the left less than the right. Considering that the difficulty of breathing arose in a great measure because the air which escaped from the wounded lung distended the pleura, and impeded the action of the lung of the opposite side, I made an incision through the integuments, over the fractured ribs, through the intercostal muscles and the pleura; a considerable quantity of air escaped, and the emphysema began to subside.