enumerating all the possible causes of azoöspermia, three may be especially designated:

1. Obliteration of both epididymes or both vasa deferentia by (gonorrheal) inflammation.

2. Debilitating diseases and, above all, alcoholism. Simmonds ¹ estimates that 61% of alcoholics are sterile.

3. Inflammation of the prostate or vesicles. If the inflammation is severe the spermatozoa may be killed *in transitu*; but only a mild catarrh is required so to alter the quality of these secretions as to deprive them of the property of nourishing the spermatozoa.

Aspermatism, absence of ejaculation, is another less frequent form of sterility. It may be idiopathic, associated with anesthesia of the prostatic urethra, and due to the loss of some link in the nervous chain connecting ejaculation and sexual intercourse. More frequently it is due to operations upon the bladder and prostate that obliterate the seminal ducts. Such cases are not often encountered nowadays, but in former times, perineal lithotomy and Lallemand's porte-caustique made many a man sterile. Grimaux de Caux remarked of the latter that it made more eunuchs than did the demands of all the harems of the East.

Treatment.—Sterility from obstruction is incurable. Sterility from inflammation or from systemic disease is usually as curable as its cause.

SELF-ABUSE

Self-abuse is the production upon one's self of the venereal orgasm. The term masturbation signifies that an orgasm is produced by means of friction with the hand. Masturbation is not a malady. It does not necessarily produce disease unless carried to excess. Its practice is not confined to man. Monkeys are often masturbators; bears have the same habit; goats, making use of the mouth, indulge in it; turkeys sometimes practise it. In the human being it is practised by both sexes at all ages, females being much less addicted to it than males. The majority of women have very little passion, and suffer the first approaches of a lover or husband largely as a matter of complaisance. Undoubtedly there are numerous exceptions to this rule, but still a rule it is that the female, naturally modest, retiring, refined, learns what passion is only as the result of experience. With the male it is different. His passion is natural. He often has erections while yet a child, and has sexual yearnings long before puberty. Planque mentions two children four years old whose sexual organs were so developed that they could have sexual intercourse. Rarely does a boy escape initiation into forbidden pleasures by his school-fellows or his elders, and, though he escapes these, he is still very likely, when handling himself during erection, to find the sensation agreeable, and to go on, really ignorant of what he is doing, until he becomes a confirmed masturbator. Male babies are sometimes handled by their nurses to keep them quiet, a practice which is certain to beget the habit even in the earliest years of life. Stone in the bladder, irritation of the prepuce from retained smegma, traumatic stricture and bladder disease, ascarides, etc., lead a child to handle himself, and end in masturbation, if long continued; indeed, there are so many causes, natural and unnatural, why a boy should masturbate that few escape. But the most common cause is undoubtedly instruction, and this is usually received from other boys at school.

It may be safely assumed that a large proportion of mankind have masturbated more or less at some period in their lives, and it is equally safe to assert that at least 90% of such masturbators are not physically injured by the habit. If carried to excess, sexual indulgence in the natural way will produce evil effects, yet sexual intercourse is not only harmless, but even beneficial in moderation, as it can be only in the married state. It is not the loss of seminal fluid which is of the first importance in producing disease from sexual excess, but the nervous shock of the oft-repeated orgasm. Babies and young children lose no seminal fluid, women have none to lose, yet, in all of these, evil results follow excess as certainly as they do in the male after puberty. It is probable that any succession of nervous shocks as sharp and decisive as the sexual orgasm, even although purely intellectual, such as joy or fear, would shatter the vitality and nervous tone of an individual as much as masturbation.

Such writers as Lallemand, Acton, Belliol, certainly make too much of the solitary vice, while quacks find here the largest and most lucrative field for their nostrums. These men scatter their books and circulars broadcast over the land, and often, under alluring titles, thrust them within the eager grasp of the young, the inexperienced, the hypochondriacal, the nervous, overworked, unmarried youth, whose sexual needs, stimulated by his impure thoughts, find no adequate relief. Their tenets find ample faith and ready acceptance in the ingenuous mind, and errors are implanted which years of sober after-thought and experience, aided by the surgeon's careful and conscientious advice, are scarcely able to eradicate. Self-abuse is not confined to youth; middle and old age are not free from it. The numerous foreign bodies found in the urethra and bladder

¹ Deutsch, Archiv f. klin, Med., 1898, lxi, 412.

attest the tendency that men of all ages have to meddle with their genitals.

The use of tobacco, alcohol, and, it might be added, tea, is as widespread as the habit of masturbation; and each of these, or certainly the first two habits, probably inflicts as much injury upon the human race as does the secret vice. Yet who would affirm that every man who smoked would have headache, dyspepsia, heartburn, neuralgia, intermitting pulse, or would become thin, depressed, nervous, sleepless-all of which effects may be produced by an excess of tobacco; or that another who drank liquor would necessarily have delirium tremens, cirrhosis of the liver, fatty kidney, and die with ascites and Bright's disease? As with whisky and tobacco, so it is with masturbation carried to excess. Masturbation is capable of producing the most serious results, among which idiocy, insanity, epilepsy, dementia, physical prostration, hypochondria, impotence, and sterility are prominent, but these are practically extremely rare, and even in these rare cases it will often be found that some other cause, such as a blow on the head, congenital degeneracy, or abuse of stimulants has acted in conjunction with the masturbation. Hence it is evident that, while the intelligent physician must recognise the possible physical evils produced by masturbation, he should boldly oppose himself to that sickly sentimentality which shrouds in mystery one of the failings of our physical nature because it involves the sexual function, and should try to look the subject honestly in the face and to handle it as if it were a problem in mathematics.

The majority of mankind who indulge in masturbation do so just before and after puberty. At first most of them are ignorant that they are harming themselves, but they soon find it out by one means or another, and then sooner or later give it up. The longer and the more frequently they yield to the vicious habit the stronger does its hold become, so that in case they escape the mental and physical disorders to which excessive venery in extreme cases may give rise, still they may pay the penalty of excess by some diminution of vigour in after-life, by upsetting their sexual hygiene, and by establishing sexual necessities which they find it difficult to satisfy; and, finally, they may continue on through life victims to a perverted sexual sense, shunning women, from whom they aver that they derive no pleasure, totally wrecked as to their morale, often hypochondriacs, and suffering from all sorts of functional distress, physical and intellectual, real and fancied.

The chief reason why so much is said of venereal excess by masturbation, and so little of sexual excess in the natural way is, that the former is so much more common, and not that the act itself is

physically more harmful. The solitary vice, as it is aptly styled, may be practised on all occasions, even in company, by the hand in the pocket, or by friction against some prominent object. In schools, not infrequently, boys practise it upon one another; but, generally, masturbation is performed in bed and in solitary places where there is no possibility of disturbance. Hence, in some cases, the frequency of its performance is very great and the effects of often-repeated nervous shock more pronounced. On the other hand, sexual intercourse requires the consent of two individuals and opportunities which are comparatively hard to find. Moreover, a man's moral sense will often keep him from committing excess with a woman, when nothing will restrain him while alone. In married life, excess is the exception; sexual hygiene is more apt to be correct, man is in his natural condition, other emotions enter largely into his daily life, and it is rare that the surgeon encounters a man happily married complaining of any disorder of the genito-urinary system, except those of a purely physical nature. On the other hand, the old rounder, who flatters himself upon the number of women he has ruined, but lays the blame upon Dame Nature, is usually a masturbator and, not infrequently, a pervert.

Symptoms.—A young child who has been taught to masturbate will be seen constantly at work at his genitals, and observed to have erections with unnatural frequency. No further signs are needed. Such children become fretful, peevish, thin, nervous, excitable. They sleep badly, have a haggard look, seem prone to convulsions, and, it is said, are apt to have epilepsy.

Boys who masturbate to excess usually have a long prepuce (they may have none, for Jews masturbate); they get a sallow look, have a sheepish, hang-dog expression; their eyes are deep-set, they incline to melancholy broodings, to staying apart and reading rather than to joining their companions at play. They become absent-minded, and their memory seems defective. Their palms are apt to be cold and moist. They lose the innocent frankness of youth.

The young man is overshy, unambitious, he shrinks from a steady gaze, blushes readily, and seems to be conscious of having done something unmanly and little.

Adult masturbators often show no sign of the habit, though they are apt to be cowardly, mean-spirited, poor specimens of humanity. But it is rare for adults to practise masturbation to great excess, and, if they suffer from any of the supposed evil consequences of the habit, it is either on account of excess in earlier life, of imperfect sexual hygiene, or of irregularly gratified sexual desire. Their symptoms assume a multiplicity of expression, and are generally hypochondria-

cal, and manifestly not entirely dependent upon masturbation; for the same symptoms may be relieved by marriage and are very common in patients who do not masturbate, who, indeed, are perfectly continent. As to atrophy of the genitals, varicocele, etc., these are not due to masturbation; and although this vicious habit may be the most important cause in a given case of chorea, insanity, etc., and should always be sought for, and if possible corrected, yet some other cause is usually to blame for the masturbation as well as for the idiocy or the epilepsy.

Castration has been employed in the vain hope of checking the vice. It is quite useless.

The foregoing remarks are not intended to palliate in the least degree the baseness of the practice of self-abuse, or to deny that lack of physical and sexual vigour, spermatorrhea, neuralgia of the urethra, etc., may be caused by its excessive indulgence; but they are intended to combat the idea, seemingly so prevalent, that very few men indulge in the secret vice, and that all who do so suffer; and they are also intended to advance the proposition that in the vast majority of instances masturbation does little harm to the individual, except in regard to his morale. It unmans him, makes him untrue to himself, and cowardly; and most sensible boys find this out before a great while, and give up the practice, which they feel to be sapping their manhood and self-esteem.

Treatment.—It is infinitely better that a boy should never masturbate if he can be prevented. Prophylactic treatment may save him. In the case of babies who do not do well, nurses should be watched and discharged if they are found handling the child. If the infant have already acquired the habit, his hands must be tied when he sleeps, and at all other times he must be watched until he grows out of the habit. Boys should always be made to sleep alone, never allowed to consort habitually with any other boy, especially older ones. All close intimacies between boys of different ages should be broken up, and, on the appearance of any of the signs of masturbation, a close watch should be maintained.

In most cases it is not good policy to ask a boy if he fingers his privates. He will be pretty sure to say no, and then to tell other lies to substantiate the first. To assume the fact after a careful study of the case is the safest course, and the boy, thrown off his guard by the statement that he does masturbate, will rarely deny it, or will do so in such a lame manner or with such overpositiveness as to convict himself. Finally, when the patient has confessed his folly, it is not wise to try to terrify him out of his habit by brilliant and exaggerated statements of the possible misery he may bring upon himself

if he does not desist. This is appealing to a base motive, and, although sometimes successful, it is often inadequate to the proposed end, for a healthy boy cannot realize what it means to be sick; he cannot understand it, and consequently is not afraid of it. The method of treatment that is most effective, but requires the most force to carry out, is to elevate the boy out of his bad habit, to shame him, to make a man of him, to reason with him, and to talk to him honestly and openly, without reserve or mysticism; to sympathize with him, not to wound him; to study him and treat him morally. This course will succeed with the greatest number, provided only sufficient time and attention be given to it.

When a man comes complaining of the results of masturbation, an attentive study of the symptoms will prove his disease to be hypochondria, and his malady ungratified sexual desire, often with neuralgia of the vesical neck (p. 314). His training should consist in encouragement and continence, with absolute purity of thought, and subsequently marriage, to regulate his sexual hygiene. After marriage we hear no further complaint from these cases, always provided there is really nothing more than functional derangement at the bottom of the patient's complaint, as is the case in the vast majority of instances.

As for medicines, they are of little or no value; camphor, bromid of potassium, or lupulin may be given as placebos, but it is doubtful if they have any efficacy. Cold sponge-baths, outdoor sports, physical fatigue, sleeping in a cool room on a hard bed with a light covering are all useful; eating lightly at night, not retiring until very sleepy and rising immediately on waking in the morning, are powerful assistants in breaking up the habit; but all will be of no avail unless the *morale* of the patient be elevated, unless he keep his thoughts pure, and desire, for the manliness of it alone, to be rid of his bad habits.

POLLUTION

Pollution is a term applied to involuntary emissions of semen in ejaculation, attended by a more or less marked venereal orgasm. Pollutions are nocturnal or diurnal.

Nocturnal Pollutions.—Nocturnal pollutions are exceedingly common. They usually accompany an erotic dream, and the patient wakes just as the ejaculation is occurring. Sometimes, when sleep is profound, the patient does not wake, or, if he does, he forgets his dream, so that the sensation of pleasure accompanying ejaculation is faint and forgotten. Occasional nocturnal emissions are entirely natural and by no means a sign of disease. Their fre-

quency compatible with health varies with the purity of mind and the sexual vigour of the patient. A man who is happily married rarely has nocturnal emissions while living with his wife, but, if he leaves her for several weeks, it is natural that there should be a formation and collection of semen which, distending the seminal vesicles, excites erotic fancies and, in the relaxed condition between sleeping and waking, escapes at the conclusion of a dream. Any man suffering from ungratified sexual desire is normally in a condition demanding relief for his overdistended seminal vesicles and, if that relief be not afforded in some way, it comes spontaneously during sleep. This is all the more certain to be the case if he has established a habit of rapid formation of semen by excessive sexual intercourse, or by habitual masturbation; and especially if, when natural or unnatural gratification is given up, lascivious thoughts are indulged in and impure associations continued. Occasionally nocturnal emissions may be overfrequent, and indicate a condition of irritation in the deep urethra—some modification of neuralgia of the prostatic urethra which requires treatment.

Treatment.—When emissions do not exceed three a week they should be disregarded, and attempts made only to purify the patient's thoughts, to elevate his tone, and if possible to get him happily married. When they occur as frequently as once or several times a night for a considerable time, certain special attempts to correct the habit are advisable, besides the employment of all known tonic and hygienic means and the measures detailed above. The patient should exercise and develop his muscular system. He should endeavour to tire himself out by physical work so as to sleep soundly. Locally, cold baths and cold douches are useful. He should sleep on a hard bed, lightly covered. The stomach should not be full on retiring. Most patients have involuntary emissions towards morning, and waking, find themselves lying on their backs. This position, with the bladder somewhat distended, tends to beget erection, and, by avoiding it, pollution may be escaped. This is accomplished by tying a towel round the waist on retiring, with a hard knot in the back over the spine. When the patient lies upon this knot it awakens him. Besides these means (among which purity of thought comes first), bromid of potassium, camphor, and lupulin may be given internally, with strychnin and a mineral acid, or such tonic as the physical conditions seem to call for. Decided advantage may be derived from the gentle use of the steel sound, and instillations of nitrate of silver.

From time to time different mechanical devices appear for treating pollution, their object being either to prevent the patient from handling himself during sleep or to awaken him before emission

when he gets an erection. I believe them valueless and as likely to do harm as good, by keeping the patient's mind concentrated upon his malady and leading him to attach too much importance to the physical act of emission. I have used one which started a battery and gave an electric shock in the back when erection occurred. Verneuil used a similar instrument, which caused a bell to ring when erection came on, and he reports a successful case, as does also Tillaux. There is another machine, a ring, which encircles the penis lightly, but when distended by erection causes pain and awakens the sleeper. I think these mechanical means bad, and unsatisfactory in their result. They attack one symptom only and neglect the real malady.

Diurnal Pollution.—Diurnal pollution is rare. Some impressionable patients acquire so intense a prostatic irritability from venereal excess that the sight or thought of certain women or the lightest friction upon the glans penis will produce ejaculation. Such injuries to the spine as are caused by the garrote, the guillotine, and the gallows commonly cause ejaculation; and sexual perverts find in shoes, hats, odours, and various abominations sufficient cause for pollution.

Treatment.—The treatment of diurnal pollution is by steel sounds and local astringents to the prostate, together with most of the means detailed for nocturnal emissions. Circumcision should be performed if the glans penis is sensitive.

PRIAPISM

Priapism is more or less continuous erection without desire. With some forms of priapism intercourse with ejaculation may take place. The connection between injuries of the cerebellum and spinal cord and erection has long been observed. Roubaud quotes Serres in stating that out of 11 cases of cerebellar hemorrhage erection of the penis was noted 6 times. Death by hanging is often accompanied by partial erection. After injuries to the spine, and in some diseases of the cord producing paraplegia, erections are often absent, returning as the paralysis improves. On the other hand, certain diseases and injuries of the cord are notably attended by priapism, disappearing as the paraplegia gets well.

The effect of large doses of cantharides in producing erection without desire is well known.

Prolonged mental exertion, overanxiety, and other causes capable of reducing the tone of the nervous system are sometimes attended by priapism, which also occurs in the early stages of prostatic hypertrophy and as an evidence of leukemia.

Priapism in children is often due to stone in the bladder, tight prepuce, worms in the rectum, etc. Extreme cases are on record where priapism has terminated in gangrene of the penis.

Treatment.—Priapism usually gets well under hygienic and symptomatic treatment, beyond which no special measures can be suggested, except irritating the lower part of the spine, blistering the perineum, an india-rubber seton at the nucha, possibly the use of electricity, and strychnin, ergot, bromid of potassium tentatively, notably in cantharidal priapism. Iodid of potassium has been successfully used.

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