The sexual disabilities of man and their treatment & prevention / by Arthur Cooper.

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THE SEXUAL DISABILITIES OF MAN

"Qu'a faict l'action genitale aux hommes, si naturelle, si necessaire et si iuste, pour n'en oser parler sans vergogne, et pour l'exclure des propos serieux et reglez ? Nous prononceons hardiement, *tuer*, *desrobber*, *trahir* ; et cela, nous n'oserions qu'entre les dents."

MONTAIGNE.

THE SEXUAL DISABILITIES OF MAN

AND

THEIR TREATMENT & PREVENTION

BY

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THIRD EDITION
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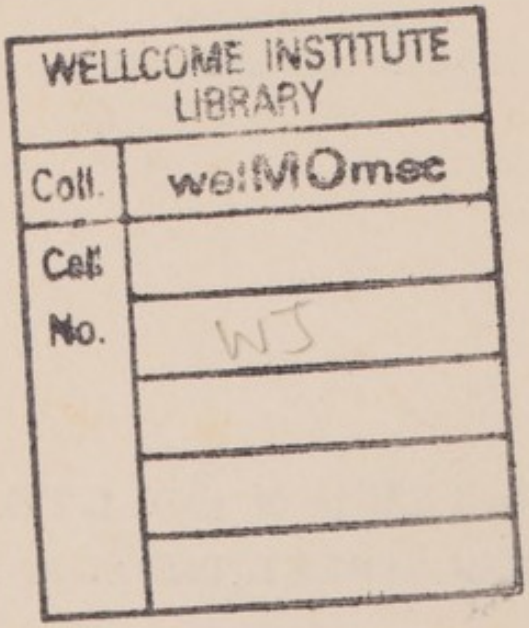

PREFACE TO THE THIRD EDITION

For this new edition the text has been revised and enlarged and altered and repaired and, it is hoped, improved.

The whole of the book as it was, has been included in the first and second parts of the book as it now is.

The third part, which deals briefly with the Prevention of Sexual Disability in some of its aspects, is entirely new.

A. C.

20 Old Burlington Street,
London, W.
July, 1916.

PREFACE TO THE FIRST EDITION

MANY years ago the writer published, with notes and additions, a translation of a short monograph on Sterility and Impotence by the late Professor Ultzmann, of Vienna, which has long been out of print.

The present little book is based mainly on what has been observed in practice during the last thirty years, and it is hardly necessary to say that it does not pretend to be exhaustive. But perhaps it may be of some use to the student who becomes a practitioner with little knowledge of matters which receive but scanty recognition in the medical schools of this country.

July, 1908.

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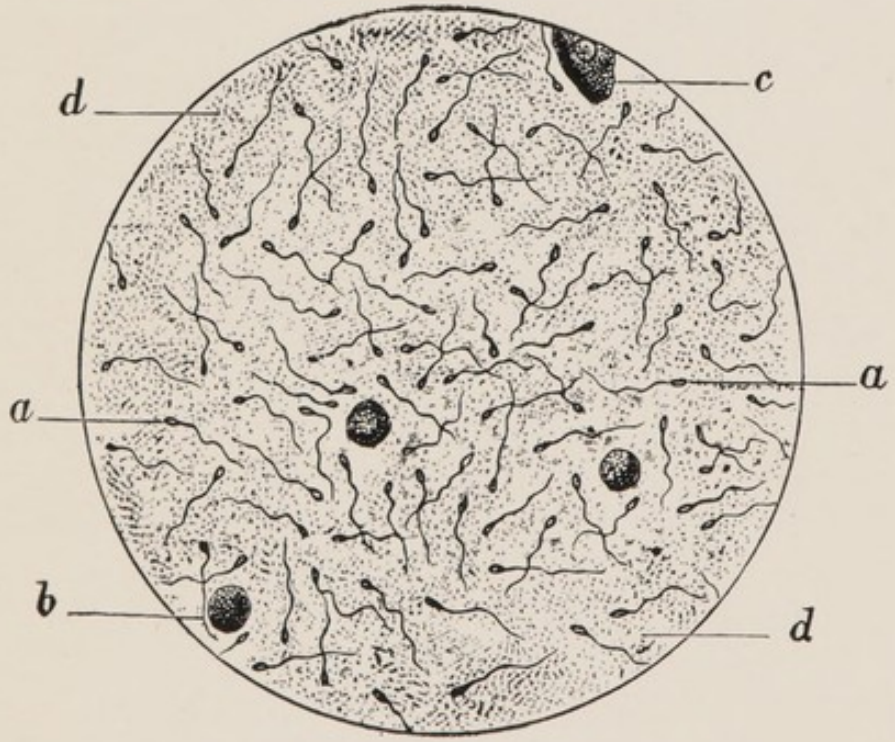
PART III

THE PREVENTION OF SEXUAL DISABILITY

FIG. 1.

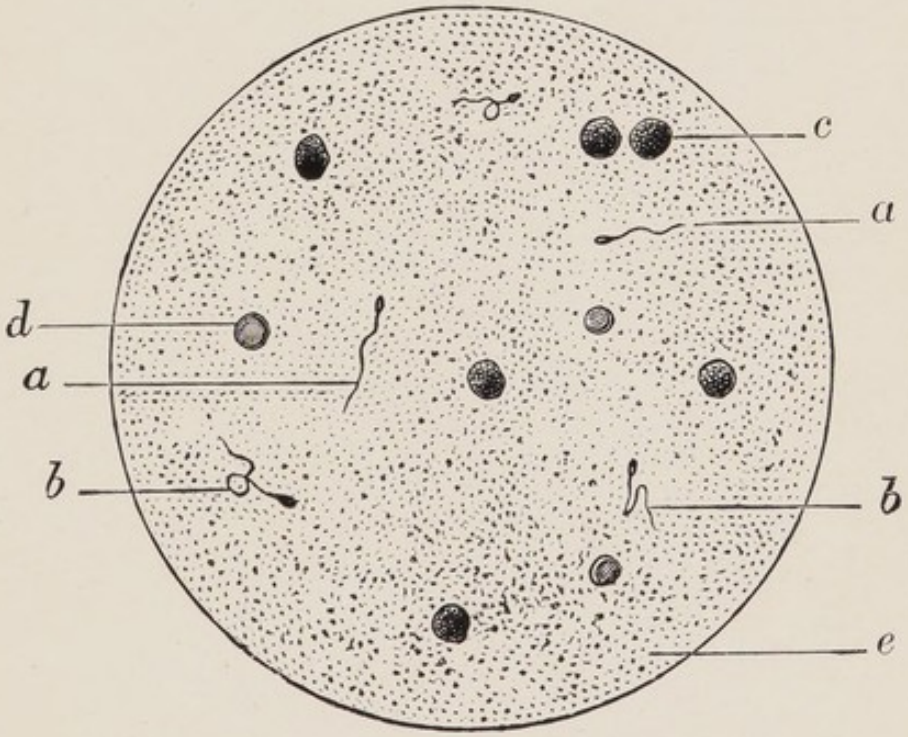


Normal Semen × 300.

a. Living Zoosperms. *b*. Seminal Cells. *c*. Epithelium.
d. Seminal Granules.

(*After* ULTZMANN.)

FIG. 2.



Abnormal Semen × 300.

a. Living Zoosperms. *b*. Dead Zoosperms. *c*. Pus-corpuscles. *d*. Blood-corpuscles. *e*. Seminal Granules.

(*After* ULTZMANN.)

THE SEXUAL DISABILITIES OF MAN

INTRODUCTION

THE chief sexual disabilities of civilised man may be broadly divided into :

1. Those depending on some defect in the seminal fluid or on some condition which prevents its proper discharge—causing Sterility.

2. Those depending on some defect in the apparatus concerned in the act of copulation —causing Impotence.

They may be present together or separately.

As regards male sterility, it is only in recent times that much attention has been paid to it, and even now, in this country at any rate, it does not receive the notice it deserves, notwithstanding its importance to the individual and the family, as well as its influence on the birth-rate of the general population.

The proportion of barren marriages in which the husband is at fault has been variously

estimated by different observers as from 10 to 25 per cent., and by some even higher still.

Dr. Matthews Duncan called attention to the matter in the Goulstonian Lectures in 1883, and again in 1889 he wrote: "Enlarged experience and inquiry make me more and more convinced of the greatness of the part played by the male. . . . It is a good rule to subject a woman to no prolonged, painful, or dangerous treatment for sterility, unless assured of the potency of the male as regards connexion and as regards the semen." Sir A. R. Simpson says (1902): "In the general community the proportion of childless marriages seems to be about 1 in 8 or 8.5; among members of the peerage 1 in 6.11. Whether Kehrer be correct in estimating that the husband is in fault in at least one-fourth of the cases remains to be proved . . . the cases where an azoic semen is ejaculated are for the most part altogether overlooked. The possibility that the cause of the childlessness may be found in the male must therefore always be borne in mind." But even now it happens sometimes that, unless the husband is clearly incompetent as

regards copulative power, the fault is attributed to the wife, and only when the gynecologist has failed to find the cause is the husband suspected and submitted to examination.

Impotence, on the other hand, has been from time immemorial a matter of interest and often of anxiety to a vast number of mankind, so that whilst it is quite common for medical advice to be sought respecting the copulative power, it seems to be comparatively rare for a man before marriage to have any sort of doubt or anxiety respecting his procreative power. And this in spite of the fact that it has long been known that a man may be able to perform the sexual act to his own complete satisfaction, and yet be quite incapable of begetting children.

In the following pages an attempt will be made to consider these and some allied conditions, not as special entities to be dealt with always in some special way, but as phenomena to be investigated and traced to their source like other morbid phenomena, and therefore as a branch of the art of medicine which ought to be studied and taught in the ordinary medical curriculum.

The present disastrous war has added an increased and ever increasing importance to the problem of sexual efficiency. The killing and maiming of so many of our best young men, and the necessary but deplorable employment on men's work of so many of our women of child-bearing age, renders it more than ever before essential that sexual disability in both sexes should be prevented by any and every means at our command.

PART I.

STERILITY

CHAPTER I

THE SEMEN

As the Semen plays such an important part in determining the question of Fertility or Sterility, it is necessary to begin by briefly describing it.

The normal semen of a healthy man as it leaves the urethra is a complex fluid made up of the secretions of the testes, vasa deferentia, seminal vesicles, prostate, Cowper's glands, and the smaller mucous glands of the urethra.

The seminal fluid is viscid, neutral or alkaline in reaction, and in appearance and consistency resembles a decoction of starch. It has an odour which has been compared with various other odours, but which is really peculiar to itself and needs no description.

According to Landois, normal semen con-

tains 82 per cent. of water, serum albumen, alkali-albuminate, nuclein, lecithin, cholesterin, fats and phosphorised fat, salts (2 per cent.) especially phosphates of the alkalies and earths, together with sulphates, carbonates and chlorides. I have noted repeatedly that the quantity of albumen varies considerably in different specimens of semen.

As the semen cools after emission it becomes temporarily gelatinous, and then fluid again. If it be kept at rest in a test-glass, it gradually separates into two layers which, after some hours, are of about equal thickness. The lower stratum is dense, opaque, and contains the cellular elements. The upper stratum is thin, more or less translucent, looking something like whey, and contains but few cells with more or less granular matter.

As regards the *quantity* of semen emitted at one time, the difficulty of forming a correct estimate is shown by the difference in the calculations made by different observers. For example, the average quantity is given by Liégeois as 1 to 3 grammes; by Austin Flint as half a drachm to a drachm; by Mantegazza as 0.75 to 6 cubic centimetres; by Duval as 1 to 8 grammes; by Ultzmann

as 10 to 15 grammes; and by Leopold Casper as 5 to 20 grammes. Thus Ultzmann's and Casper's estimates are seen to be far above the others. This wide difference is no doubt partly due to the fact that the quantity is liable to vary in the same person according to circumstances, and especially with regard to the frequency or rarity of sexual indulgence, and the interval that has elapsed since a previous emission at the time the examination is made.

On the whole, and judging from my own observations, it seems probable that the average quantity emitted by a healthy man under normal conditions is between 1 drachm and 2 drachms. And it also seems probable that the degree of sexual excitement, and the intensity of the orgasm at the time may have something to do with the quantity of semen ejaculated. When the sexual act is repeated at too frequent intervals, the quantity gradually becomes less and less, until only a few drops or even nothing at all may be emitted.

The most important constituents of normal semen are the modified cellular elements produced by the testes, and known as *spermatozoa* or *zoosperms*. They are developed from the

small cells (spermatids) which form the innermost stratum of the seminal epithelium. It is the presence or absence, and the activity or inactivity of the zoosperms that chiefly determines the fertile or sterile quality of the seminal fluid. They appear to have been discovered by a pupil of Leeuwenhoek in 1677.

But besides its spermatic or external secretion the testis is now known to have also an internal secretion, and the correlation of this with the secretions of the ductless glands and other organs of internal secretion, and their joint influence on the reproductive system is now being inquired into by many able observers in this country and elsewhere.

Landois defines a spermatozoon as a detached independently mobile cilium of an enlarged epithelial cell, measuring about 1-500 inch in length. According to Halliburton, a spermatozoon consists of a head, a very short neck, a body, a tail, and an end-piece. The head is of flattened ovoid shape, and in the anterior two-thirds of its extent is surmounted by a head-cap which, sharpened at its extremity, forms a cutting edge. The head is formed from the nucleus of the spermatid, and the body and tail from the cytoplasm.

Austin Flint says the head is about 1-5000 inch long, 1-8000 inch broad, and 1-25,000 inch thick.

A fresh specimen of healthy semen, when examined under the microscope (FIG. 1), shows the presence of zoosperms in enormous number, and in active progressive movement. The rate of movement is given by Landois as from 0.05 to 0.5 mm. a second, being of course most rapid immediately after the fluid is shed. The head of the zoosperm is propelled forward by a whip-like wriggling of the tail.

According to Ultzmann, normal semen, when examined with a No. 3 eyepiece and a No. 7 objective (Hartnack), should show at least 100 zoosperms in the field at one time. As a rule, however, there are more than that, and it has been estimated that the number discharged at a single emission amounts to several hundreds of millions.

Certain deformities, such as an abnormally large head, two heads or two tails, are occasionally met with in one or two specimens among a normal crowd. Schäfer says that sometimes two kinds of spermatozoa are met with in the same species of animal, some being far

larger than the others, and that such giant spermatozoa have been observed in man. What may be the significance of these abnormities as regards breeding does not appear to be known.

Besides zoosperms the semen also contains seminal cells, epithelium of various forms from the genito-urinary passages, and chromatin particles often called seminal granules. Two forms of crystals are also found in the semen. First, very small colourless four-sided crystals which may be seen in some specimens of normal semen soon after emission, and while the zoosperms are still in active movement. Secondly, the very much larger rhomboidal bodies known as Böttcher's or Schreiner's crystals which, as a rule, only appear in normal semen some considerable time, perhaps 2 or 3 days, after emission. When the zoosperms are absent or few in number, these crystals usually form much earlier. According to Schreiner they consist of phosphatic salts with an organic base.

Zoosperms are not found before puberty, but in healthy men they may continue to be produced until a late period of life. Curling found them several times in the testes of

men upwards of seventy years of age, and once in a man of eighty-seven. Duplay also discovered zoosperms in the testes of nine octogenarians, while Casper states that Abel observed them in a man of ninety-six.

But though zoosperms may be present in old men, it would seem that they do not always possess fertilising power. Pajot thinks Duplay made a mistake in concluding that old men are capable of procreation at any age. He agrees that zoosperms may be present in old age, but states that they are very different from those found in healthy young men. They are one-half shorter, more slender, and though under the microscope they can be seen to oscillate, they do not move across the field. Pajot also states that he knows such zoosperms cannot impregnate, because he has so often met with them in what he calls old-young married men, with young and healthy wives who remained childless. According to Krafft-Ebing reproductive power usually ceases about the age of 62. In the semen of a man of 62 which I examined within an hour after emission I found zoosperms in normal quantity, but smaller than usual and without movement.

Zoosperms may be absent for a time after excessive sexual indulgence. Liégeois examined the semen of a student who had had intercourse three or four times daily for ten successive days, and no zoosperms could be seen. But after three weeks' abstinence they were found in enormous quantity.

Some of the variations that may occur in the zoosperms, both as regards number and size, are indicated by certain observations made by Casper on the semen of a vigorous man of sixty, and recorded in his work on Forensic Medicine: On one occasion, on the third day after coitus, there were a large number of very small zoosperms, while on the fourth day, after renewed coitus, they were few and small; after a pause of two days there were none; after a pause of one day there were none, and the fluid was watery. At another time, on the fifth day after coitus, the zoosperms were very numerous. At another time, after a pause of six days, they were few in number, but of large size. Four months later, and three days after coitus, the zoosperms were comparatively small; whilst on another occasion, on the third day after coitus, they were innumerable.

It has been stated by some writers that the zoosperms do not show activity until they reach the seminal vesicles, and Fürbringer attributes their motility to the prostatic secretion. E. Martin, however, found motile zoosperms in the epididymis, and Griffiths, of Cambridge, found numerous active zoosperms in the seminal tubules of both testes which had been removed for enlarged prostate from a man aged 74.

The length of time the activity of zoosperms may continue outside the body varies considerably in different cases and circumstances. Lallemand pointed out that they live longer when emitted in natural coitus than after emission produced in any other way. Ultzmann says that in healthy semen, suitably protected from light and cold, living zoosperms can be detected even after 48 hours. I have myself observed progressive movement at various times up to 60, 70, and even 84 hours after ejaculation, the last being in a specimen taken from semen kept in a loosely-corked test tube, and not protected from light or cold in the month of April. I also found active zoosperms three days after emission in a sample sent to me

by post. Even on a slide movement may continue for many hours. For instance, in a specimen on a celled slide, after 24 hours, I found many zoosperms in active motion. After 30 hours, fewer showed activity. After 48 hours, most were stationary, many oscillating, but some were still moving across the field. After 72 hours there was no progressive movement, and oscillation of only a few. On the other hand, movement sometimes ceases in six hours, or even less. The examination should always be made as soon as possible after emission, and care should be taken not to mistake a mere wobbling of the crowd of zoosperms for progressive movement.

Cold has an adverse influence, and in winter a cold slide may stop all movement, which, however, I have found can sometimes, but not always, be restored by warmth.

Sometimes the seminal fluid is so thick that the zoosperms seem unable to move. This state of the semen which, by the way, is mentioned by Lucretius, may be physiological or pathological, and will be referred to again.

Movement is also quickly arrested by acids,

strong alkalies, and by water. When the semen to be examined is contained in a protector it should be transferred to a warm glass as soon as possible. I have occasionally suspected that something used in the manufacture of certain rubber protectors may be responsible for impaired motility of the zoosperms.

It is generally said that moving zoosperms are never seen in the urine, but this seems to depend on reaction and specific gravity. I have seen decided movement in a case in which a shred contained in faintly acid urine was examined an hour after the urine was passed. Perhaps the mucus of the shred protected the zoosperms in this case, or the urine happened to be just of favourable density.

It may be as well to mention that the mere presence of zoosperms in the urine does not give any indication to the naked eye, but if other constituents of the semen are also present they appear as a stringy cloud studded with flocculi, which floats for a time and then settles down gradually to the bottom of the glass.

Ultzmann points out that zoosperms which have died naturally after emission present a

straight or only a slightly curved tail, while those which were dead before emission have the tail coiled or bent at an angle (FIG. 2). This should be remembered in examining the semen when the zoosperms are dead, and according to my own observation it appears to be a trustworthy sign. Ultzmann also states that a similar condition of the tail is usually found when the zoosperms have been killed by some injurious secretion such as urine or the acid mucus of the vagina, and that when movement has been arrested by water the tail not uncommonly forms a loop (FIG. 2).

In examining a *dried* specimen of semen under the microscope, care must be taken to go over the whole of it, for in drying the zoosperms tend to run together in groups, so that while some fields may be crowded with them, in others there may be few or even none.

The zoosperms may preserve their form in the dried state for a number of years. I have now a specimen of semen which was put up on an ordinary slide with a cover-glass, but without mounting or reagent of any kind, in 1891. Since then it has remained with no other protection than the

glass shade used to cover the microscope, and although the number of recognisable zoosperms has been gradually diminishing, many of them, after nearly 25 years, can still be identified.

Of the other secretions which go to make up normal semen, that of the *seminal vesicles*, and perhaps that of the dilated lower portion of the vasa deferentia also, is thick, alkaline, gelatinous, and often contains small masses of glairy mucus, resembling sago grains. It is believed that in certain animals coagulation of the secretion of the seminal vesicles in the vagina of the female after coitus tends to prevent the zoosperms from escaping, and it has been suggested that a similar action occurs in human beings. Whether the function of the seminal vesicles is merely to secrete, or whether they serve also as a reservoir for the zoosperms, is a question on which opinions differ. The nature of the secretion of the epididymis does not seem to be accurately known.

The *prostatic* secretion is thin, opaque, albuminous, amphoteric or slightly acid in reaction, and is supposed to give the semen its peculiar odour. F. H. A. Marshall says

the reaction may be neutral or alkaline in inflammation, and this may perhaps partly account for the different opinions expressed by authors as to its reaction. Marshall also describes the prostatic fluid as containing spermin which, when brought together with phosphates secreted by the other genital glands forms Böttcher's crystals. It also contains a protein substance and lecithin-like globules.

The secretion of Cowper's and the smaller *urethral glands* is a clear, stringy alkaline glycerin-like fluid, which in ordinary conditions is only sufficient to lubricate the urethra ; but under the influence of sexual excitement, and especially during coitus, it is produced in much larger quantity.

All these secretions contribute their share towards the proper composition of the seminal fluid and the vitality of the zoosperms, and the urethral mucus serves also to neutralise acidity due to the passage of urine along the canal.

CHAPTER II

QUANTITATIVE CHANGES IN THE SEMEN

THE physiological characters of the semen having been described in the preceding chapter, the pathological changes to which it is liable have next to be considered. These changes may be quantitative or qualitative.

Polyspermia, or the emission of an abnormally large quantity of fluid is, as may be gathered from what has been said in the preceding chapter, not easy to define exactly. Of course, in such a well-marked instance as that recorded by Ultzmann, in which the quantity measured 35 grammes, there could be no doubt about the excess. The patient in that case was a very nervous excitable man, but examination of the sexual organs revealed nothing abnormal. Such cases are probably rare, and not of much practical importance. Ultzmann states that in polyspermia the excess is due to increase of the liquid portion of the seminal fluid, and that

there is no actual increase in the cell elements or zoosperms. Thus polyspermia suggests over-secretion, either by the prostate or seminal vesicles or urethral glands or all of them, and perhaps sometimes due to nervous influence.

Oligospermia, or the emission of semen in abnormally small quantity is, like polyspermia and for the same reason, difficult or impossible to define exactly. The condition is natural in old age, and may occur temporarily after sexual excess, and also in certain debilitating diseases. As the semen is composed of several secretions it will of course be diminished in proportion if one or other of its constituents be absent. If the testicular secretion only is wanting, the quantity of emitted fluid may not be markedly affected, but if the prostatic secretion and that of the seminal vesicles be from any cause excluded, the fluid emitted may be so scanty that such cases are often included under aspermia. Perhaps the commonest cause of oligospermia is suppression of the prostatic secretion, as in atrophy or fibrous induration of the prostate following abscess or chronic prostatitis of long duration. The diagnosis will depend on careful study of the history and of the

patient himself, with or without the assistance of the microscope.

Aspermia.—This term is somewhat loosely used to denote not only the absence of semen as the name would imply, but also conditions in which semen is produced, but is in some way prevented from escaping in the normal manner. Aspermia may be congenital or acquired, permanent or temporary.

Congenital aspermia may be due to defect or malformation in some part of the genital system, but congenital aspermia, in which without discoverable cause semen has never been emitted in any circumstances, is very rare. Ultzmann has recorded two cases, and the following instance occurred in my own practice :

A man, aged 20, consulted me because he had never had a seminal emission either waking or sleeping. He said he had not attempted sexual intercourse, but had practised masturbation repeatedly without ever having been able to produce emission. Sexual desire was present, and he had erotic dreams accompanied by erection once or twice a fortnight, but though he was awakened by a sensation as of emission, no emission ever occurred.

There was no history of disease or injury of the genital organs, and he had never had mumps. On examination the patient was slightly built, but had all the outward signs of virility. The prepuce was short and not tight. The testes and epididymes were normal in size and consistence. The vas deferens could be plainly felt on each side, and there was no varicocele. A No. 19 (French scale) *bougie à boule* passed easily to the bladder, no part of the urethra being abnormally sensitive. Per rectum, the prostate was normal to the touch and not tender. The urine was clear, acid, and contained neither albumen nor zoosperms. On a second visit the urine passed immediately after an erotic dream was brought to me, and four specimens were examined with the microscope, two after the urine had been standing for six hours, and two more after twenty-three hours. In none of these were any zoosperms to be seen.

Relative aspermia.—The term "relative" is applied to cases in which semen is emitted in some circumstances but not in others.

Relative aspermia may assume one or other of several forms. In one form semen is never emitted in coitus, or at any other time during

the conscious state, though emissions occur during sleep. The following is an example of this curious form of aspermia :—A slightly-built man, aged 28, of strong sexual feelings and good general health, consulted me on account of inability to complete coitus by ejaculation. He stated that emission had never occurred, either during coitus, or through artificial stimulation, or at any other time in his life whilst he was awake. He had nocturnal emissions from time to time, accompanied usually by erotic dreams. On all such occasions, however, the emission was suddenly arrested the moment he awoke. Erection was perfect, and there was no difficulty about penetration in coitus, but however long the act was continued emission never occurred, and finally erection subsided without any feeling of distension in the urethra, and without pleasure, and there was never any oozing of fluid afterwards. A specimen of the semen emitted during sleep was brought to me, and found to contain active zoosperms. He had never had any venereal disease, and there was no stricture. The deep urethra was perhaps over-sensitive, but there was no other discoverable local lesion, defect, or

malformation. The cremasteric and bulbo-cavernosus reflexes were absent. The patient had no marked neurotic symptoms himself, but his mother was said to be nervous and hysterical.

In another case of relative aspermia, in a man of 21, there was no difficulty as regards emission when the stimulus was artificial, but failure during coitus, though both erection and intromission were quite satisfactory.

In such cases of aspermia the cause is no doubt to be looked for in the nervous system, but at present no satisfactory explanation is at hand. To say, with Schulz and Ultzmann, that the cause is non-excitability of the ejaculation centre, complete or relative, is merely another way of saying that we do not know. Matthews Duncan mentions the case of a married man in good health but apparently feeble both in desire and capacity in whom "the rare connexions were only occasionally accompanied by emission, and the semen which the surgeon examined was sometimes healthy and sometimes azoospermic. This man had not had connexion with any other than his wife, and he declared he had used no kind of solitary indulgence."

Acquired aspermia is not nearly so rare as the congenital form. It may be permanent or temporary, and the cause may be mechanical or neuro-psychical.

Prostatitis from gonorrhœal or other inflammation involving the ejaculatory ducts, is perhaps the commonest local cause of acquired aspermia, and atrophy of the prostate or cicatricial contraction following suppuration, may either occlude the ejaculatory ducts or may so displace or distort them that if semen escapes at all it passes backwards to the bladder. Tuberculosis or injuries of the prostate may have similar effects, and senile prostatic enlargement may also interfere with the permeability of the ejaculatory ducts.

Aspermia following gonorrhœal prostatitis or abscess may or may not be recovered from, according to the seat and extent of the mischief. If the obstruction is solely due to inflammatory swelling or induration, recovery may take place when the enlargement subsides, even after a long time, as in a case recorded by W. Anderson, in which aspermia following abscess of the prostate had already lasted eighteen months before the patient came under observation. After six months' treatment the

enlarged and indurated prostate had nearly regained its ordinary size, and three months later the power of ejaculation was fully restored.

Concretions in the prostate or ejaculatory ducts may also interfere with the escape of the semen.

In other cases temporary aspermia may be caused by some local source of irritation in the external organs, the urethra or the prostate, setting up reflex muscular spasm. Sexual excess, natural or artificial, may cause temporary aspermia by exhausting the supply of semen available at the time. For example, a man who masturbated ten times on the same day had emissions on the first three occasions only.

Cerebral inhibition also may cause aspermia, as in the case of fear, anxiety, over-excitement or other emotional disturbance, and here erection may or may not fail also. Peyer noted temporary aspermia in two cases of *asthma* attributed by him to sexual disturbance.

Anæsthesia of the glans penis would appear to be an occasional cause of aspermia. Curling reports a case of this kind which was cured by blistering. He also mentions another case

of non-ejaculation, in which the nerves appeared to have been destroyed by a syphilitic ulcer of the dorsum penis, or compressed in its cicatrisation. A state of incomplete anæsthesia of the glans seems sometimes to retard ejaculation without altogether preventing it, as in some cases of tabes.

Among injuries to the prostate the operation of perineal *Lithotomy* has probably been a not infrequent cause of sterility in the past, when that operation was more common than it is now. Cases bearing on the subject have been reported by many observers, and Teevan and others have published instances in which emission was known to have ceased to occur after the operation. But it is still uncertain to what extent sterility has followed perineal lithotomy because, in so many of the records, the evidence of sterility appears to be based merely on the fact that the wives were childless, and not on examination of the man himself and his secretions.

As regards *Prostatectomy*, E. H. Fenwick remarks that no promise can be made as to the retention of sexual power. The desire, or the seminal fluid, or the erectile power may be lost, or all may remain, and even

in a very small percentage be improved. It mainly depends on how the ducts are interfered with by the growth and by the operator. Thomson Walker says aspermia follows suprapubic prostatectomy in 32.5 per cent. of cases. When such persons are able to copulate the semen either lodges in the prostatic cavity or passes into the bladder, and is thence discharged with the urine.

Onanism.—Among the causes of aspermia must also be included the practice of *interrupting coitus,* which is so frequently resorted to at the present time, with the object of avoiding pregnancy. One of my patients, after having become the father of five healthy children, adopted this method of preventing further increase of his family, and practised it with apparent impunity for five years. After that time emission began to fail, at first occasionally, then more frequently, until at the time he consulted me emission had failed to occur for periods of two or three weeks in succession. The ill effects of interrupting coitus probably depend not so much on mere withdrawal before emission as on interference with the discharge of semen either by voluntary effort or by digital or

other pressure on the urethra. A rubber ring is sometimes used for this purpose, and W. A. Hammond of New York refers to three cases in which sterility was caused in this way through the semen passing backwards to the bladder even after the use of the ring had been abandoned.

The term *False Aspermia* is applied to cases in which semen enters the urethra, but is in some way prevented from leaving it in the normal manner.

Stricture of the urethra is the commonest of such causes, but epispadias hypospadias and urethral fistulæ opening into the perinæum or rectum, may divert the semen from its natural course and thus cause sterility.

With regard to *stricture* it must be remembered that it need not necessarily be very narrow in order to prevent the semen from escaping, for a calibre that easily allows urine to pass when the penis is flaccid, may be sufficient to prevent the passage of the much denser semen when erection is present. Besides, the urethra in the neighbourhood of a stricture is always more or less irritable and inflamed, and consequently muscular spasm is also a contributory factor. These

points are illustrated by the case of a man, aged 23, who had had gonorrhœa as well as a perineal abscess, and who for some time had been aware that the urine stream was gradually becoming smaller. At the time he consulted me there had been no emission during coitus for about two months. Sometimes semen oozed away afterwards, and when it did not do so he noticed that the urine next passed was cloudy and thick. The urethra was very tender and irritable, and at 5½ inches there was a stricture admitting No. 14 (French scale). Under general sedative treatment and gradual dilatation of the stricture he soon began to improve, and after No. 24 was reached he got quite well.

Large *Preputial Calculi* and an extreme degree of *Phimosis* may also interfere with the discharge of the semen, and a *very short frenum* may so drag down the meatus that the semen takes a wrong direction. Hammond states that an extreme degree of erection is sometimes sufficient to obstruct emission, and he mentions a case of the kind which was cured by half drachm doses of sodium bromide taken three times a day for a week.

CHAPTER III

QUALITATIVE CHANGES IN THE SEMEN

It has already been mentioned that in general appearance normal semen resembles a decoction of starch. It also leaves a greyish-white stain on linen, which becomes stiffened when dry. In disease the quality of the semen may be altered in various ways.

Abnormal thickness of the seminal fluid is generally said to be due either to a preponderance of the thicker secretion of the seminal vesicles or to diminution or absence of the thinner prostatic secretion. But a similar condition may be found in some healthy men when there has been no discharge of semen for some time, in which case ejaculation may be attended by discomfort or pain.

Hydrospermia.—The semen is *thinner* and more watery than it should be in certain cases from some morbid change in one or other of its constituents, and usually in

connection with diminution or absence of zoosperms. In polyspermia also the fluid is thin.

The quality of the semen may also be affected by the addition of some extraneous and more or less deleterious material, such as blood or pus.

Hæmospermia.—When Blood is mixed with the semen the colour is changed to red or brownish-red or brown, according to the quantity of blood present and its source.

The commonest cause of Hæmospermia is gonorrhœa. It may also occur in certain cases of artificial or natural excess, in tuberculosis of some part of the genital system, in senile enlargement of the prostate, in certain constitutional diseases, scurvy for example, and in some cases of sexual activity after prolonged continence, especially in men no longer young.

Careful examination of each case will usually determine, at any rate roughly, where the blood comes from, but its exact source is not always clear, and no doubt varies according to the cause. In gonorrhœa the blood comes most often perhaps from some part of the posterior urethra or the prostate.

In other cases it may come from the ejaculatory ducts, the seminal vesicles, the vasa deferentia or the testes, according to circumstances.

I saw recently a healthy medical man of 69, who had never had gonorrhœa, and who on coitus after some years' continence emitted bloody semen on several occasions without known cause. There was no pain, nor any other morbid symptom or sign that I could discover, except very slight tenderness in the middle line of an apparently normal prostate on palpation per rectum.

The colour and the appearance of the stains on linen depend on the source of the blood. Ultzmann has pointed out that when the blood comes from the posterior urethra the resulting stains are not uniform in colour, but that there are generally separate blood spots as well as rusty brown seminal spots. On the other hand, when the blood comes from the seminal vesicles, all the stains are uniformly coloured throughout, showing a more intimate mixture of blood and semen.

Pyospermia.—When the semen contains Pus it has a more or less pronounced yellow colour,

according to the quantity of pus present, and the stains on linen are yellow or greenish-yellow. The commonest cause of pyospermia is gonorrhœa and, as in the case of blood, when the pus comes from the urethra the seminal stains will be irregularly spotted or streaked with it, but when the pus comes from the seminal vesicles the stains will be uniformly yellow.

A brownish-yellow colour of the semen may be due to pus and blood in varying proportion, or in patients with jaundice it may be due to *Bile*. The microscope will decide. If the semen contains blood or pus, or both, while the urine is free from them, it may of course be concluded that the blood or pus comes from the genital and not from the urinary organs.

Ultzmann has also drawn attention to various alterations in the *colour* of semen due to the presence of *Indigo* which, he states, is found occasionally in some excessively nervous men, especially after sexual excess. He describes a reddish form which, without the microscope, is liable to be mistaken for blood, and another of violet tint. He also states that, though he has never seen a blue

specimen, he possesses a bright green one in which the colour is due to a mixture of indigo and pus. I have not myself met with any case of the kind.

CHAPTER IV

CHANGES IN THE ZOOSPERMS

THE picture of a dense crowd of active zoosperms presented under the microscope by the semen in the healthy state may be altered in disease in several ways. Thus the zoosperms may be dead, or they may be reduced in number, or they may be absent altogether.

Necrozoospermia.—As each of the several secretions which go to make up the seminal fluid no doubt takes part in forming a suitable medium for preserving the vitality of the zoosperms, so it would seem that if one or other of them be absent or altered in character, the zoosperms may be deprived of life. But when the zoosperms are dead at the time of emission, it is generally in connection with some morbid change in the deep urethra, prostate, seminal vesicles, vasa deferentia, or testes. Inactivity of the zoosperms is also often associated with the presence of blood or pus in the semen, though one or

both of these may be present and yet the zoosperms may be active. The reason why they are sometimes dead and sometimes living in such cases is not certainly known, but is supposed to depend on the presence or absence of micro-organisms or their toxins.

Oligozoospermia, or diminution in the number of zoosperms in the semen, occurs naturally in old age and temporarily after sexual excess, but is also not infrequent as a result of disease. Anything that interferes with the production of zoosperms, or their escape into the urethra, may cause diminution in their number, and if one side only is affected the number will be proportionately less. The commonest cause is gonorrhœa. Tuberculosis or other wasting disease is another cause. But however few in number the zoosperms may be (FIG. 2), if any of them are in active movement, reproductive power cannot in the present state of our knowledge be said to be absent, though the chances of impregnation may be diminished.

Azoospermia, or absence of zoosperms from the seminal fluid, is the natural condition before puberty, and perhaps also in extreme old age. It may be congenital or acquired.

Congenital azoospermia is usually associated with absence or atrophy of the testes, or their retention in the abdomen or inguinal canals, or other misplacement or anomaly of the sexual organs.

The question of the reproductive power of *Cryptorchids* has often been discussed, but it is a difficult one to decide because so much of the evidence is indirect or inexact. Most cryptorchids are supposed to be sterile, but some appear to be fertile, though it may be only for a limited period. The present position appears to be (1) that certain cryptorchids, mostly those who married about the twentieth year, are believed to have become fathers, and (2) that retained testicles when examined after removal rarely show signs of spermatogenesis, and when they do show such signs it is only for a few years after puberty. Bland-Sutton says that in such cases perivascular sclerosis of the gland supervenes, which in a few years renders it sterile.

But apart from any deformity or discoverable disease past or present, the semen in rare cases is found to be devoid of zoosperms, and this condition has been called *idiopathic*

azoospermia. Robin, for example, states that among several thousands of observations he has five times noted the absence of zoosperms from the ejaculated fluid. All five men, none of whom had ever had epididymitis, were vigorous and free from disease of any kind. Other similar cases have been reported by various observers, and I have seen one case myself. It need hardly be said that examination of the semen ought to be repeated under known conditions and at various times before a diagnosis of idiopathic azoospermia is arrived at. In connection with this too it must be kept in mind that temporary azoospermia may be due to sexual excess. A case by Matthews Duncan in which the semen was "sometimes healthy, sometimes azoospermic," is cited in the section on Aspermia.

Acquired Azoospermia.—The chief cause of acquired azoospermia is *Gonorrhœa,* by extension from the deep urethra to the ejaculatory ducts, and thence to the vas deferens and epididymis, whereby the duct or ducts become obstructed or in some other way rendered incapable of transmitting the zoosperms. Most authors attribute the resulting azoospermia to blocking of the lumen of the ducts,

but Terrillon believes that in many cases it is due to persistent catarrh of the mucous surface lining the ducts, for in experiments on dogs he found that, after injecting irritating fluids into the vas deferens, the zoosperms disappeared at an early stage of the inflammation thus set up, and before obliteration had had time to occur. Neisser attributes to gonorrhœa in husband or wife from 40 to 50 per cent. of all barren marriages.

Zoosperms may be also absent or few in number, imperfect or dead, in posterior urethritis with prostatitis or spermatocystitis.

When azoospermia follows epididymitis it does not bear any constant relation to the clinical severity of the preceding inflammation. No doubt in most cases the epididymitis has been obviously double, but this is not a necessity; for, as I have myself observed, azoospermia may follow epididymitis that has apparently affected only one side, while double epididymitis may not be so followed.

Liégeois examined the semen in 13 cases of unilateral epididymitis, with the result that in 12 of them, which were all caused by gonorrhœa, the specimens examined contained only from 1 to 30 or 40 zoosperms each. In

the remaining case, which was not due to gonorrhœa, there were from 100 to 150 zoosperms. Robin found no zoosperms in the semen of a man who had suffered from slight epididymitis on the left side only without any consecutive induration.

The adverse influence of double epididymitis on the procreative power is indicated by a number of cases collected by Liégeois. Thus, of a total of 83 cases of double gonorrhœal epididymitis, return of zoosperms was noted in only eight. Of these cases 23 were observed by Liégeois himself, 35 by Godard, and 25 by Gosselin.

It must also be remembered that inflammation may attack the vas deferens without extending to the epididymis, or at any rate without clinical signs of epididymitis, and therefore it seems probable that gonorrhœa may sometimes cause azoospermia without symptoms other than those which are usually attributed to posterior urethritis. So that it might be wise to look upon any man who has suffered from posterior urethritis as under suspicion of sterility, until or unless some sort of evidence to the contrary is forthcoming.

In aspermia the failure of emission at once

tells even the least observant man that something is wrong, and leads him to seek advice. In azoospermia, on the other hand, the quantity of fluid emitted may be so little affected that he is quite unconscious of any deficiency, and as his copulative power may be perfect and sexual feeling unimpaired, he rarely suspects himself to be the defaulting partner when pregnancy fails to occur. Hence too it happens that a certain number of marriages take place in which the primary cause for which, according to the Prayer Book, marriage was ordained, has no reasonable chance of being fulfilled. And it is clearly unfair that a woman should enter unknowingly into a union which must of necessity be barren.

It would be well if the medical profession made it more widely known that—apart of course from the obscure question of what is called *Sexual Incompatibility*—it is quite possible for a man to ascertain with reasonable certainty his condition as regards procreative power, and that before marriage every man who is under suspicion ought to do so. Further, it seems desirable that when marriage has already taken place and turns out to be barren, the condition of the husband

should always be inquired into before the more troublesome and complicated examination of the wife is undertaken.

With regard to sexual incompatibility it may be remarked that this condition may really be more rare than it is supposed to be. Most of the evidence relating to it, as far as human beings are concerned, seems to be indirect, and based chiefly on such facts as that a woman who remained sterile with a first husband has proved fertile with another. Obviously no such case should be attributed to incompatibility, unless the semen of the first husband was known to be normal.

A lump in the epididymis is always suspicious, and should always suggest examination of the semen. But the presence or absence of palpable thickening of the epididymis is not to be accepted as sufficient evidence of the presence or absence of procreative power. Kehrer, of Heidelberg, examined the semen in 96 cases of sterile marriage, and found azoospermia in 29, but although more than two-thirds of the men had suffered from gonorrhœa, no testicular lesion could be detected in many of them.

Although microscopic examination is the

only conclusive test, the appearance of the fluid emitted in azoospermia usually differs considerably to the naked eye from that of normal semen. The fluid is thinner and more watery in consistence and, after standing for some hours, the deposit forming the lower layer is scanty and sometimes hardly appreciable, instead of the two layers being of about equal bulk as in the normal state. Sometimes also there are small mucous masses from the seminal vesicles. In some cases the azoospermic fluid gives only a dull yellow reaction with nitric acid, instead of the brighter canary-yellow of normal semen. Under the microscope the deposit is seen to consist of epithelium, often in a state of fatty degeneration, granular matter, a variable number of leucocytes, and not infrequently Böttcher's crystals.

Besides gonorrhœa there are many other causes of azoospermia, temporary or permanent. Indeed, anything that prevents the production of zoosperms or prevents their escape into the urethra causes it.

Syphilis may cause azoospermia when the testis or epididymis has been affected on both sides either before birth or in childhood

or in adult life, and in both congenital and acquired syphilis. Cases of sterility have also been reported in which palpable signs of testicular disease were absent. Apart from lesions of the genital organs themselves, syphilis probably does not often prevent fertilisation of the ovum, but syphilis is the commonest cause of abortion and it causes immense and deplorable destruction of life by killing the offspring later on both before and after birth.

Hutinel long ago found syphilitic changes in the testes of children born before term, who only lived a few days, and though only one organ might appear to be affected, he always found on *post mortem* examination that both testes were more or less involved.

Tuberculosis is another cause of sterility when the genital organs are attacked, and it is to be regretted that the tuberculous are not more frequently incapable of procreation.

Godard, in 1857, drew attention to the sterile condition of men with tuberculous disease of one testicle. He states that tubercle of both organs always causes sterility and sometimes impotence also, while in tubercle of one side only the patient though potent

is sterile. That the semen contained no zoosperms in such cases Godard ascertained in many instances, both by examination of the ejaculated fluid and also of the contents of the vasa deferentia and seminal vesicles. Moreover, none of those who had married had become fathers since the testicle had become affected. This, Godard remarks, may seem extraordinary, seeing that one testicle remained healthy, but more surprising still the fact that in several cases the sterility had preceded by one or two years the obvious development of the testicular lesion. Robin accepts Godard's view as regards this influence of unilateral tuberculous disease, and says that it was also confirmed by Mantegazza.

Gout.—Orchitis sometimes occurs in gouty patients, and its chief characteristic seems to be its liability to alternate with other gouty affections, especially those of the joints. It is said to affect primarily and chiefly the body of the testis.

Among other diseases in which the testicle may suffer are mumps, typhoid fever, malaria, Malta fever, influenza, small-pox, scarlatina and tonsillitis.

Of these diseases *Mumps* takes the first

place, for orchitis is believed to occur in about one-third of all cases in male adolescence and adult life, and is followed by atrophy of the testis more frequently (70 per cent. according to Laveran) than any other form of orchitis. The testicle sometimes becomes swollen before the parotid, and in some epidemics of mumps cases occur in which the testicle only is attacked. The inflammation is usually limited to the body of the testis, but the epididymis may also be involved and may even be attacked before the testis. In the great majority of cases only one side is affected.

Typhoid orchitis seems to be not very uncommon, and may occur during the fever, or apparently more often during convalescence. The epididymis appears to suffer more frequently than the testis itself and though resolution may take place abscess is far from rare.

In severe cases of *Malaria* orchitis occurs occasionally. Charvot among others reported cases among the French soldiers in Tunis in 1888. Both testis and epididymis may be affected. The inflammation is acute, and there are sometimes exacerbations and remissions as in other malarial affections. It is

said to be not infrequently followed by atrophy.

In *Malta* or *Mediterranean* fever orchitis is not uncommon. Wurtz says it is an orchi-epididymitis, usually unilateral, comes on suddenly, and disappears in a few days without leaving any trace. I do not know of any evidence as to whether atrophy occurs after this form of orchitis, but in a man of 45 who had suffered severely from Malta fever with orchitis eight years before, I could not detect any wasting of either testicle.

In certain cases of arthritis in connection with *cerebro-spinal meningitis* inflammation of the testis and epididymis has been observed.

Although information as to their general effect on breeding capacity seems to be lacking, it will be seen that these testicular infections may interfere with procreative power in two ways; either by destruction of the spermatogenic function of the testis by atrophy or fibroid degeneration following orchitis, or by blocking the ducts as a consequence of epididymitis. And though the testicular affection appears to be one-sided in a large majority of cases, one cannot be sure by clinical examination alone that the other side has wholly

escaped. And it should be remembered that even when the mischief really is limited to one side it diminishes a man's procreative chances by one half, and that if the other organ for any reason happens to be disabled also, he becomes sterile.

In all such cases the only true test is by examination of the emitted fluid. The following case is instructive on this point as well as in some other respects, and it also indicates that the production of zoosperms may continue for at least four months after orchitis due to mumps and yet cease later on, and that too without marked atrophy of the testis.

A man, aged 35, of strong sexual desire and of perfect potency, who had been married 14 years, consulted me because he had no children. He said that for as long as he could remember he had had a rupture on the right side, and that about the age of puberty a small testicle first appeared on that side. The left testicle had always been present in its natural position. Eleven years ago he had mumps, accompanied by swelling of the left testicle. At some period between four and six months after the attack of mumps

the semen was examined and the report stated that normal zoosperms were then present. For this reason he felt sure that the sterility was not on his side, and was making arrangements for the examination of his wife by a gynæcologist when he came to me. On examination, there was an easily reducible inguinal hernia on the right side and a testicle about the size of a filbert. The left testicle was of fair size, though somewhat smaller and softer than the average. Both epididymis and cord were apparently normal. I advised him to abstain from coitus for a week and then to bring a specimen of the semen, which he did. This specimen was a typical example of the fluid emitted in azoospermia. It was thinner than normal semen, and even after standing 24 hours there was no separation into layers and no obvious deposit. The microscope showed scattered leucocytes, much fine granular matter, and a few crystals, but no trace of zoosperms.

As in the case of apparently one-sided lesion one is not justified from clinical examination alone in assuming reproductive power, so also when the testes are more or less wasted one is not justified in assuming

sterility, however small and useless the organs may appear to be. This point is well brought out in a case recorded by Churchman, in which a testicle which had wasted to the size of a date-seed after a kick on the scrotum, was removed and found to consist of normal testicular tissue. Zoosperms in good number were also present, both within the tubules and in the vas deferens. This suggests caution as regards the removal of any testicle except for some clear and urgent reason.

In the case of epididymitis it would seem theoretically that a lump in the tail which consists of the convolutions of a single duct, would be more likely to cause obstruction than a lump in the head which contains numerous ducts, but whether this is really so in practice seems to be uncertain.

Traumatism of various kinds, accidental or surgical, is also responsible for many cases of sterility when both testicles or their ducts are involved; but in surgical operations, if perineal lithotomy and operations on the prostate be excepted, only one side is usually affected. Such operations as castration and double vasectomy are of course meant to be followed by sterility.

The pressure of large *hydroceles, hæmatoceles,* or other scrotal swellings, especially if long-continued, sometimes causes degeneration of the testes and consequent loss of function.

If *Varicocele* causes sterility, it is probably but rarely, and only in the case of double varicocele would the question be likely to arise. No doubt in varicocele the testis on the affected side is frequently smaller and softer than its fellow, but that is not evidence of loss of function. Indeed, a small and soft organ is more likely to be efficient than one that is larger and harder ; for increased size and hardness may be due to fibroid change of a degenerative kind. If a patient with varicocele is also sterile, the evidence as regards cause and effect ought to be clear before any operation is suggested for the purpose of curing sterility, and the chances of failure should always be explained to the patient beforehand.

In 1906, Corner and Nitch published a report of their examination of over 100 cases after the inguinal operation for varicocele. In 84 per cent. they found the affected testis harder than the other and in 55 per cent. larger as well. This they attribute to fibrosis.

Unfortunately their observations afford no direct evidence of the spermatogenic value of such testes, but it seems probable that, although from the patient's point of view the organ may appear to be in a better condition than before the operation, it may be really of little or no functional use.

Exposure to *X-rays*, either as patient or operator, has been known to cause sterility in man since 1905, when Dr. Tilden Brown reported to the New York Academy of Medicine that ten men, none of whom had suffered from venereal disease or injury to the genital organs, but who had been working more or less with X-rays for about three years, were found to have azoospermia, but were not impotent. In a case mentioned by the *Medical News* in its report of Brown's observations, a man under treatment by X-rays for pruritus ani was known to have had active zoosperms previously, and though they disappeared after the treatment, they were again present about three months later on. P. Krause has also referred to a case (which may be the same) in which living zoosperms reappeared after five months' absence. Wullyamoz relates the case of a medical radiologist who for three years had

had complete azoospermia. In January 1909, he began to wear a special leaden X-ray proof apron whenever he was working with X-rays. Examination in July still showed an absence of zoosperms, but in October they were present again in abundance.

These cases seem to indicate that azoospermia from this cause is sometimes at any rate only temporary.

As regards the pathological changes produced by X-rays, the *British Medical Journal* (April 18, 1914) quotes from the report of an autopsy on the body of Dr. Tiraboschi, a radiologist of Bergamo, who had suffered for some years from radio-dermatitis. Both testicles were shrunk to the size of filbert nuts, the parenchyma being soft and yellow in colour. Histological examination showed pronounced atrophy of the epithelial cells of the seminiferous canaliculi. It was impossible to distinguish the various cellular elements and there was little or no evidence of karyokinesis. The basal membrane of the canaliculi was enormously thickened by proliferating connective tissue, which compressed and destroyed the glandular tissue. The whole of the epididymis was also invaded by connective tissue. The pernicious anaemia

to which he succumbed was the direct result of the absorption of the ionization products of the tissues most sensible to the X-rays, namely, the testicles, the osseous medulla and the spleen.

Obesity has long been known to affect adversely the reproductive power in both sexes. Senator thinks that the impotence frequently noted in fat men is probably due in the first instance to atrophy or other kind of degeneration in the testes resulting in azoospermia. Kisch states that while the general proportion of sterile to fertile marriages is 1 in 10, when the wife is very fat or both husband and wife are very fat, the proportion is 1 in 5. In the semen of corpulent men Kisch states that he has repeatedly found the zoosperms few in number or only feebly motile, while in 9 per cent. of his cases they were absent altogether.

Alcoholism.—Though direct evidence as to the effect of alcohol on the generative organs seems to be wanting, there had long been a general belief that alcoholism diminishes fertility in both sexes, but of late the more general opinion among medical men in this country appears to be that although alcohol may

perhaps increase fertility it lowers the quality of the off spring.

Forel says drink directly diminishes the population, and that in Russia abstainers are much more prolific than drinkers. He also refers to Bezzola's statistics as showing that a single drinking bout may have a blastophthoric effect. Dr. Yellowlees, of Glasgow, is of opinion that alcohol has a serious effect on the offspring, and he states that cases have come within his own experience of defective children begotten in drink.

How or why a union turns out to be barren in cases of alcoholism is not always clear. It must be remembered that alcoholism and obesity often go together, and that both very fat men and excessive drinkers are not infrequently impotent.

In his lectures on sterility in woman, Matthews Duncan records a striking case of a young woman given to alcohol who remained sterile for several years after marriage without any discoverable disease of the genital organs to account for the sterility. After a year's seclusion and total abstinence from alcohol she immediately became pregnant, and pregnancy also recurred. The same observer states

that alcoholic drinking in certain cases induces chronic ovaritis which often comes and goes in the presence or absence of the cause, and that when ovaritis is present sterility is frequently a result, and its cure is often followed by disappearance of the sterility. This is quoted here because it seems to suggest the question, does alcohol ever produce a similar effect on the gonad in man?

The prolonged or habitual use of certain *Drugs* is followed by sterility in some cases. Among such drugs may be mentioned lead, opium, arsenic, iodides and bromides.

Lead is the most important of these, as so many people are more or less exposed to lead-poisoning either through the drinking-water or as workers in one or other of the manifold arts and manufactures in which lead in some form is employed. In the form of diachylon lead is taken as an abortifacient in some parts of England. The influence of lead-poisoning on the reproductive power of men and women is still under inquiry.

Sir Thomas Oliver says: "Lead hits hard the reproductive powers of man and woman," and that "latent paternal and maternal plumbism is fatal to offspring."

Dr. A. Routh mentions the case of a woman who had repeated abortions until her husband was cured of plumbism, when she bore a living child. Verhaeghe, in the course of an inquiry into the health of house painters in Lille, made the discovery that there was a much higher percentage of still births among children born after the father had become a painter than before.

As regards the other drugs which have been said to cause sterility the evidence brought forward is not rarely inconclusive, nor has sufficient care always been taken to distinguish between sterility and impotence, and between *post* and *propter*.

There are many other alleged causes of sterility, in regard to which the evidence is mostly circumstantial or speculative. For instance, it is supposed that the spermatic secretion is suspended in most severe maladies that affect the human race, and this may be so in the case of acute disease, but we know that it is by no means always so in syphilis and tuberculosis.

Among various environmental influences which have more or less effect, temporary or permanent, on the reproductive power,

are over-feeding and under-feeding, changes of *Food,* changes of *Climate* and changes in the habits of life. About these more is known in regard to the lower animals than human beings. Such influences also concern both sexes, and are beyond the scope of the present work.

CHAPTER V

TREATMENT

THE Treatment of Sterility will of course depend on the cause, and has to some extent been indicated in the preceding pages.

In **Polyspermia** and **Oligospermia** no treatment is required when active zoosperms are present. When they are dead or absent the condition of the urethra, prostate, seminal vesicles, and testicles should be inquired into, and if oligospermia can be proved to be due to the absence of any particular constituent of the semen treatment, if any be practicable, should be guided by the result of clinical and microscopical examination.

Aspermia.—In *Relative Aspermia,* when congenital, the result of treatment is variable. If any cause of reflex irritation can be made out, it should of course be remedied if possible. Even when no organic lesion can be discovered and the cause seems to be wholly psychical, the man should never

be condemned as hopelessly sterile, for there is always a chance that circumstances may arise in which the inhibition may be removed. In the case recorded on page 23, treatment by drugs, the passing of sounds and faradism had no apparent effect; but another similar case in which the result was more fortunate was that of a man, aged 26, in whom the posterior urethra was extremely sensitive with marked spasmodic contraction of the compressor urethræ. These symptoms gradually yielded to the repeated passage of bougies, and faradism was also used. Some time after treatment had been discontinued this patient succeeded for the first time in his life in evoking emission, and no further difficulty was complained of. A specimen of the semen was sent to me and was found to contain zoosperms. He had previously been engaged, but had naturally refrained from marriage as long as the disability continued. Whether he married afterwards I do not know.

When no improvement takes place and marriage is in question, and still more if the question of issue is of special importance, the lot of such men is a hard one; for though potentially fertile they are practically sterile.

Ultzmann suggests that when the semen is known to be normal in such cases artificial insemination might be successful.

Acquired Aspermia.—When acquired aspermia is due to some organic change, such as cicatricial contraction following prostatic suppuration or injury involving the ejaculatory ducts, treatment will hardly be likely to be successful, but when the obstruction is merely due to prostatic swelling or induration, recovery may take place under treatment, as in the case given on page 25. When tuberculosis or prostatic enlargement is the cause, the result will depend on the course of those diseases.

In *Anæsthetic conditions* of the external genital organs the Faradic current should be applied by means of the wire brush or other dry electrode. Failing this, blistering might be tried, as in Curling's case referred to in an earlier chapter.

The form of acquired aspermia due to neuro-psychical causes, and associated with fear, anxiety, over-excitement and other emotional states, often gets well of itself when the cause is removed. In many such cases, however, there has been previous sexual

excess or misuse, and therefore inquiry should be made on this point, as well as regards gonorrhœa and spasmodic asthma. Search should also be made for any local condition capable of setting up reflex muscular spasm.

In *False Aspermia* treatment will depend on the nature of the impediment. Stricture must be treated by dilatation or otherwise, and urethral irritation and hyperæsthesia allayed as indicated in the case reported on page 30. Preputial calculi must be removed, and phimosis or short frenum dealt with by operation. Hypospadias or Epispadias should be remedied if possible, and urethral fistulæ closed. In the minor degrees of hypospadias, when the urethral opening is on some part of the glans penis, the reproductive function is not as a rule interfered with materially. When hypospadias or fistula cannot be effectually dealt with by operation, and the opening is so far back that the semen cannot reach the vagina in coitus, a possible remedy for sterility might be found in artificial insemination, as in the well-known case in which John Hunter succeeded by this means in securing impregnation in the wife of a man who had

hypospadias. Luteaud also has reported a successful result in a case of hypospadias.

When the semen is unusually *thick* or *thin*, if active zoosperms are present no treatment is required. If zoosperms are present, but motionless, or if they are absent, the cause should be sought in the testes, seminal vesicles, or prostate. But, as has already been mentioned, over-thick semen is sometimes found in healthy men when an unusually long time has elapsed without emission. In one such case in which activity of the zoosperms was defective in the first specimen which I examined, a second specimen emitted an hour after the first showed zoosperms normal in number and activity. This case suggests the remedy in such circumstances. In a case reported by Beigel in which the semen was habitually thick and the zoosperms inactive, pregnancy is stated to have followed the injection of a small quantity of tepid water into the vagina after coitus.

Hæmospermia and **Pyospermia.**—When *blood* or *pus* is mixed with the semen, treatment will depend on the source of the blood or pus, and will mostly be included in the treatment of urethritis, prostatitis, or seminal

vesiculitis as the case may be. When hæmospermia is the consequence of sexual excess, artificial or natural, the remedy is obvious.

Necrozoospermia, Oligozoospermia, Azoospermia.—To Necrozoospermia, which is not infrequently associated with hæmospermia and pyospermia, the foregoing remarks will also apply. And when no local cause can be discovered the patient's general state of health should always be inquired into.

When the number of zoosperms in the seminal fluid is abnormally small (oligozoospermia), or when they are absent altogether (azoospermia), or when they are small, imperfect, or wanting in activity, the first consideration is whether the condition is physiological or pathological, temporary or permanent.

The rate at which zoosperms are produced probably varies considerably in different men and at different times. So that in any case when few or none are to be found the sexual history should be first investigated. For it seems not improbable that certain men may be kept in a chronic state of azoospermia, not from disease, but simply as the result of excess. Take, for example, the case of a healthy man of strong sexual feeling who

marries and has sexual intercourse every day, or at any rate oftener than is compatible with his power of producing normal zoosperms. As long as this continues he is naturally sterile, but as a rule the excess does not last long. In some cases, however, it continues for years, and it seems probable that a certain number of barren marriages may be thus accounted for. A patient who consulted me for sudden and complete impotence, and who had been married fifteen years without children, told me that he had had intercourse nearly every night during the whole of that time. The obvious remedy is abstention for a time to allow of the formation of perfect zoosperms.

But apart from actual sterility it seems possible that an explanation of the prevalent belief that the first-born of a family is not infrequently in some way inferior to the later born may be found in the supposition that during the period of excess immediately after marriage the ovum has chanced to become fertilised by an imperfectly developed and unfit zoosperm. I do not know whether this possible explanation may have occurred to those who are engaged in the study of Eugenics, but at any rate it could do no harm

if it were utilised by the family doctor in advising moderation to the newly married.

As regards *Cryptorchids* and those suffering from other misplacements of the testicles, when the question of marriage has to be determined whatever fluid may be emitted should be examined for zoosperms from time to time ; for as has already been mentioned some of these subjects appear to be temporarily capable of procreation at some period between puberty and about the age of 20 to 25 years.

As *Gonorrhœa* is the chief cause of acquired azoospermia, whenever the posterior urethra is affected the patient should rest, and all possible measures should be taken to avoid extension to the ejaculatory ducts. When signs of implication of the vas deferens or epididymis are present, rest in bed is imperative, together with suitable local applications, support of the scrotum, and careful treatment of the urethritis. Vaccine treatment has been reported to act favourably in some cases of acute and sub-acute gonorrhœal epididymitis.

Though a testicle should of course be supported whenever it is affected, I know of no evidence that the wearing of a suspender in

gonorrhœa has any real influence in preventing epididymitis, though I have sometimes suspected it as a cause. Besides, a so-called suspender too often fails to suspend, in which case it is worse than useless, and merely a source of irritation and discomfort. The local application I have used for many years in acute and sub-acute epididymitis is a lotion containing one ounce each of the strong solution of lead subacetate and rectified spirit, and six ounces of distilled water. The addition of opium merely makes a muddy evil-smelling mixture, and is probably quite inert. The scrotum is wrapped up in lint soaked in the lotion and covered with oiled silk or gutta-percha tissue, and a triangular bandage with thigh straps is applied. It is most important that treatment should be continued until all swelling of cord or epididymis has disappeared.

After the acute stage, if hardness or thickening persist, iodide of potassium or of sodium, or other preparation of iodine should be given, and mercury may sometimes be added with advantage. A well-fitting suspender must always be worn.

Among the *Local applications* for chronic epididymitis mercurial ointment is often re-

commended, but the old ointment was much too strong for the scrotum and frequently set up dermatitis. The present preparation (B.P. 1914), which contains only 30 per cent. of mercury, is less likely to cause irritation, but when it is used the patient should be warned about hydrargyrism. Iodex may take the place of mercurial ointment, or a trial may be made of the sweating plan of treatment which consists in swathing the scrotum in cotton wool and then covering it with oiled silk or gutta-percha tissue, the whole being enclosed in a well-fitting suspender. When tenderness has disappeared, gentle massage of the epididymis is well worth trying. This the patient may be taught to do for himself with iodex, and it should be repeated for a few minutes night and morning after bathing with hot water.

I have long been convinced of the futility of the old method of strapping the scrotum with strips of adhesive plaster. When pressure is considered advisable it should be intermittent, not continuous, and may best be applied by means of an elastic bandage, the pressure of which can be regulated if necessary by the patient himself.

Waterhouse has reported the "almost instantaneous" relief of very severe pain by Bier's method in a case of gonorrhœal epididymitis. A band of garter elastic was applied round the scrotum and root of the penis. Bier himself has used his hyperæmic treatment for the indurations following epididymitis. For its application he advises that one or both testicles should be well drawn down, and that a soft rubber tube well padded with wool should then be placed round the root of the scrotum and the two ends fixed with clamp forceps. This together with a suspender is worn for several hours daily, the maximum duration of each application being twelve hours. For such cases of induration too Ionization has been suggested, and also injections of thiosinamin or fibrolysin.

The treatment of chronic epididymitis may have to be continued for some time, and the sooner it is begun the better will be the chances of success. In some apparently unpromising cases however perseverance may be successful. For instance, Curling cites a case of Godard's in which sterility following gonorrhœal epididymitis was cured after it had lasted a year and a half, and also gives the following case

of his own: "A gentleman, aged 38, was under my care on account of induration in both epididymes after inflammation. He was married, but his semen was destitute of spermatozoa. He continued long under treatment, and only at the end of two years, the induration having diminished, were spermatozoa detected in his semen."

It must be remembered that the proof of success in treatment as regards procreative power lies not in the disappearance of hardness or thickening of the epididymis, but in the presence of active zoosperms in the semen. I have noted the disappearance of palpable induration from the epididymes under treatment without any return of zoosperms.

In azoospermia from gonorrhœal epididymitis, when other means have failed, *operative treatment* to establish anastomosis between the vas deferens and the portion of the epididymis beyond the site of obstruction has been proposed and practised, and Dr. E. Martin, of Philadelphia, has reported successful cases. The operation is described in White and Martin's *Genito-Urinary and Venereal Diseases*, and also by Thomson Walker in his *Genito-Urinary Surgery*, 1914, who states that he has operated

in five cases but does not give the result. Posner, of Berlin, states that he has attempted vaso-orchidostomy in a fairly large number of cases, but without success. This observer also recommends that before any operation of the kind is undertaken, the testis should be punctured to ascertain whether zoosperms are present or not. But it may be pointed out that the presence of zoosperms in the testis would not prove that they could reach the urethra, especially if it be the case, as is maintained by Luys, that the ejaculatory ducts may become stenosed through gonorrhœa.

In *Syphilitic* affections of the testis or epididymis active specific treatment must of course be carried out, and unless this be promptly undertaken in orchitis atrophy of the testis will be likely to follow. Gummata of the penis usually disappear under treatment. In *Tuberculosis* sterility should be considered a fortunate thing.

In *General Diseases*, such as gout, and the various specific fevers, the treatment of orchitis is mostly included in that of its cause, with the addition of soothing applications, support of the scrotum, and rest until all signs of inflammation have disappeared. *Malarial*

orchitis is said to be readily amenable to large doses of quinine.

To relieve the pressure caused by *Hydrocele, Hæmatocele, Hernia,* or other scrotal swellings, the remedy will mostly be some form of surgical operation. At the same time it should not be forgotten that operative measures designed for the relief of these conditions, and also for *Varicocele,* may possibly themselves sometimes have a share in the causation of sterility.

For protection from the effects of *X-rays* various means have been devised by radiologists, and now that the possible effects on the reproductive power have become known, they would seem to be preventable by the use of suitable screens. That azoospermia due to this cause may be only temporary, in some cases at any rate, seems to be clear from those cited in the preceding chapter. As regards curative treatment once complete azoospermia has occurred nothing appears to be known.

In connection with this subject it may be mentioned that it has been proposed that certain degenerates and those otherwise unfit to breed, both men and women, should be sterilised by means of X-rays.

In sterility of the *Obese* the obvious remedy is to reduce fat, and most observers agree that if superfluous fat can be got rid of the reproductive power may return. Walter Heape remarks that an over-fattened ram or bull loses his normal reproductive vigour temporarily, but that under proper treatment he rapidly regains it.

When sterility appears to be due to *Alcohol or other Drugs*, the suspected substance, whatever it may be, should of course be left off, and restorative treatment adopted according to the circumstances of each case.

PART II.

IMPOTENCE

CHAPTER I

SEXUAL PHYSIOLOGY

IMPOTENCE may be briefly defined as inability to perform the sexual act.

Before dealing with the phenomena of impotence and some allied matters it will be convenient to refer briefly to the physiology of the sexual function.

This complex function which is a twofold function including both copulation and insemination, is under the control of nerve centres situated in the brain and in the lumbo-sacral portion of the spinal cord or, as some suppose, in the lumbar ganglia of the sympathetic system. The cerebral centre is the seat of the sexual appetite and impulse. The lumbar centres regulate the machinery of erection and ejaculation.

In normal conditions the cerebral and the lumbar centres act in unison. But the lumbar centres can act without the cerebral centre, for when the spinal cord is severed above the lumbar enlargement both erection and ejaculation may occur by means of the nervi erigentes which pass from the lumbar centres to the genital organs. But the cerebral centre may interfere with the lumbar centres and thus prevent the proper performance of the sexual act. This influence is supposed to be exercised through the medium of inhibitory nerves passing between the brain and the lumbar centres, and accounts for some of the phenomena of impotence to be considered by and by.

Erection of the penis, which is necessary for perfect coitus, is due to engorgement of the vascular sinuses of the erectile tissue with blood and is brought about through the agency of the nervi erigentes. The erect condition is chiefly maintained during the time necessary for the completion of coitus by compression of the efferent veins, which is effected partly by means of the involuntary muscular tissue of the penis, and partly by the bulbo-cavernosus ischio-cavernosus and perhaps other of the perineal muscles. The

corpus spongiosum, in erection, is not so rigid as the corpora cavernosa.

Erection can be evoked by stimulation of the cerebral centre, either by impressions originating in the brain, sexual thoughts for example, or by impressions conveyed through the senses, especially those of sight, touch, and smell. Erection may also be produced by spinal irritation, as in some lesions of the spinal cord, or in a reflex manner by peripheral irritation either of the external genital organs, especially the glans penis, the urethra, or the prostate, and sometimes by flagellation applied to the buttocks, as well as by distension of the urinary bladder or seminal vesicles.

Ejaculation is a reflex act, the centre for which, like that for erection, is situated in the lumbar enlargement of the spinal cord. In normal circumstances ejaculation should only occur when erection is present.

When under the influence of sexual excitement before and during coitus the erectile tissues become fully distended with blood and erection of the penis thus becomes complete, the veru montanum swells also, and thereby the orifices of the ejaculatory ducts are directed

forwards. During this time too Cowper's and the smaller urethral glands are pouring out a clear viscid secretion. As coitus is continued the testicles are forcibly drawn up by the cremaster muscles, and sexual excitement becomes gradually more and more intense until ejaculation takes place, and this according to Michael Foster is most probably effected by means of peristaltic contractions of the seminal vesicles and vasa deferentia, assisted by rhythmical contractions of the bulbo-cavernosus muscle.

The sexual act in normal circumstances is usually followed immediately by a certain transient sense of languor and sleepiness which is probably due to lowered blood pressure, and which in strong and healthy men may pass almost unnoticed. According to Freud, sexual gratification is the best hypnotic, for in his opinion most nervous insomnias are due to lack of it. Sometimes after coitus there is a feeling of chilliness, and a slight fall of temperature has been noted. Soon afterwards a sense of well-being and satisfaction follows, and many men find that coitus has the effect of clearing the brain and rendering them more fit for work than

before. No doubt too the sexual act, especially when a certain length of time has elapsed without any escape of semen, often relieves a nervous irritable man and improves his temper. Haig remarks, in his book on *Uric Acid*, that as the sexual act produces low and falling blood-pressure, it necessarily relieves conditions which are due to high and rising blood-pressure, such as mental depression and bad temper.

But although the *nervous shock* attending the sexual act may be so slight that it is hardly felt in the healthy state, it may have serious consequences in disease, especially when the vascular system is affected, and in certain exceptional cases the result may be fatal. Poncet, of Lyons, among others, has dealt with this question, and has recorded cases illustrating the evil effects of coitus in various morbid conditions, both medical and surgical. Kisch, of Marienbad, has reported among 21 cases of sudden death in stout persons, two in which death had occurred during connection. Again, Dr. Wynn Westcott, one of the coroners for London, in an address on " Sudden and unexpected deaths," remarks : " Simple fatal syncope may be due to muscular

exhaustion, especially during or after sexual intercourse; among 1,100 inquests a year, I have about four such occurrences, always in males." Tissot says: "Pline le naturaliste nous apprend que Cornelius Gallus, ancien préteur, et Titus Etherius, chevalier romain, moururent dans l'acte même du coït."

Although very hard work or overstrain, mental or physical, may abolish for the time either sexual desire or power or both, stimulation of the sexual impulse by bodily (not mental) exertion, provided it be moderate and not excessive, is a curious fact, and may perhaps be a survival from the time when the male had to pursue or fight for possession of the female. There are at the present time certain men whose vigour is somewhat below the average, who succeed better in coitus if they are slightly tired at the time the attempt is made. Fielding, that keenest of observers of human nature, remarks (in *Tom Jones*) that strong liquor "is never so apt to inflame inordinate desire as after moderate fatigue." A. and F. Leppmann state that it is known that soldiers after a long march are considerably more excited sensually than when at rest. Interesting in connection with this sub-

ject is the following citation from Brantôme: "Il se void souvent parmy les gens de guerre, mesme aux prises des villes par assauts, force soldats tous armés jouir des femmes, n'ayans le loisir et la patience de se desarmer pour passer leur rage et appetit, tant ils sont tentés."

CHAPTER II

GENERAL CONSIDERATIONS

IMPOTENCE may depend on various causes and, as will have been gathered from the preceding chapter, may be of cerebral, spinal, or peripheral origin.

Before going further, it may be as well to mention certain general considerations which it is desirable to keep in mind when dealing with disorders of the sexual function.

In the first place it must be recognised that the sexual instinct which originally was obeyed solely with a view to its natural end, the propagation of the race, after ages of misuse has come to be widely regarded as a passion to be indulged solely for the sake of sensual gratification. Not only among the unmarried, but too frequently also in married life, the natural consequence of sexual intercourse is not only undesired but sought to be evaded in every possible way. The prevalence of habits of satisfying the

sexual appetite in various ways other than by natural congress has also to be remembered, for abnormal indulgence of some kind forms an important factor in a large number of cases of impairment of the sexual function.

Thus it has to be accepted that much in the present state of society as regards sexual matters is really not physiological but pathological, and thus too it becomes necessary to view men and things not as we conceive they ought to be but as they are, seeing how wide is the difference between natural conditions and those which obtain at the present day.

Each case of sexual disorder should be studied on its own merits and in connection with its own surroundings, for the manner of dealing with it ought to depend entirely on the result of such study which, it may be added, is made none the easier by the fact that the phenomena of impotence are so largely subjective that the medical man has to rely to a considerable extent on what the patient tells him. Further, in no class of cases is it more important to take into account the intimate relationship that exists between body and mind.

Both the relations and the differences between Impotence and Sterility also need to be clearly understood. Not a little of what has been written on these subjects in the past and to some extent even now is obscure, owing to the use of vague and ambiguous language. Perhaps this confusion may be partly due to the fact that the English law does not appear to recognise sterility apart from impotence. A man of course may be both impotent and sterile, but it must not be forgotten that a sterile man is frequently potent and that a so-called impotent man is not always sterile; for there are degrees of impotence, some of which in favouring circumstances are compatible with the procreation of children. If we limit the term 'potent' to those men only who are capable of coitus with the organ in a state of perfect erection lasting until ejaculation has been completed, and affording perfect satisfaction to the agent, it must be admitted that such potency is by no means universal at the present time.

The sexual appetite and the ability to satisfy it vary widely in different men, just as the appetite for food and the digestive

power vary. Hence what exactly constitutes impairment of sexual power cannot be stated in exact terms applicable to all cases, and similarly the terms moderation and excess must be understood in a relative sense. For what may be moderation for one man, or at one time of life, may be excess for another man, or at another time of life. Before puberty, as well as for a certain time afterwards, any exercise of the sexual function is of course excess, and the same remark applies to men who from any cause are out of health, as well as to those in whom impaired potency is a natural consequence of age.

According to Curling most men are conscious of some decline in sexual vigour after the age of 40. This however is a matter on which no hard and fast rule can be laid down. The duration of potency varies greatly. The age at which it declines depends on the individual, and is to be reckoned not so much by mere years as by the previous wear and tear of life. It is also greatly influenced by the manner in which the sexual function has been treated in earlier life, and by the general state of health. According to Hammond not

one in twenty men in New York is capable of natural satisfactory intercourse at the age of sixty, and the same observer states that it is rare to find a man of fifty capable of intercourse once a fortnight.

Naturally, with advancing years sexual desire and power should decline concurrently and equally, and fortunate is the man when it is so. But in civilised man at the present time power not infrequently diminishes or even disappears while desire remains. Hence it happens that men who have misused their powers in earlier life and who have lost the power of erection sometimes seek gratification in perverse and unnatural ways in which erection is not necessary. This frequently leads to trouble and sometimes to the police court.

Lastly, it would be a great mistake to suppose that those who suffer from sexual troubles, fancied or real, are always or even most frequently to be found among the idle the worthless and the profligate. On the contrary, though mostly neurotic or of neurotic stock, many are honourable men of high intellectual capacity and culture, holding positions of responsibility and trust, and in all other

respects excellently qualified to become the fathers of fit and valuable citizens. And it must also be remarked that what is sometimes called youthful indiscretion, if abandoned, is not incompatible with the attainment of success and even eminence in the highest grades of intellectual and social life later on.

CHAPTER III

SECONDARY IMPOTENCE

THE subject of Impotence is a wide one which has been considered from different points of view, according as the observer has been a general physician or surgeon, a neurologist, an alienist, or a so-called genito-urinary specialist. It has also been divided and subdivided by authors in various ways, and not infrequently the more division the more confusion and overlapping. As perhaps no method of classification can be entirely satisfactory it seems best for practical purposes to divide simply into :

1. Secondary or symptomatic impotence when some definite preceding morbid condition, general or local, is found to be the cause.

2. Primary impotence when no such cause can be discovered.

Secondary impotence is here dealt with first because it ought to be excluded if possible before the disability is called primary.

One form of secondary impotence, which is often called *organic*, includes cases in which the hindrance to copulation depends on some defect, malformation, or other abnormality of the genital organs themselves or of adjacent parts, for example: Absence or defective development or atrophy of the penis; some severe cases of hypospadias and epispadias; elephantiasis or tumours of the penis; extreme shortness of the frenum. Varicosity of the veins of the penis has been said to be a cause of impotence, but I have seen so many cases without evidence or complaint of impotence that I am inclined to doubt it.

Indurated lumps or patches in the fibrous tissue of the penis, usually of the corpora cavernosa, may cause impotence by producing so much distortion or bending of the penis on erection that coitus is interfered with or prevented altogether. They are mostly found in men of middle age or beyond, are usually situated on or near the dorsum of the penis so that the curve on erection is usually upwards, and may or may not be attended by pain. They have been attributed to gout and thrombosis in the erectile tissue among other things, and have been compared with

the thickening which sometimes attacks the palmar fascia.

On the whole it seems most likely that these indurations begin as a fibrositis, and, like fibrositis in other parts of the body, may be caused by some microbic or toxic irritant from the alimentary or genito-urinary tract, or elsewhere, as well as by injury. In most cases unless there be a history of injury or gonorrhœa there is no history at all.

Large irreducible hernia, hydrocele, hæmatocele, or other large swellings or tumours of the scrotum or testicles, and a pendulous abdomen or excessive development of the hypogastric fat may also act as mechanical obstacles to the proper performance of the sexual act.

Varicocele is not infrequently present with sexual disorders, but there seems to be no clear evidence that it causes impotence. According to Sir W. Bennett, varicocele is always congenital though it does not often give trouble in childhood and so usually escapes notice until after puberty. He also states that taking the community generally, it will be found that 7 per cent. of males have varicocele, and that 80 per cent. of those who have varicocele are affected on the left side

only. Dr. Dukes, of Rugby, in an examination of 1000 boys between the ages of 13 and 15, found varicocele in 96 cases, 92 on the left side and 4 on the right side.

When a young man with varicocele gets run down in health from any cause, or suffers from habitual constipation or sexual excess, his varicose veins may make themselves felt, and they do this, especially in hot weather, by causing a sensation of weight or dragging and sometimes of actual pain which may be either continuous and dull or intermittent and sharp. If the man is neurotic and if the sexual function is out of order in any way, all the trouble, real or unreal, from which he may be suffering is likely to be put down to the varicocele. And such people may be hard to convince that their fears are groundless. If a varicocele appears or first causes trouble in middle age the condition of the kidney should always be inquired into.

As regards the effect of *Prostatectomy* on potency Freyer says: "There is no diminution of the sexual capacity after enucleation of the enlarged organ suprapubically by my method, the nerves controlling this function being left intact."

Thomson Walker found that of 112 cases of suprapubic prostatectomy the sexual function was unimpaired in 47.5 per cent. Desire and erection were normal in 32.5 per cent., but there was no discharge of semen. He also remarks that in the usual perineal operation the sexual powers are abolished unless a portion of the prostate is left as in Young's operation.

Excessive *riding on horseback* seems sometimes to affect potency. I have seen several cases of impotence in men who have been habitually in the saddle nearly all day long in connection with their duties on a ranch, or other similar occupation.

Although any debilitating malady, anæmia for example, may be accompanied by impaired potency, *Bright's disease* is one of the most important of the general diseases in which impotence is a not uncommon symptom, and care should be taken not to overlook it, for the treatment appropriate when the kidneys are sound may be injurious when they diseased. Thus one of the first things to be undertaken in all cases of sexual trouble is an examination of the urine, care being taken not to attach undue importance to a low specific gravity

of urine passed by a nervous patient at the time of consultation. More important still, as I learned long ago, is it not to accept the presence of *albumen* in the urine in such circumstances on one examination only as evidence of disease, and more especially when the quantity of urine passed is only small. For nervous and physical strain may account for a considerable amount of albumen, at a first visit for example, while subsequently when the patient is more at ease the urine may be quite normal.

In connection with this may be mentioned a form of intermittent and apparently functional albuminuria described by Moxon, in 1878, under the title of *The Albuminuria of Adolescents*, and since discussed under a variety of names by a large number of writers. It seems probable that this condition may be due to various causes, and it is noticed here because Moxon, Dickinson, and others considered masturbation to be one of the chief causes. This should be borne in mind when albumen is found in the urine of boys and young men.

Diabetes mellitus is another disease not infrequently accompanied by loss or impairment

of sexual power, and it may be an early symptom. In temporary glycosuria also sexual failure has been noted as one of the signs of an approaching attack. Nodules of the penis have been reported in some cases of diabetes. In *Diabetes insipidus* also impotence is said to be a prominent symptom.

In certain diseases and injuries of the *Nervous System* sexual derangements are frequently met with. In some epileptics temporary sexual excitement or perversion occurs, and in tabes impotence, partial or complete and sometimes preceded by increased desire, is common, and may be one of the earlier symptoms. Insensibility of the testis to pressure is said to be present in about half the cases of tabes. In general paralysis and senile dementia, sexual excitement and irregularities are common in the early stage, but impotence follows later on. In other forms of insanity and in idiocy the sexual function is not infrequently affected, and masturbation is common. Sometimes there is great excitement and sometimes perversion, with or without impotence. In melancholia, and also in diphtheritic paralysis, there is sometimes loss of desire or power or both, and in peripheral

neuritis from any cause impotence is said to be the rule. Abnormal increase of the sexual appetite in old age or its revival after it has once disappeared should be looked on with suspicion, for it may be the first sign of some form of neuro-psychical disorder or senile decay.

In *Neurasthenia* from any cause there may be loss of desire or of power or both. A. and F. Leppmann state that as a rule in severe accident-neurasthenia there is extinction of sexual desire, and that some experts look on this as almost diagnostic, and refuse to admit a severe accident-neurosis if the injured person has procreated a child since the accident. What is called sexual neurasthenia is mentioned in the next chapter.

Blows or falls on the *head*, especially the back of the head, and on the spine are occasionally followed by temporary or permanent impotence. *Cretins* are often impotent. They are also frequently masturbators. In *Acromegaly* impotence is common in advanced cases. In *Myxœdema* the sexual feelings are sometimes in abeyance.

In *Phthisis* impotence is present in some cases, but in others there is unfortunately increased desire without impotence, and this

leads too often to the procreation of undesirable offspring. A leading article in the *British Medical Journal* says : "The sexual erethism of the consumptive often shows itself in frequent indulgence, with selfish indifference to the feelings or danger of the other party."

Here also may be mentioned the irritable state of the sexual system often attended by frequent seminal emissions, which is liable to occur during convalescence from *Typhoid* and other fevers, as well as in certain other acute diseases, *Pneumonia* for example. These troubles usually subside as health is regained, but in some cases impotence follows, after *Influenza* for instance, and like other sequelæ of that disease may prove troublesome to deal with. I have seen a number of cases in which influenza appeared to be sometimes the sole cause and sometimes a contributory factor in causing impotence.

Prolonged residence in hot climates alone, and still more if a man has lived freely or suffered from any form of *tropical disease*, may have an adverse influence on the sexual power.

A history of *Malaria* is not uncommon in cases of impotence, but as such men have

usually lived in the tropics it is not always clear to what extent the impotence may be due to climate, or to malaria or to other diseases, dysentery for example, from which the patient may have suffered. Maclean states that Dr. Cutcliffe noticed that in some very malarious districts in Bengal large numbers of men were impotent, the women proving fruitful with men from other non-malarious regions. Impotence has also been observed in some cases of Bilharziosis.

X-Rays.—The only case I know of which bears on the possible influence of X-rays on potency, is that of a medical man who had been suffering for over a year from X-ray dermatitis when he consulted me for impotence which he attributed to the rays. The loss of power and also of sexual desire had both appeared about the same time as the skin trouble. His semen had been examined six months before I saw him and zoosperms were then present. As he was over 50, and as potency does not appear to have been affected in the cases of X-ray sterility so far reported, I was inclined to doubt his diagnosis as to the cause.

In general *obesity* the copulative power is

often feeble, with or without loss of desire, and sometimes the patient is also sterile, as has been mentioned in a preceding chapter.

Affections of the *digestive organs* are not infrequently accompanied by temporary impairment of sexual power and appetite. Peyer regards many cases of gastric disorder as reflex neuroses due to sexual irregularities.

But though disorders of the sexual and the digestive systems are often associated, their relation as regards cause and effect no doubt varies in different cases. Mental depression due to real or fancied impotence may affect the digestion through the nervous system, and, on the other hand, temporary disturbance of the sexual function not infrequently accompanies dyspepsia, especially in gouty subjects. Other gouty conditions are also liable to cause sexual disturbance and sometimes priapism, due to irritation of the genito-urinary passages by excess of uric acid in the urine.

Constipation with a loaded lower bowel may cause undue frequency of seminal emissions by reflex irritation, just as a full bladder excites erection and sometimes emission in the early morning, especially in the supine

position. It is also believed that the intestinal *toxins* produced in chronic constipation have an injurious effect on the sexual function in both sexes.

The presence of *Oxalates* in the urine of those who suffer from sexual disorders is well known to be not uncommon, but the reason why is not always clear. Often there are symptoms of faulty metabolism at the same time, but it seems probable that in some cases crystals of oxalate of lime originate in the mucus of the genito-urinary passages as suggested by Ralfe many years ago. I have repeatedly found them embedded in the shreds of muco-pus in cases of gleet.

Phosphatic deposits also are common in nervous patients with sexual trouble, and these again may be partly of local origin, especially in affections of the prostate. The cloudy-white appearance of the urine due to earthy phosphates frequently alarms these patients, as they fancy it is caused by the presence of semen, or as they term it, 'Spermatorrhœa.'

Asthma.—The association of sexual disorders with asthma has long been recognised abroad. A hundred years ago both Deslandes

and Lallemand expressed the opinion that nervous asthma might be caused by masturbation or venereal excess, and I have seen cases of both aspermia and impotence in connection with spasmodic asthma. Peyer considers disturbance of the generative system to be one of the chief exciting causes of asthma in both sexes. It is worth noting that in a discussion on asthma at the British Medical Association Meeting in 1911 no mention was made of the male generative system.

In *Syphilis*, when the genital organs are affected, there may be impotence with or without loss of desire, especially in double orchitis, and this also occurs occasionally without any discoverable lesion of the genital organs and at various stages of the disease. I have noted temporary loss of sexual appetite both in secondary and tertiary syphilis, and it is to be regretted that this is the exception and not the rule; I have also noticed its return under treatment. Occasionally gummata form in the penis, and during erection may cause more or less deformity. *Defective sexual development* has been attributed to inherited syphilis. Hutchinson thinks it is not uncommon for syphilis to damage in some

slight degree the whole bodily development, and that sometimes there appears to be special defect in sexual development.

Gonorrhœa is directly or indirectly responsible for a large proportion of cases of impotence. According to Fürbringer over 50 per cent. are due to that disease. In acute gonorrhœa there is often increased sexual desire, with frequent and painful erection and sometimes chordee. Posterior urethritis, prostatitis, and spermato-cystitis, are not uncommonly accompanied at first by undue frequency of seminal emissions which are sometimes bloody, and later on by imperfect erection and precipitate ejaculation.

Stricture of the urethra, if old and neglected, may invade the erectile tissue and thus cause deformity on erection, and a similar result may follow extensive abscesses, inflammation of the cavernous bodies, or too deep incisions in internal urethrotomy.

Impotence with reflex symptoms of various kinds, and occasionally suggestive of organic nervous disease, is sometimes met with in connection with *urethral stricture,* even of quite moderate degree, as in the following case: An officer in the army, aged 40, who

had been under my care for syphilis two and a half years before, and who had previously had several attacks of gonorrhœa, came to me again, six weeks after marriage, complaining of deficient erectile power and loss of desire, and also of stiffness and a sensation as of a foreign body within the anus, and pains in the thighs. The pupils and knee-jerks were normal. He had lately undergone a six weeks' course of mercurial inunction and iodides without any benefit, and was in a very nervous and depressed condition. On examination three strictures were found in the anterior urethra, the narrowest of which admitted No. 16 (French scale). Under dilatation of the strictures and the administration of strychnine he soon began to mend, and by the time No. 23 was reached his general condition had greatly improved; the pains and stiffness gradually disappeared and sexual desire and power returned.

Localised tender spots in the urethra, the result of gonorrhœa, are sometimes the source of reflex irritation leading to frequent emissions. *A contracted meatus,* congenital or acquired, is another occasional cause of reflex irritation, and on the other hand too much

cutting of the meatus, which was extensively practised some years ago both in America and in this country when Otis's views were in fashion, interferes with the propulsive power in ejaculation.

Balano-Posthitis and *Phimosis*, separately or combined, are common causes of reflex irritation, which may lead to sexual irregularities or to abnormal seminal emissions. Balanitis may of course occur without phimosis, but with phimosis there is usually more or less balanitis.

Whatever may have been the advantages of the prepuce to primitive man in a state of nature, there can be no doubt that to many civilised men of to-day it is a potential cause of irritation and discomfort, while the easily vulnerable state of the mucous membrane beneath a long or rarely retracted prepuce greatly increases the risk of venereal infection. Still, when the prepuce is retractable, as it ought always to be, most of the irritation and some of the risk may be avoided by keeping the parts in a clean and healthy condition.

Balano-posthitis may depend on a variety of causes, the commonest of which is decomposition of smegma allowed to collect beneath

the prepuce and behind the corona. Another form of balanitis is that set up by saccharine urine, and characterised by a deep crimson or purplish-red colour of the mucous membrane, sometimes with slight bleeding and a tendency to inflammatory phimosis and fissures of the preputial margin. The presence of this, or indeed of any form of balano-posthitis, should always suggest examination of the urine.

Phimosis may be congenital or acquired, partial or complete, and it is not necessary that it should be complete in order to cause irritation ; for a long prepuce without phimosis is sufficient to do so if the glans is habitually covered, unless strict cleanliness be observed.

Thus, in estimating the effect of peripheral irritation of this kind on the sexual function, it is important to look not only to the presence or absence of phimosis, but to the state of the mucous membrane, for a moist and over-sensitive condition from any cause may be sufficient to account for abnormal emissions or premature ejaculation in coitus.

Among other sources of reflex irritation which should be thought of are genital *Herpes*,

Eczema, and other skin diseases of the genital and anal regions, *Fissure, Piles,* and other rectal affections, as well as *Thread-worms.* In senile *Enlargement of the Prostate* there is sometimes considerable sexual excitement and irritation, with or without impotence.

Among the causes of symptomatic derangement of the sexual function, alcohol and certain drugs must also be included.

As regards *Alcohol,* Lauder Brunton remarks that it appears to excite the cerebral centre, while it partially paralyses the lumbar centre or the nervi erigentes; or as Shakespeare says "It provokes the desire, but it takes away the performance." No one will deny that alcohol provokes desire, but that it takes away performance needs qualification. It is no doubt true that a state of absolute drunkenness or of confirmed alcoholism may cause impotence, but to most healthy people alcohol taken occasionally and in moderate quantity is an aphrodisiac, and that it does not cause impotence is abundantly evident from the testimony of so many patients who say they have contracted venereal diseases whilst under its influence, as well as from the law reports in the daily papers. Again,

that alcohol and adultery are very frequently associated must be clear to any one who reads the newspapers when the Divorce Courts are in session. Indeed we have it on the authority of a former president of the Divorce Division, Lord Mersey, in his evidence before the Royal Commission on the Divorce Laws, that "if they could get rid of drink, the doors of divorce courts might almost be closed." So that if we accept the justice of a large proportion of the decrees *nisi* pronounced in the divorce courts and the truth of the evidence on which they are based, we must also accept it as true that alcohol in moderation does not take away 'performance.'

Those who are in the habit of taking *Opium*, or one or other of its derivatives, or *Cocaine*, are often deficient in sexual power, and the prolonged use of cocaine locally, to the nasal passages for example, has also been noticed to depress both desire and power. *Indian hemp* or *Hasheesh*, like opium-smoking, is said at first to increase both desire and power, but this action is only temporary, and if the drug be continued impotence follows later on. In *Lathyrism* which is due to over-consumption of the food grain called Lathyrus sativus

or Teora sexual power is said to be lost in severe cases.

It seems probable that any drug habit, whether the drug be alcohol or morphine or cocaine or chloral or any of the more modern hypnotics and anodynes, may have an adverse influence on the sexual function, as they all when taken habitually tend to diminution of self-control and deterioration of the moral sense, and thus may lead to sexual irregularity or excess, either natural or artificial, and consequent impotence.

Excessive *tobacco* smoking, and what is excess varies greatly in different men, certainly seems to affect potency adversely in many cases.

Other drugs which have been accused of causing impairment of sexual power are mercury, salicylic acid and salicylates, iodides, bromides, lead, and arsenic. As regards the last-named drug it may be mentioned that, in the epidemic of arsenical poisoning through beer in Lancashire some years ago, impotence was noted by several observers. Nitrate of potash and alkalies generally, if taken in large doses or for long periods, are also supposed to affect sexual power adversely, while chlorate

of potash is said sometimes to cause sexual excitement. Some of the preparations of *Thyroid gland* used in the treatment of various diseases have been reported to act as sexual depressants, while exposure to the fumes of *Carbon Disulphide,* especially in the preparation of rubber, besides peripheral neuritis also causes a form of impotence which is said to be not infrequently preceded by satyriasis.

CHAPTER IV

PRIMARY IMPOTENCE

In Primary Impotence the most important points are :

1. The Psychical element is a prominent factor in most cases.

2. Abnormal seminal emissions due to artificial or natural sexual excess are common.

3. Local changes in some part of the genito-urinary system are present in many cases as a result of irritation and over-stimulation.

Thus the phenomena of primary impotence may be conveniently dealt with by consideration of these three points, but though they may be separated to some extent for the purpose of description they are commonly associated in practice, one or other predominating in different cases according to circumstances.

Psychical Impotence probably dates from the time when man first began to think about himself, and evidences are to be found in

the writings of all ages. It may be present alone, as for example in the case of a nervous but otherwise healthy young man who, from fear of incapacity or lack of self-confidence, suddenly finds himself impotent on his wedding night. Or again, a man marries and leads a moderate and healthy sexual life and becomes a father in due course. His wife dies, and after an interval of continence he wishes to marry again. Such a man, if neurotic, may begin to doubt whether he has not become impotent from disuse, and if he dwells on the matter is not unlikely to be temporarily incompetent.

Mental fatigue or *pre-occupation*, or *overwork*, especially in connection with financial, mathematical, or other absorbing pursuits, not infrequently lessens and sometimes abolishes for the time either desire or power or both. This is generally attributed to the law of compensation, and many eminent men of various times, including Sir Isaac Newton, are said to have been sexually deficient.

The inhibitory effect on sexual activity of suddenly calling attention to some irrelevant matter has been amusingly described by Sterne in the clock-winding incident in

the opening chapter of *Tristram Shandy*. Fear, anger, disgust, grief, and other *emotional disturbances* are all capable of causing temporary impotence, as is also a period of prolonged sexual excitement before attempting coitus. In such cases there may be only a single failure, in which case the patient rarely comes under medical notice. One who is not neurotic nor prone to self-criticism will probably ignore and forget it, and thus no harm is done. In converse circumstances the memory of failure may be sufficient to prevent success for a length of time varying with the nervous susceptibility of the individual concerned.

An excellent illustration of this form of psychical impotence is given by Brantôme. It also indicates the unwisdom of boasting, in sexual as in other matters: "Une dame devisant d'amour avec un gentilhomme, il lui dit, entre autres propos, que s'il estoit couché avec elle, qu'il entreprendroit faire six postes la nuict, tant sa beauté le feroit bien piquer. 'Vous vous vantez de beaucoup,' dit-elle. 'Je vous assigne donc à une telle nuict.' A quoy il ne faillit de comparoistre; mais le malheur fut pour lui qu'il fut surpris,

estant dans le lict, d'une telle convulsion, refroidissement et retirement de nerf, qu'il ne put pas faire une seule poste ; si bien que la dame lui dit : 'Ne voulez-vous faire autre chose ? Or, vuidez de mon lict ; je ne le vous ay pas presté comme un lict d'hostellerie, pour vous y mettre à vostre aise et reposer. Parquoy, vuidez.' Et ainsi le renvoya et se mocqua bien après de luy, l'haïssant plus que peste."

The term *relative* has been applied to a form of psychical impotence in which a man is potent only in certain circumstances, or with some particular woman and not with another ; and if, as Ultzmann remarks, the woman with whom the disability occurs happens to be the wife the situation is an unfortunate one. This form of impotence is probably not uncommon in marriages of convenience when mutual affection is lacking.

The curious cases in which a man is potent only when the woman is dressed in some particular way, or has some physical defect or deformity or other peculiarity may be regarded as instances of perversion.

Anaphrodisia.—In certain cases the natural instinct seems to be wanting, sexual desire

being never experienced, and in most of them there is arrested development or other manifest defect in some part of the nervous or the sexual system.

In some rare instances, however, there is complete and apparently congenital absence of the sexual impulse without discoverable physical cause, as in the following case: The patient was a healthy looking naval officer, aged 26, with nothing unusual in his general appearance or, as far as could be ascertained, in his genital organs. He stated that he had never felt any sexual desire, though he had occasional erections as well as nocturnal emissions. He had never masturbated, but had attempted sexual intercourse several times, not at all from inclination but simply because he wished to be like other men. On no such occasion, however, had there been either desire or pleasure or erection or emission. There was no history of injury or severe illness of any kind, and the urine was free from albumen and sugar. There was a family history of gout, but the patient himself had never suffered. His brothers were said to be normal in regard to sexual matters.

Acquired Anaphrodisia is not uncommon. It may be temporary or permanent and due to one or other of various causes, including most of the acute and some chronic diseases and also, as has already been mentioned, absorbing scientific or other studies and occupations.

Like impotence, Anaphrodisia may also be *relative* and indeed in some degree is natural, since no man is sexually attracted by all women (and happy is the man if it be only by one woman). Thus relative anaphrodisia may lead to relative impotence. It may also lead to the divorce court.

There are certain cases of marriage in which without dislike or absolute want of desire there is a state of more or less indifference to sexual matters, as for example in the case of a dyspeptic man of 36 who consulted me for lack of power, and who had lived with his wife for more than ten years without any attempt at intercourse. His wife also had been indifferent, and his own desire though present to some extent had been insufficient to lead him to make any attempt until after the period just mentioned, when as might have been expected he failed.

With the march of civilisation some natural instincts have been partially or wholly lost. The civilised human female, for example, appears to have lost her maternal instinct to the extent that unlike other animals she now has to be taught how to tend the offspring which she brings into the world. There are also rare instances of individuals whose sexual instinct fails to teach them how to perform the sexual act. I lately saw a healthy man of 44 who had lived fifteen years of married life without proper intercourse through the ignorance of both husband and wife of the necessary technic. He had been satisfied with certain abortive attempts about once a week ever since his marriage, and although of course pregnancy did not occur both husband and wife believed that coitus had been naturally and fully accomplished.

Psychical Impotence is much more frequent in connection with the effects of sexual excess or misuse or of gonorrhœa than alone, and is then often associated with a condition of nervous exhaustion and other symptoms called neurasthenia.

The term *Sexual Neurasthenia* is now often used to describe certain cases of general

nervous weakness and irritation combined with sexual symptoms. G. M. Beard, an American physician who appears to have invented the term, long ago laid it down that neurasthenia may excite disorders of the reproductive organs, and on the other hand that disorders of those organs as well as masturbation may be excitants of neurasthenia. Doubtless sexual trouble of some kind is often associated with a variable number of the manifold symptoms, physical and mental, now known as neurasthenia and psychasthenia, and either the sexual or the nervous element may be the cause or the effect in different cases, a point which can only be determined by careful study of each case and its circumstances. Herman says that a frequent cause of neurasthenia in women is "the too frequent practice of preventing pregnancy without consideration of the feelings of the wife." A similar remark might apply to the husband also. Another cause is enforced sexual abstinence.

Sexual Hypochondriasis.—Hypochondriasis has been defined as a form of mental unsoundness closely allied to melancholia and characterised by a morbid anxiety without

any or only very slight foundation, relative to the state of physical health. If for the words 'physical health' we substitute 'the sexual organs' we have the condition often called sexual hypochondriasis, and the sexual element makes it none the easier, but even more difficult to deal with in many cases. Sexual excess, natural or artificial, is generally considered to be a potent cause of hypochondriasis. Forel thinks masturbation is not a cause, but that when present it is either an effect of the hypochondriasis or simply associated with it. Both neurasthenia and hypochondriasis are terms which are often used loosely as a cloak for ignorance.

The extent to which the psychical element prevails in cases of sexual disorder varies greatly, but as a rule it may be said that the more sensitive the nervous organisation of the patient, the earlier and the more severely will he suffer. The higher the development of the moral sense the more easily will it be damaged, but it does not follow that the degree of mental trouble corresponds at all with that of the physical trouble if such there be.

Given, then, some previous sexual irregularity in a neurotic subject, the way in which

a climax comes about may be somewhat as follows: A young man perhaps highly educated and of more than average intellectual power, from one or other cause of mental strain or worry—reading for an examination for instance—neglects to take sufficient exercise, gets his general health upset and his digestion out of order. By and by the sexual apparatus becomes disordered too, and nocturnal emissions occur. These gradually become so frequent that he gets alarmed, begins to brood over his troubles, sleeps badly, and perhaps takes to reading books which he thinks bear on his case. Then the memory of old bad habits comes back to him, and he imagines that they are in some way connected with his present state, draws false inferences, and ends by convincing himself that he is impotent and incurable.

The same end may be arrived at from the starting point of a marriage engagement—an event which is not uncommonly the occasion of much introspective and retrospective self-examination. During such an engagement a nervous young man is often liable to repeated sexual excitement which, if not gratified, is naturally soon followed by undue

frequency of seminal emissions, and a sequence of events similar to what has just been described. When marriage is in question, however, matters may assume a more serious aspect if his morbid ideas are not checked; for he may gradually drift into thinking himself unworthy of the object of his affection or that he has committed some unpardonable sin, and thus become reduced to a state of despair owing to a conviction of moral unworthiness or physical incapacity or both. In some of the worst cases the end is insanity, or even suicide as in a case under my own observation.

With regard to the mental effects of masturbation, Sir George Savage (in the Lumleian Lectures for 1907) remarks that though he does not attribute any serious increase of insanity to it, "yet the dread of its results, which are so commonly enforced upon the public by quacks, has a very serious influence in producing a number of youthful hypochondriacs and a considerable number of suicides." Savage also believes that at present "there are more celibates who indulge in the habit to a longer period and greater extent than if they married early."

Of the various means resorted to for satisfying the sexual appetite outside natural coitus, besides masturbation which is the commonest, there are also other forms of artificial stimulation practised by the individual alone or in conjunction with others of the same or the other sex. It must be remembered that mechanical irritation to the extent of producing ejaculation is not necessary to cause ill-effects, for they may follow many other devices which may or may not stop short of provoking the sexual orgasm. These include impressions originating in the brain through the imagination, as well as impressions conveyed to the nerve centres through any of the senses in a variety of ways which hardly need to be particularised. All such artificial modes of promoting sexual excitement as well as the practice of interrupting coitus (Onanism) and excess in natural intercourse may be placed in the same category as nerve-disturbers.

Onanism.—This widely prevalent artifice for avoiding conception, which is always injurious sooner or later and has already been referred to as a cause of aspermia, may gave rise to a variety of symptoms as in the

following examples: A man, aged 43, owing to his wife's bad confinements and the advent of two children in rapid succession, had for several years, though indulging in coitus twice or three times a week, always withdrawn before ejaculation occurred. At the time I saw him he had for a year lost all sexual desire, and was thus practically impotent, though whether he was actually so was open to doubt as, having lost all inclination, he had made no attempt at intercourse. He also suffered from depression, headache, backache, and other nervous symptoms. Another man with three children whose wife refused to bear any more practised interruption for twelve years. He then at the age of 42 lost all power of erection, though desire remained as strong as ever. Another man, aged 38, had gradual loss of power after six years, and eighteen months later total loss of desire.

Thus it will be seen that the consequences of this practice vary in different cases. The nervous system always suffers to some extent according to the nervous organisation of the individual, and in addition there may be partial or total loss of power or of desire

or both. And although sometimes Onanism is continued for years without recognised mischief, the patient should always be warned that whoever makes a practice of preventing, delaying or checking the natural completion of the sexual act, whether by withdrawing before emission, by voluntary effort or by obstruction of the urethra, may surely expect to pay the penalty sooner or later. There is nothing good to be said about Onanism, and it would be well if all medical men would do what they can to prevent it.

The results of natural and artificial excess are similar in many respects, but in the case of artificial indulgence the psychical effects are usually much more marked than in the case of natural excess. Artificial excess too can be and often is carried to a far greater length than excess in coitus, first because in masturbation erection is not requisite, and secondly because the cooperation of another person is not required.

The ill-effects of sexual excess of any kind depend partly on the associated nervous action, and partly on the loss of semen, or to quote the words of Dr. Mott in reference to the evil influence of sexual excess in the

causation of tabes and general paralysis: "It acts in two ways (1) directly by exhaustion of neuro-potential; (2) indirectly, in the male, by the excessive loss to the body of highly phosphorized nucleo-proteids contained in the sperm. These are bio-chemical substances possessed of great specific energy and are not easily replaced."

Seminal Emissions.—One of the commonest troubles complained of in primary sexual disorders is abnormal frequency of seminal emissions, or, as the patient puts it, 'Spermatorrhœa.' This vague term, by the way, has done an infinite amount of mischief as a bogey for frightening nervous people, and it has really no definite meaning at the present time. By patients it is used as a general name for all kinds of discharges, real or unreal, and even in the medical profession it is used in different senses by different authors, so that it would probably be best to discard it altogether, at any rate until some general agreement as to its precise signification has been arrived at.

In the normal state ejaculation of semen should only occur when erection is present, and during full consciousness it should only

occur in coitus. During sleep, however, or perhaps more commonly between sleeping and waking, occasional emissions must now be considered normal. These emissions mostly take place in the early morning when the bladder is full and the sleeper lying on his back. Their exciting cause may be either central—an erotic dream for example—or peripheral from distension of the seminal vesicles or of the urinary bladder, or both.

The frequency of nocturnal emissions varies according to the individual and the circumstances of his sexual life. Healthy married men, living with their wives under ordinary conditions, do not usually have them at all, or but rarely. Most healthy unmarried men, from the age of 16 or 17 to 40 or later who are continent, have nocturnal emissions at intervals varying from one week to five or six weeks. Under the influence of ungratified sexual excitement or other circumstances, such as excess in eating or drinking, indigestion, constipation, or lack of the usual amount of exercise, the frequency of the emissions is often temporarily increased. Thus they may occur for two or even three nights in succession followed by a considerable interval.

Normal emissions apart from coitus have the following characters: (*a*) They arise during sleep. (*b*) They are accompanied by an erotic dream, and (*c*) by erection of the penis. (*d*) The sleeper awakes as the orgasm is reached. It must be added, however, that occasionally when sleep is so profound that though the spinal centres are stimulated the cerebral centre remains unaffected, emissions may occur without dreaming, and without awaking the sleeper.

Nocturnal emissions, like coitus, should not as a rule be followed by depression or feeling of slackness next day. But as there are exceptions to most rules so there are a certain number of healthy but neurotic men who find that on the day after an emission they are not perfectly fit. For example, a highly neurotic patient of mine who was a well-known athlete in his day, was always in a state of trepidation on the day before an important engagement lest he should have an emission during the night, as he had learned by experience that on the following day he was never able to do himself justice. Such happenings are due to nervous apprehension and do not necessarily indicate disease.

In disordered states of the sexual function one or other of the characters of normal emissions mentioned above may be altered or absent, and the emissions may become so frequent that they occur every night, or even more than once in the same night.

In a still more irritable state of the sexual centres emission may take place in the day-time, with or without erection, under the influence of various slight stimuli, central or peripheral, which in health would have no such effect ; for example, libidinous thoughts or impressions conveyed through the senses, riding on horseback, cycling, friction of the clothes during gymnastic exercises or even in ordinary walking. In certain persons anxiety or mental stress, quite apart from sexual matters, and due to such circumstances as working against time in an examination or trying to solve a difficult mathematical problem will provoke emission, though here perhaps friction due to the incidental movement and fidgeting may be partly to blame.

A soldier who fought in the Boer war told me he was liable to involuntary emission when he found himself in a tight corner. Seminal emission may also occur at the time

of death, and is popularly supposed to be especially common in death by hanging, but according to Dixon Mann this is not so. Escape of semen, he says, is met with in many kinds of death, both violent and natural. Jex-Blake says that in death by lightning seminal emissions are "not rare."

The commonest causes of abnormal emissions are excess, artificial or natural, and posterior urethritis, especially when gonorrhœa has extended to the colliculus, ejaculatory ducts, prostate or seminal vesicles. In either case the nerve centres get into the bad habit of responding too easily and too quickly to stimuli, and the consequence is that if a man in this state attempts coitus he fails. Erection if it occurs at all is usually imperfect and unstable, and emission often takes place before there is time for penetration, or if penetration is effected ejaculation follows so quickly that a feeling of disgust rather than of satisfaction is experienced. This combination of precipitate ejaculation, with imperfection or absence of erection, constitutes what has been called *Impotence with irritable weakness*, and it is one of the commonest forms of derangement of the sexual function at the present time.

But though excess or misuse is a predominant cause of premature ejaculation, it may be mentioned that among the men of to-day there are a certain number in whom, without apparent adequate cause, the sexual centres seem to be inherently over-sensitive and excitable. This condition may be found occasionally among married men of active brain but not necessarily markedly neurotic, who enjoy fair health, and who deny any previous sexual irregularity. Indeed, some say they never exercised the sexual function at all before marriage, and most have married somewhat late in life. Such men, although they may become fathers, complain that coitus comes to an end before they or their wives have time to feel full satisfaction from the act. In most of these cases, however, more or less improvement takes place as the man becomes accustomed to the environment of married life, so that though in some cases conjugal misunderstanding is the result, many wisely accept the situation and cease to worry about it.

These cases of early ejaculation without definite assignable cause, may perhaps indicate that under the nervous stress of modern life

the sexual centres are becoming more impressionable and more quickly responsive to stimulation, and thus that the duration of the sexual act so far as the man is concerned may be tending to become gradually shorter.

The Local Effects of sexual irregularity and excess vary greatly in different cases. Whilst a sensitive man of unstable nervous organisation will suffer first and chiefly in his nervous system, a stolid insensitive man may commit considerable excesses without marked nervous symptoms, and may continue until some disorder of the genito-urinary system leads him to seek advice.

The local effects produced by excess or misuse and those due to gonorrhœa are in many respects similar as regards the sexual symptoms to which they may give rise, but of course in gonorrhœal cases the important question of infection (which does not come within the scope of this work) has always to be considered.

In many cases there is an intermittent discharge of clear viscid glycerin-like fluid due to over-secretion by Cowper's and the other urethral glands. This is an exaggeration of what occurs naturally in coitus and under

sexual excitement, and which is sometimes called *urethrorrhœa ex libidine.*

The commonest local change in primary impotence is hyperæsthesia of the urethra, and especially of the prostatic and bulbous portions, together with a condition of chronic congestion or inflammation probably affecting primarily and chiefly the colliculus and its neighbourhood.

This condition often extends to the ducts and follicles of the prostate, and thus a chronic *Prostatitis* of variable extent is frequently present with the other phenomena of impotence. In catarrhal prostatitis there is of course more or less discharge from the prostate, and when the bulbous portion of the urethra is affected, from Cowper's and the other urethral glands.

The discharge appears most frequently during defecation, especially if attended by straining, but often after urination also, and sometimes independently of either on any sudden muscular movement such as occurs in coughing or sneezing, as well as during sexual excitement. There may be only a drop or two but sometimes considerably more, and the fluid may be glairy, stringy, and clear,

or thinner and more or less opaque according to the proportion of urethral or prostatic secretion contained in it. Berkeley Hill says that in prostatitis from masturbation or venereal excess the urine is often more or less bloody. The urethra is nearly always extremely sensitive to instruments, but in some cases of old standing is more or less insensitive. Chronic prostatitis is commonly accompanied by symptoms of neurasthenia more or less marked according to the neurotic tendency of each patient.

When the ejaculatory ducts are relaxed or infiltrated some of the contents of the vasa deferentia and seminal vesicles are liable to be expressed by straining, and the same thing may happen at times to healthy men during violent exercise, especially rowing.

All these discharges are usually called 'Spermatorrhœa' by the patient, and if the seminal passages have not been cleared for some time, zoosperms in varying number may be present in the discharge, but that of course is no reason why it should be called spermatorrhœa. The microscope will show what the discharge contains, and the significance of the presence or absence of zoosperms

will depend on the circumstances of the particular case.

In connection with this subject the term 'Prostatorrhœa' has come to be widely used in medical books, and especially in the United States where apparently it was born, though why this special name should have been thought necessary for one of the signs of catarrhal prostatitis is hard to understand. Fortunately the word has not become so widely known to patients as 'Spermatorrhœa.' But both have been used in different senses by different writers, and if both were consigned to the scrap-heap we should be well rid of two indefinite and confusing mouthfuls, and nobody would be one penny the worse.

For further information on diseases of the urethra, prostate and seminal vesicles, some work on genito-urinary diseases should be consulted.

Neuro-Muscular Atony affecting some part of the apparatus concerned in erection and ejaculation is an important factor in some cases of impotence. Besides the unstriped muscular tissue of the penis, the muscles chiefly concerned in the sexual act are the

compressor urethræ, the ischio-cavernosus on each side and the bulbo-cavernosus in the middle. The ischio-cavernosus muscles act on the corpora cavernosa, while the bulbo-cavernosus acts on the corpus spongiosum and particularly on the bulbous portion of it. Thus, while the ischio-cavernosus muscles are called into action chiefly and perhaps only during erection, the bulbo-cavernosus is called into action at every act of urination, as well as at every seminal emission however brought about. So that the bulbo-cavernosus, which it may be remembered has no bony attachment, and perhaps the compressor urethræ seem more liable than the other muscles to fail from excessive use, and this failure may show itself in urination by imperfect expulsion of the last drops and consequent dribbling afterwards; in erection, by the glans and corpus spongiosum remaining more or less flaccid while the corpora cavernosa may be distended; and in emission, by impairment of ejaculatory power, so that the semen, instead of being forcibly ejected, escapes slowly and imperfectly. The urethra is sometimes more or less insensitive, as shown by the easy manner in which an

instrument slips into the bladder without any discomfort to the patient.

In some cases the neuro-muscular weakness seems to be inherent, and there is not infrequently a history of *Enuresis* in earlier life. This was pointed out by Lallemand long ago, and I have myself noted the connection between enuresis in childhood and impotence or other sexual disorder later on in a number of cases.

A curious case bearing on this point is that of a married man, aged 37, who consulted me for slowness and want of force in ejaculation. This he said had always been so both in nocturnal emissions and in coitus. He had no difficulty in erection or in penetration, but apparently there was no real orgasm and hardly any pleasurable feeling. In coitus the semen began to trickle away slowly before withdrawal and continued to do so for a few minutes afterwards. In childhood he had enuresis which lasted more or less till about the age of 18, when it ceased. At the age of 8 he was supposed to have retention of urine, and a country doctor taught him to pass a metal catheter, and this he continued to do from time to time up to the time he

came to me, that is for about 30 years, although he never drew off more than about half a wineglassful of urine and sometimes only a few drops. He had never suffered from any venereal or other genital disease or injury and his general health had always been good. There was now no difficulty about urination, and on one occasion I saw him pass nine ounces of clear, acid, non-albuminous urine in a full stream and without discomfort of any kind. There was no other cause for his trouble that I could discover except the enuresis and the long-continued use of the catheter. The bulbo-cavernosus reflex was absent and the bulbo-cavernosus seemed to be the muscle chiefly at fault. I treated him with nux vomica and iron, and applied faradism to the urethra as well as externally, but he attended irregularly and I do not know the result.

CHAPTER V

GENERAL TREATMENT

In the Treatment of Impotence and allied disorders of the sexual system the first thing to do is to inquire carefully into the patient's general state, both physical and mental. And the next thing is to find out whether he is suffering from any general or local disease likely to be the cause of the sexual trouble whatever it may be—in other words, not to conclude that the sexual trouble is primary until the secondary or symptomatic forms have been excluded. In all cases with the exception perhaps of those due solely to mechanical causes, it is of the first importance that the doctor should gain the full confidence of the patient if treatment is to be successful. Whoever thinks these cases can be cured by the mere writing of a prescription had better leave them alone altogether.

In what is called *organic* impotence the treatment, if any be practicable, will mostly

be by one or other of the operations which are described in most works on surgery.

In the troublesome cases in which coitus is interfered with by bending or distortion of the penis on erection from the presence of *indurated patches or lumps* in the fibrous tissue treatment is unsatisfactory. Sometimes they decrease in size spontaneously; sometimes iodides seem to have a favourable effect; and sometimes the patches remain stationary or slowly increase in spite of treatment. Locally, various preparations of mercury and iodine have been used with varying results. In a case in which gonorrhœa was the apparent cause I prescribed Iodex to be well rubbed in every day after bathing with hot water, but I do not know the result.

In one of my cases in which the induration followed injury during coitus the pain on erection ceased and the induration decreased in size under free purgation. In another case, also due to injury during coitus, the thickening seemed to diminish for a time under inunction with iodine vasogen, but the upward curve on erection remained much as before. I do not know whether ionization or fibrolysin or thiosinamin has been tried in such cases.

When *Varicocele* causes inconvenience it should be supported by a suspender which, with daily cold douching and attention to the bowels, will suffice for the great majority of cases. Sometimes tonics are needed, and occasionally astringent lotions are also of service. Only when a varicocele is so large as to cause inconvenience from its bulk, or causes severe pain which cannot be relieved by other means, or is clearly doing damage, either physical or mental, in some other way, should an operation be advised, unless of course circumstances compel the patient to submit to the regulations of one or other of the Public Services, or if he has to live in a hot climate.

When impotence occurs with *Bright's disease* or *Diabetes*, or as a consequence of injury or organic disease of the *Nervous system*, the impairment of sexual power must of course be looked on as part of the more important malady, and its treatment will thus in most cases be included in that of the original cause.

In functional *Albuminuria*, if masturbation be practised its evils must be plainly pointed out and its discontinuance insisted on, while

general restorative treatment, according to circumstances, is carried out.

In wasting diseases, such as *Phthisis*, impotence is to be regarded as a fortunate occurrence, and it is to be regretted that it is not more frequently present.

The derangements of the sexual function which occur after *acute diseases*, are usually only temporary, and require no special treatment. When impotence persists the treatment is the same as that of primary impotence. In impotence with *malaria*, quinine is an important remedy and if it fails arsenic should be tried.

In impotence with general *obesity* both desire and potency may return if the excess of fat can be got rid of.

The *digestive system* should always be looked after in cases of sexual trouble. The frequent association of sexual and digestive disorders has already been referred to, as well as the fact that their relation as regards cause and effect varies in different cases. Treatment therefore will depend on which of the two is considered to be the primary affection. *Constipation* is common and should always be attended to. A mercurial purge followed by a saline draught is good to begin with, but

if the constipation be habitual and regulation of the diet prove ineffectual, cascara or a dinner pill containing aloin, rhubarb, belladonna and nux vomica, with or without iron, according to circumstances, often answers well. Gouty dyspepsia, excessive acidity of the urine, as well as any other symptoms due to gout, should receive appropriate treatment.

Oxaluria and *Phosphaturia* should be treated as in other cases with the addition that inquiry should be made about such local conditions as chronic urethritis or prostatitis, for, as has been already mentioned, it would appear that both oxalates and granular phosphates may have a local origin.

Loss of power or of desire occurring in *Syphilis* without local lesions, is usually recovered from under specific treatment. Syphilitic lesions of the genital organs require prompt and active treatment by mercury or iodides or both, according to the stage of the disease.

The treatment of impotence dependent on *Gonorrhœa* and due to implication of the posterior urethra, prostate, or seminal vesicles is, apart from the question of infectiveness, in many respects similar to that of non-gonorrhœal cases, and is referred to further on.

In sexual weakness caused by *alcoholism* or *drugs*, the important point is to make a correct diagnosis, and then to take steps to prevent the patient from continuing to take the injurious substance whatever it may be, followed by the employment of such restorative treatment as seems most likely to be useful.

In purely *psychical* impotence, as in the case of a healthy but nervous young man who fails on his wedding night, cure may generally be promised, and friendly advice and explanation that such a state of things is not uncommon and will pass away, are usually enough to calm the patient's fears. In some cases, however, a dose of some alcoholic liquid especially in the form of a sparkling wine is a valuable adjuvant in tiding him over his first difficulty, after which there is usually no further trouble. The quantity must be sufficient to prevent inhibitory action by the cerebral centre without interfering with the spinal centres—in other words, just sufficient to produce a don't-care condition; and for those who have never taken much alcohol a single glass of good champagne taken shortly beforehand will usually be enough.

But in those given to alcohol, and in any case if there have been repeated failures extending over days or weeks before advice is sought, and especially if frequent emissions have also occurred, the alcoholic plan of treatment would probably fail and should not be prescribed. In such circumstances temporary separation of husband and wife at night is the best remedy. Separate rooms are advisable, but if that is impracticable at any rate separate beds should be insisted on, and if the patient is forbidden to make any attempt for a certain time things will usually come right in a few days or weeks.

In impotence from emotional causes the treatment is obviously to remove the cause whatever that may be.

In cases of *mental pre-occupation* and *overwork*, the remedy lies in changing the mode of life for a time and taking a holiday, conbined with a course of whatever tonics seem to be indicated.

In *relative* psychical impotence it has been said that success in coitus may be sometimes attained through the imagination.

In *Anaphrodisia*, if the absence of desire is inherent, as in the case given on page 113,

medical treatment can hardly be expected to succeed. In acquired cases the treatment to be adopted will depend on the patient's sexual history and antecedents or present circumstances, and success will depend on whether the cause can be discovered and removed.

The temporary anaphrodisia which is fortunately common in many severe diseases, usually disappears as health is regained without special treatment.

When the psychical element is merely one factor of a complex condition in which masturbation or other sexual irregularity and its effects are concerned, treatment must be adapted to each case after careful consideration of all the circumstances.

In the first place, the bad habit whatever it be must be abandoned; next, complete sexual rest as regards the mind as well as the body is essential. It is necessary to speak plainly to the patient on these points; for it is curious how many men deceive themselves by imagining that if they abstain from sexual acts they are fulfilling all the necessary requirements of continence. It should therefore be made clear to them that in

therapeutics continence includes the mind as well as the body, and that repeated sexual excitement provoked through any of the senses, though it may not go so far as to produce emission, is quite as injurious as actual masturbation.

With complete sexual rest secured, the next step is to persuade the patient to look on his trouble as curable, and to help him to realise that "to mourn a mischief that is past and gone, is the next way to draw new mischief on." He should also be urged to employ both body and mind in some congenial and useful manner.

Physical exercise in some form is most important, and should be adapted to the age and circumstances of each patient. Walking is good for all, and loafing is bad for all. For the young, cricket, rowing swimming, tennis, and in many cases football, running, jumping, boxing and wrestling are excellent. Riding on horseback, cycling and certain kinds of gymnastics should be forbidden or encouraged with special regard to the presence or absence of prostatic irritation. As regards cycling care should be taken that the saddle is a suitable one. For older men golf is to be commended.

Motoring, especially the driving of a motor car at a moderate speed, is a good way of taking a man out of himself, and the vibration and movement through the air compensate to some extent for more active exercise. On the other hand continued motoring at excessive speed has been reported to cause impotence.

Change of air and scene is always beneficial, and sea bathing or a course of treatment at some bracing health resort inland is often of service.

When circumstances admit of it removal of the patient as far as may be practicable from everbody and everything likely to remind him of the past is desirable. Foreign travel with frequent change of place is an excellent means of diverting the mind, and to this end an incidental sea voyage will contribute more or less according to the patient's fondness or dislike of the sea. A long voyage should only be recommended with caution to patients suffering from sexual trouble, particularly if a tendency to hypochondriasis be a prominent feature in the case. To send a nervous youth addicted to masturbation or a sexual hypochondriac alone on a long voyage is to place him in circumstances most unlikely to be beneficial; for the monotony and idleness

incidental to such a voyage are just the things to be avoided by the class of patient in question. So that although travelling by sea as a means to an end is excellent, a long voyage ought only to be advised under suitable conditions, especially as regards companionship and supervision.

But many people are unable to afford these things, nor is it often essential that they should. The youth should be encouraged to live think and read cleanly, to do his own work in life to the best of his ability, to put sexual matters out of mind, and in his leisure to amuse himself with one or other of the physical exercises just mentioned according to his capacity, his inclination, and the time of year. He should remain in bed only long enough for sleep, and rise on awaking in the morning instead of lying in bed and thinking of his troubles. He should bear in mind that among his greatest enemies are idleness and alcohol, and not infrequently tobacco also.

In cases accompanied by extreme mental depression, if the man can bring himself to seek advice and if he be still capable of profiting by it, and if he have faith in his doctor, recovery may usually be looked for in the

end; but such cases are difficult to deal with, especially if the patient has become convinced that he is incurably impotent or morally ruined or that he has committed unpardonable sins.

When the causes of mental uneasiness are imaginary and arise simply from ignorance, as for example, in the not uncommon case of a man fancying himself defective because he is not so vigorous as some friend is—or says he is, for these boasters exaggerate greatly—explanation and friendly advice are usually all that is necessary, as also in the case of certain men who appear to think that sexual indulgence is the chief end of existence, and who fancy something is wrong if they are unable to carry out their wishes whenever opportunity offers.

Considerable excesses are sometimes committed by young people immediately after marriage. But this state of things usually lasts only a short time, and in most cases comes to an end before any great harm results to themselves. Savage however states that he has seen "several cases of young newly-married people rendered emotionally insane in consequence of a few days' sexual orgie."

I was lately consulted by a man who was suffering from sleeplessness, indigestion and general lassitude. He had been married several months and during the whole of that time he had had intercourse every night and frequently during the day also. He was in a highly nervous and shaky condition and appeared to have only a very vague idea that he was committing any excess. He laid the blame on his wife, and by way of trying to keep himself up to her standard of efficiency he was drinking five pints of beer a day, which did not tend to improve matters. In such cases a little plain speaking in the way of warning and advice is necessary, together with whatever tonic treatment seems to be indicated. The possible effect on the offspring of excess in early married life has been referred to in the chapter on the treatment of sterility.

Onanism.—The practice of interrupting coitus should be dealt with by explaining the injurious effects of such abortive intercourse, and by urging the patient to abandon it. The further treatment, if any be required, will be that of Neurasthenia or Impotence or both, as the case may be.

In regard to cases of functional nervous disorder combined with sexual trouble of any kind, it may be worth while to mention that I have not yet found it necessary or desirable to prescribe the plan of treatment including rest, isolation and over-feeding associated with the name of Weir Mitchell. The more such patients can be induced to occupy both body and mind in some useful and congenial way the better. Whether it be called work or play does not much matter, provided it takes the man out of himself and helps him to forget his troubles.

Before beginning any treatment with the object of preventing *seminal emissions* it is necessary to determine in each case whether they are really abnormal or not. If they have the characters described in the preceding chapter as normal, and are followed by no ill-effects, no treatment is necessary.

When nocturnal emissions are clearly too frequent, inquiry should be made with regard to errors in diet and digestive troubles, alcoholism, lack of sufficient exercise and so on, and treatment will depend on the result of the inquiry.

When the frequency of emissions is due to

repeated sexual excitement without gratification, such as occurs in some marriage engagements, especially if prolonged, the patient can only be advised to avoid the occasion of excitement—which advice he probably will not follow—and to get married as soon as possible.

Those who have indulged to excess either naturally or artificially, on first abandoning their bad habit nearly always suffer from frequent nocturnal emissions. They should be told that this is inevitable for a time and must be encouraged to persevere, with the assurance that the emissions will gradually get less frequent as time goes on.

In all these cases much can be done by attention to the general health. The diet and proper action of the bowels should be looked after, and abstinence from alcohol enjoined as a rule. The excessive use of tobacco, especially cigarette smoking with inhalation, is always injurious, and smoking should either be prohibited altogether, or reduced within narrow limits. Excessive tea-drinking and coffee-drinking must also be avoided.

When the emissions, besides being too frequent, also lack the characters of normal

emissions, and especially if they are habitually followed by depression and languor, the patient must be systematically treated after careful inquiry into the cause. If the symptoms suggest some lesion of the urethra or prostate, local treatment (which is dealt with further on) may be necessary.

With a view to prevent congestion of the genital organs and thus lessen the liability to nocturnal emissions, certain auxiliary measures are often helpful. The bladder should always be emptied immediately before retiring, and it is a good plan, as advised by Diday, to empty it about an hour before also. The patient should also train himself to rise and empty the bladder at the first sensation of fulness. The last meal should be a light one without alcohol, and at least three hours before bedtime. If alcohol is deemed necessary it should be taken with the mid-day meal and not later in the day. The bed covering should be light, the mattress firm, and the window open. If there be a tendency to sleep on the back, in which position emissions most frequently occur, some device for preventing the supine position is advisable. For this purpose an ordinary cotton reel or some

other hard object may be fixed over the spine by tapes. A belt with the buckle behind may serve in some cases. A knotted towel is sometimes recommended but is unsuitable because of its bulk. Such things as spiked collars for the penis or other barbarous contrivances to prevent or check erection and emission are merely mentioned to be condemned.

In the treatment of *irritable weakness*, characterised by imperfect erection and premature ejaculation in coitus, the first and most important point is complete sexual rest for a period which will vary according to the case, but which should rarely be less than three months. If the patient be married temporary separation of husband and wife at night must be insisted on. General hygienic treatment and hot or cold bathing are often required, and local treatment may or may not be necessary, as will be explained by and by. It should be remembered that in some of these cases alcoholism or excessive smoking plays a considerable part.

The Drugs used in the treatment of impotence and allied conditions, as well as the general rules for prescribing them, are much the same as in other diseases, bearing in

mind that these patients do not always or necessarily require any drugs at all.

Alkalies, such as citrate of potash and the bicarbonates of sodium and potassium, combined with sedatives or tonics according to circumstances, are often of great service in dyspepsia, gouty conditions, and irritation due to over-acidity of the urine.

Aperients.—An occasional mercurial purge followed by a saline aperient is useful in most cases, especially in hypochondriasis. As a general rule too from half a pint to a pint of hot water may be taken in the morning on rising, and to this a moderate dose of sulphate of soda or magnesia should be added when the bowels do not act easily and sufficiently.

Sedatives.—The bromides, belladonna and hyoscyamus are often of the greatest service in irritable conditions of the generative organs, and when seminal emissions are too frequent, camphor, chloral, antipyrin and phenacetin are all useful in certain cases. The bromides are often best given with an alkali, or may be combined with other sedatives or with tonics according to circumstances.

Salix Nigra (black Willow) is a sexual sedative which is used as a substitute for

bromides and also in combination with them for the control of too frequent seminal emissions, as well as in cases of prostatic irritation and urethral neuralgia. It is prescribed in the form of a fluid extract in doses of from half a drachm to a drachm. Salix Nigra seems to lack the depressing properties of the bromides and a mixture of the fluid extract with a small dose of bromide acts very well to some cases.

Tonics.—Of these, iron, quinine, arsenic and nux vomica or strychnine are perhaps the most generally useful.

Iron and *quinine* or *arsenic* may often be combined with advantage, but whenever Iron is prescribed measures should be taken to guard against constipation.

As regards *Arsenic*, it must be remembered that though a valuable hæmatinic and nervine tonic, it may itself cause neuritis and impotence if given in large doses or continued for a long time, as for example in some of the cases of poisoning by impure beer already mentioned. If quinine fails in any sexual trouble associated with Malaria, arsenic should be given a fair trial.

Nux vomica in combination with alkalies or acids is valuable in the digestive troubles,

which are so commonly associated with sexual troubles. But when there is a tendency to frequent nocturnal emissions, the irritable condition should be allayed by sedatives before nux vomica is given. *Strychnine* is indicated in many cases in which, without increased irritability, there is deficient power of erection with or without loss of desire. It may be given in solution or in the solid form, and combined or not with other drugs. It is always wise to begin with a small dose, as some people are peculiarly susceptible to this drug, and I have seen a number of cases in which unexpected results occurred. For this reason, unless the patient has already taken strychnine, I generally begin with $\frac{1}{60}$ grain of the sulphate twice a day, and increase the dose gradually as may be necessary. To obtain the full benefit from strychnine, the drug may have to be continued with intervals for some months, the effects of course being carefully watched, and the dose regulated according to the case. In impotence following influenza I have found strychnine one of the most valuable remedies.

Valerianates act well in some nervous and hypochondriacal cases. The valerianate of

iron, quinine or zinc, or a combination of these may be given, the dose of each being about a grain.

Ergot is usually given on account of its action on involuntary muscular tissue, and it is also said to check some of the glandular secretions. In relaxed conditions of the prostate and seminal vesicles and their ducts it is often beneficial. It may be given alone or with other drugs, strychnine for example. Eustace Smith and others consider ergot to be also a nerve sedative, which suggests its employment in some of the nervous forms of sexual disorder.

Phosphorus, besides being a reputed nerve tonic, has also long been classed among the so-called aphrodisiacs, though evidence that it has a direct action on the sexual organs seems to be wanting. According to Whitla, it acts on the centres which preside over the reproductive act, and is an aphrodisiac in cases of functional loss of power. With regard to this drug Fortescue-Brickdale remarks (1910): "Phosphorus having been largely given as a brain food and nerve tonic, it may be well to point out that there is at present no evidence that the central nervous system

is ever in a condition of phosphorus starvation." It is prescribed in depressed conditions of the sexual function, either in the form of globules containing phosphorated oil, or in pills with or without other drugs, or in one or other of the numerous preparations of glycero-phosphates or of hypophosphites often combined with syrup or malt extract.

Cantharides or *Cantharidin* which is now the official name, is another so-called aphrodisiac, which acts chiefly by its irritating effect on the mucous membrane of the genito-urinary passages. A single dose of about 10 minims of the tincture is sometimes followed by (sometimes painful) erection, and thus may be occasionally useful in certain cases of functional impotence, and it has also been prescribed in repeated doses of 2 or 3 minims with some preparation of Iron. Cantharidin should not be given without a preliminary examination of the urine, and if it is continued the urine should always be watched for blood or albumen, and in case either appears the drug must be stopped at once.

Curling remarks that the condition in which aphrodisiacs are applicable is chiefly that in which the penis is but feebly excited, and

does not maintain the physical state necessary for penetration or for congress in timid persons, and those whose organs are inexcitable from long disuse.

Opium.—Although Opium in full doses or taken habitually causes impotence, single small doses, like alcohol in small doses, may perhaps be reckoned among the aphrodisiacs, and it probably acts much as a glass of champagne acts, by producing a don't-care condition. With this object a dose of 5 or 6 drops of laudanum may be given in certain cases of psychical impotence.

Aphrodisiacs should not be prescribed in cases of sexual excess, nor should they be given to old men.

Besides the official drugs there are many others which have been introduced from time to time on account of some alleged special influence over the generative organs, and which, however widely they may differ in other respects, seem to agree in this—that they are uncertain in their action and not infrequently disappointing in their effects. The following are some of them.

Damiana is said to be a nerve tonic of great value in sexual debility, and is prepared

both as a fluid and as a solid extract. Sometimes it seems to be beneficial, and one patient, a medical man, told me he thought he had derived benefit from it. In other cases it upsets the stomach, and does no good at all. Some of the preparations of damiana seem to vary in action according to the druggist who prepares them.

Yohimbine, advertised also as *Aphrodine,* is an alkaloid prepared from the bark of the Yohimbehe tree, a decoction of which is said to have been long used as a tonic by the natives of the Cameroons. It is supposed to act as a stimulant to the erection centre, and owing to its vaso-dilatory action produces hyperæmia. It is prescribed in solution and also in tablets, each containing $\frac{1}{13}$ grain of aphrodine chloride, and has also been used hypodermically, the dose being from 8 to 16 minims of a 2 per cent. solution. From experiments on animals there appears to be no doubt that this drug causes marked congestion of the genital organs, but in the human animal there are many other things to be considered, and certainly in him congestion does not necessarily mean potency, and in many cases the artificial production of

hyperæmia would be decidedly undesirable. A medical man who took Yohimbine for a fortnight told me that he had noticed congestion of the testicles about an hour after the dose was taken, but there was no improvement in potency. Posner, who prescribed the drug in a large number of cases, states that he has modified his former favourable opinion of it. He now thinks that though probably useful in some cases, in the majority it is useless. Albert Moll has never obtained any results from Yohimbine which could not be attributed to suggestion.

Muiracithin is a combination of an extract obtained from a Brazilian drug Muirapuama with Lecithin, and has been recommended by certains writers in Germany and elsewhere as a remedy for nervous impotence. Apparently it is supposed to act in much the same way as Yohimbine, and is prescribed in the form of pills. One of my medical patients who took the drug for three weeks said that for ten days there was no appreciable effect. Then desire increased, but the impotence remained as before.

Organotherapy.—Since 1889 when Brown Séquard published his views on the value of Testicular extract in old age and other con-

ditions a multitude of animal extracts under a great variety of names such as Spermin, Didymin, Orchitin and the rest have been introduced and widely advertised for the treatment of impotence among other maladies. Some are given by the mouth and some by hypodermic injection also.

With regard to these latter day preparations I may say that although I have prescribed some of the drugs on occasion I have learned more about them from patients, so many of whom I find have already tried one or other of them without benefit. They mostly agree in being costly, and whatever their action may be on other disorders there does not seem to be at present any conclusive evidence that they cure impotence in man. Bruce and Dilling remark (1915) that the exact place in therapeutics of these animal extracts has not yet been determined, and that their expense prevents a more general trial.

Suspension.—Some years ago, when the suspension treatment of locomotor ataxy was in vogue, similar treatment was employed for the relief of impotence, and in some cases favourable results were reported. I have no personal experience of it.

Suggestion, though employed consciously or not every day in all sorts of cases, is of special importance in the treatment of functional sexual disorders, and if it is to have the desired effect it is essential that the patient have faith in the man who suggests. All known methods of treatment, whether medicinal or mechanical, may be placed side by side with suggestion, and the aim should be so to combine suggestion with other treatment that they mutually help and enforce one another.

Of *Hypnotism* or hypnotic suggestion I do not pretend to know anything, but success has been reported in cases of masturbation, perversion and impotence.

Marriage.—Before leaving the subject of general treatment a word must be said about the important and often difficult question of marriage in cases of sexual disorder.

Perhaps it is hardly necessary to point out that marriage is never to be recommended solely as a curative measure. In all cases when such a step is contemplated, the patient ought to have reasons for marriage other than those connected with his own physical benefit, and he ought not only to have sexual desire, but desire for natural intercourse and

not for some kind of abnormal gratification. In cases of impaired potency from any cause, even though it may be only slight, the doctor who recommends or gives consent to marriage ought to be satisfied that there is no reason why adequate sexual power should not be recovered under the influence of married life. In these circumstances it may be said, as a general rule, that when the patient is under forty, when there is no organic disease, and when the nervous symptoms are slight, marriage will be beneficial, or at least is not contra-indicated. In other circumstances caution must be exercised and each case must be judged by itself, but in coming to a conclusion of the whole matter the question of the outlook for the future wife ought to be considered as well as the probable effect of marriage on the man himself.

Confirmed Sexual Perversion of any kind, whether it be Masturbation (which may or may not be a perversion) or Homosexuality, should bar marriage; nor should a sexual hypochondriac marry as a rule. He will be only too likely to make his wife unhappy as well as himself.

The respective *ages* of the man and woman

who propose to marry is a point that should not be lost sight of. On the whole, the most favourable age for marriage as regards both parents and offspring appears to be from 20 to 25 in women and from 25 to 30 in men. If a man of any age whose potency is doubtful decides to marry without medical approval, he ought to take care that the future wife is sufficiently informed either by himself or someone else as to the state of affairs, to avoid disappointment and misunderstanding after marriage. A man of middle age, though not very vigorous sexually, might do well enough with a wife of about his own age, while it would be most imprudent for him to marry one in the twenties.

In any case in which marriage is allowed the man ought to be warned against excess, for some of those who have previously been deficient in power are prone to indulge immoderately when they regain it. Other things being equal and speaking generally, it may be said that the prospect is more favourable when the preceding sexual trouble has been due to natural than to artificial causes, because in the case of natural excess the psychical element is usually so much less in evidence.

CHAPTER VI

LOCAL TREATMENT

Baths and Bathing.—Besides the usual bath including of course thorough cleansing of the genital organs which should be taken daily by all men, local bathing both hot and cold is a valuable aid to treatment in many cases of impotence, especially those in which the prostate is affected and in which there is undue frequency of seminal emissions.

Cold bathing as a rule should not be used at night by unmarried men liable to frequent nocturnal emissions, because the subsequent reaction seems to increase the tendency to erection and emission. But in the case of married men in whom erection is imperfect or unstable it may sometimes be used with advantage as a tonic before coitus. In the morning a cold or tepid bath, or a warm bath ending with a cold shower if that is at hand, and followed by brisk rubbing with a rough towel, is always beneficial. Whenever the prostate is con-

gested hot bathing is one of the best means of relieving the feeling of fulness, weight, and pain which is so often complained of. The patient may sit in a hot hip-bath (100° to 110° F.) for a length of time varying from 5 to 15 minutes, or if this is impracticable, he may sit on a bath sponge placed in an ordinary washing basin containing the hot water. *Enemata,* hot at night and cold in the morning, are useful in similar cases.

Douches are in some cases more effective than simple bathing, and when erectile power is feeble hot and cold douches used alternately and changed quickly for about five minutes, always beginning with the hot and ending with the cold, have a better effect than either alone. The douches should be applied with a certain amount of force to the sacral and perineal regions. They may be taken at a bathing-place, or they may be given at home by means of rubber tubing and a nozzle attached to ordinary water taps, care of course being taken that the water is not hot enough to scald the patient.

Suppositories.—A convenient method of applying remedies in some affections of the prostate and neighbouring parts is by means

of suppositories. Among the drugs that may be used in this way are Morphine, Belladonna, Cocaine, Mercury, Iodides and Ichthyol, in combination with Oil of Theobroma. Iodex may also be used as a suppository.

Counter irritation is sometimes useful in prostatic irritation and may be applied in several ways, one of the most convenient being that recommended by Sir Henry Thompson, which consists in making a small blister every four or five days on either side of the perineum alternately by means of Liquor Epispasticus, and continuing the applications for a period of several weeks. The advantage of this plan is that the patient need not lie up while carrying it out. But it does not always succeed, in which case a larger surface may be acted on, either by blistering fluid or the strong tincture of Iodine, and the patient confined to bed or couch until the soreness has passed off.

Massage.—For the treatment of chronic affections of the prostate and seminal vesicles, massage per rectum has been largely resorted to of late years with the object of getting rid of morbid secretions and improving the circulation and tone of the organs. It may

be used with advantage in many cases of chronic prostatitis. As regards the seminal vesicles, always supposing that the operator's finger is long enough and strong enough to reach them effectually, it seems to be the only available means, short of operation, of acting upon them directly. Feleki and others have invented instruments to take the place of the finger. In practising massage care must be taken not to use force, especially at first and in gonorrhœal cases. For if septic matter be present there is some risk of forcing it along the vas deferens and thus setting up epididymitis.

The massage may be repeated once, twice, or thrice a week, according to the effect, but the patient's own feelings are often the best guide as to how often it should be done, or whether it should be continued or left off altogether.

W. Bellfield of Chicago has described and practised an operation for draining the seminal vesicles through an opening in the vas deferens, and more recently Luys has recommended dilatation of the ejaculatory ducts through the urethroscope in certain cases of chronic vesiculitis.

Electricity in some form is recommended by most authors in the treatment of Impotence. I have found the induced current useful in cases of neuro-muscular atony when erection is feeble and ejaculation wanting in force.

Stimulation of the skin by means of the wire brush or other dry electrode is indicated in the treatment of coldness, relaxation and deficient sensation of the penis, scrotum and adjoining parts. The value of electricity as an aid to the enforcement of suggestion should also be borne in mind.

The treatment of any affection of the external organs which seems to be setting up reflex irritation should never be neglected.

Balano-Posthitis and Phimosis.—Balano-posthitis should be treated by washing twice a day, drying, and the application of a powder of boric acid and kaolin or talc. A strip of lint or gauze should also be placed in the furrow behind the corona. When inflammation prevents retraction of the prepuce, as in certain cases of glycosuria for example, the preputial cavity should be syringed out with a boric acid and spirit lotion, and a piece of boric lint or wool tucked in the orifice after passing

water, to absorb the remains of the irritating urine.

At some bygone period of man's existence a highly sensitive state of the parts was probably necessary for the proper performance of the sexual act, and while man was still unclothed the prepuce no doubt served also to protect the glans from accidental injury. In the altered circumstances of the present day, however, the aim of the uncircumcised should be to convert the mucous surfaces as far as may be into the skin-like condition found in those who have been circumcised in infancy.

When without actual balano-posthitis the mucous membrane is moist and tender, as it is when the glans is habitually covered by the prepuce, it should be hardened and so rendered less sensitive. The easiest way of doing this is by habitually wearing the prepuce behind the corona, and if there is a tendency for it to slip forward, a strip of lint or gauze may be tied loosely round the furrow.

In addition to this, or when for any reason it cannot be carried out, the dusting powder already mentioned, or if that is insufficient

a spirit lotion to which Hazeline or Sulphate of Zinc may be added with advantage, should be applied once or twice a day. Tannin is a good hardener, but it stains linen. If a mucous surface bears the application of rectified spirit without discomfort it may probably be excluded as a source of reflex irritation.

The prepuce ought always to be freely retractable, not only in the flaccid state but also during erection, and if it is not it ought to be made so, or removed altogether.

In partial *Phimosis*, when the prepuce is not very long or narrow and if there are no adhesions or cicatricial tissue, gradual dilatation sometimes succeeds, as it does also when retraction though easy in the flaccid state is difficult during erection. When the prepuce is both long and narrow or if there are firm adhesions or cicatricial tissue, circumcision is advisable. But it may be as well to add that operative treatment should not be resorted to as a mere matter of routine in sexual disorders. For whoever expects circumcision alone to cure either masturbation or impotence will surely be not rarely disappointed.

Though the preceding remarks refer chiefly to the periods of adolescence and adult life,

something of what has been said applies also to children, in whom genital irritation is so likely to lead to masturbation. The condition of the prepuce especially should be looked to in childhood, not only on account of trouble at the time, but because repeated attacks of balano-posthitis gradually set up an unhealthy cicatricial condition of the mucous membrane, rendering it liable to crack and tear, and thus open the door to possible venereal infection at a later period of life. The irregular pits and crannies also which are the result of partial adhesions between the prepuce and glans, by forming foci for the lodgment of the natural secretion as well as of infectious matter from without, eventually become a potential source of irritation and of danger.

With regard to local affections such as *Herpes, Eczema,* and other skin diseases of the genital or neighbouring regions, and rectal troubles such as *Fissure, Piles* and *Worms,* it is only necessary to say that they should be treated as in other cases. The important point is not to overlook them.

If a *narrow Meatus,* congenital or acquired, is judged to be the cause of obstruction or

reflex irritation it should be enlarged by incision.

Urethral Treatment.—It is not always easy to say offhand whether local treatment of the urethra is or is not likely to be beneficial in sexual disorders. It need hardly be pointed out that the days of indiscriminate urethral instrumentation have or ought to have gone by, and that now-a-days anyone who passes an instrument into the urethra, and especially through its deeper portion, ought to have a good reason for doing so. No doubt most neurotic patients with impotence accompanied by frequent emissions or premature ejaculation in coitus have an over-sensitive urethra, but it does not necessarily follow that urethral treatment is required. In deciding the question all the circumstances of each case should be carefully considered.

As a roughly general rule it may be said that if the patient has never had urethritis, if the urine is clear and free from shreds, and if examination per rectum gives no definite indication, the urethra should be left alone until other measures have been tried and found wanting. On the other hand, if he has had gonorrhœa, if the history and

symptoms suggest stricture or if the urine contains urethral shreds, examination of the urethra is usually advisable.

In examining the urethra for diagnostic purposes the best instrument is one with a slender shaft and a bullet- or acorn-shaped end (*bougie à boule*) beginning with a size as large as the meatus will admit without force. By flexible instruments of this kind the site of stricture or of tender spots in the urethra can be ascertained much more accurately than with other forms of bougie.

The calibre and general condition of the urethra having been thus determined, the next step will depend on what has been found. If there are localised tender spots in the anterior urethra they should be inspected with the urethroscope. Inflamed or granular patches may be treated by the passing of sounds and the application of a solution of nitrate of silver varying in strength according to the case. For chronic patches with thickening of the submucous tissues a mixture of equal parts of the strong tincture of Iodine and glycerine, applied by means of a mop through the urethroscope is often useful. If stricture is present it must of course be dilated or otherwise dealt with.

Some cases of hyperæsthesia, chronic congestion and inflammation of the deep urethra, and chronic prostatitis are greatly benefited by the passing of instruments, and it is often advised that only large metal sounds should be used in such cases. It is generally better however to begin with flexible bougies, and thus gradually accustom the urethra to the presence of instruments before passing on to the steel sound; and when the deep urethra is very sensitive the patient may be spared much alarm and discomfort by beginning with quite small olivary or *coudé* instruments as flexible as possible. The size should be gradually increased up to the largest the meatus will admit, and if the orifice be contracted it may be necessary to enlarge it. At first the instrument should be removed at once, but as tolerance increases it may be retained for a gradually increasing length of time up to ten or fifteen minutes according to the effect.

As in the case of rectal massage, so also in that of urethral instrumentation, the patient's feelings will often be the best guide as to whether it is likely to be useful or not. If pain and tenderness diminish, if the sense of

weight and dragging in the perinæum is relieved, and if the patient feels more comfortable generally after the sound has been passed, the treatment should be continued once, twice, or three times a week according to the case. But if the symptoms increase or do not improve, instruments should be left off, for a time at any rate.

When sounds have relieved but have failed to cure, the Psychrophor, introduced by Winternitz, is sometimes useful. This is a metal instrument resembling a double-current catheter but without any opening at its vesical end. By means of rubber tubing attached to the two branches into which the other end is divided, water of any required temperature can be kept circulating through the instrument, and thus the effects of heat or cold combined with those of pressure can be obtained. Cold water as it comes from the ordinary tap is often used, but if the patient finds this too cold, water at a higher temperature, say from 65° to 80° F., may be used to begin with. The duration of each application varies from 5 to 15 minutes.

When erection is feeble and when sensation in the deep urethra is also impaired heat

sometimes acts better than cold, in which case the temperature of the water may be from 100° to 110° F. according to circumstances.

When other means fail, the application of astringents or mild caustics to the posterior urethra is sometimes successful.

Solutions of some salt of Zinc or Iron or other mineral or vegetable astringent are sometimes used, but in many cases nitrate of silver varying in strength from 1 grain to 20 grains to the ounce answers best, beginning with the weaker solution. Whichever fluid is decided on is injected into the posterior urethra by means of either a syringe attached to the end of a small soft catheter, or by Guyon's well-known apparatus, or by Ultzmann's "*urethraltropfer*," which consists of a graduated syringe attached to a small silver catheter with a short curve and a capillary bore extending to the tip. This last-named instrument in its original form is inconveniently short for the posterior urethra, and as a rule a flexible instrument is preferable. The quantity of fluid to be instilled varies from 5 to 30 minims, the stronger the solution the smaller the quantity. If necessary the applications are repeated at intervals of three

days to a week or longer according to the effect produced. If stronger applications than those mentioned are deemed necessary, it would probably be better to use the urethroscope.

Instead of injections Ultzmann recommends in some cases the use of urethral suppositories containing tannin or nitrate of silver with oil of theobroma. These are introduced into the posterior urethra by means of Dittel's *porte-remède*.

Lallemand's *porte-caustique* for the application of solid nitrate of silver is an undesirable instrument which has itself been accused of causing sterility by occluding the orifices of the ejaculatory ducts. It is now seldom or never used.

The cases in which urethral applications are required are mostly but not always of gonorrhœal origin, and for further information on the treatment of chronic gonorrhœa and its complications, as well as the antiseptic precautions to be observed in the use of urethral instruments, the reader is referred to some recent work on genito-urinary surgery.

PART III.

THE PREVENTION OF SEXUAL DISABILITY

CHAPTER I

ABNORMAL SEXUAL INDULGENCE

ALTHOUGH Abnormal Indulgence has already been considered incidentally throughout the first and second parts of this book, it has such an important bearing on Sexual Disability that it seems desirable to add a few remarks on its prevention.

The commonest form of abnormal sexual indulgence is what is usually called *Masturbation* or self-abuse, an artifice which has its equivalent in apes and many other animals, horses and dogs for example. But neither of these terms covers the whole field of abnormal indulgence, so that although Masturbation is a convenient general name it is not always accurate. For the hand is not always used,

and the artificial manœuvre, whatever it may be, is not always performed by the individual himself, but not infrequently consists in mutual stimulation of some kind by two persons of the same sex or of opposite sexes. *Onanism*, which has been dealt with elsewhere, is often wrongly used as a synonym for masturbation, and though an important cause of sexual disorders is not at all the same thing.

Abnormal indulgence also includes cases in which sexual gratification is procured by voluntary effort of the imagination or memory, without physical interference at all. This is sometimes loosely called mental masturbation. Sexual excitement produced by salacious literature or pictures or conversation or other similar means must also be included, and though these things may and often do lead to physical stimulation they may have equally bad effects without it, especially if the stimulation become habitual.

The causes of masturbation or other artificial indulgence are various, and hence it follows that preventive measures vary according to the cause and other circumstances. As some sort of order is desirable for convenience of description the following remarks are roughly

arranged under six heads, but it must be borne in mind that there is often overlapping, for more than one factor are often concerned in the same case :

1. Heredity.
2. Irritation.
3. Seduction. Teaching. Bad example.
4. Compensation.
5. Self-suggestion.
6. Neuro-psychical Disorders.

1. The question as to what part *Heredity* plays in the causation of masturbation is obscure and opinions differ in regard to it. Attempts have been made by many writers to explain those strange cases in which masturbation appears in children and infants a few years or even a few months after birth. Bloch, for example, says that in the majority of cases in which masturbation appears in sucklings we have to do with inheritance, and he gives an instance in which both the mother and the grandmother of a female infant masturbator were also masturbators. Goodhart and Still say they have met with it frequently both in male and female infants, and they think that in some cases masturbation may be the early evidence of mental degeneration.

Freud, on the other hand, thinks that the popular belief that the sexual impulse is absent in childhood is an error. To him it seems certain that the new-born child brings with it into the world the germs of sexual activity, and that while taking nourishment by suckling it at the same time enjoys a sexual gratification which it then seeks to procure for itself through the familiar activity of thumb-sucking. This thumb-sucking, or it may be tongue-sucking or toe-sucking, which Freud also calls pleasure-sucking, he takes as a model of infantile sexual manifestation which, he says, is often combined with a rubbing contact in the sensitive parts, such as the breast or the external genitals, by which road many children go from thumb-sucking to masturbation. Albert Moll disagrees with Freud and thinks these sucking movements have nothing to do with the sexual life of the child. Shuttleworth, who has known masturbation to occur in a neurotic baby four months old, states that his experience " points to its origin being in most cases the mere fidgetiness of the neurotic child, a pleasurable sensation in the genital organs being an accidental and spontaneous discovery."

It would thus seem that unless Freud's

views be accepted, and apparently they are by no means generally accepted in this country, the causation of masturbation in infants when no sufficient cause of irritation local or general can be discovered, and apart from neurosis and teaching, is still doubtful. It would be interesting to learn more about the subsequent life history of such infants. Possibly that might throw some light on the subject.

2. *Irritation* of some kind, either local or general, accounts, partly at any rate, for a large number of cases of masturbation not only in childhood but also in adolescence. But of course the exciting irritant will have different effects according to the nervous organisation of each individual, for what might be harmless to the stable brained may be enough to cause mischief in the neurotic and especially in those of precocious sexuality.

The sources of irritation are manifold. Morbid conditions of the urine, either excessive acidity with uric acid crystals, or excessive alkalinity, or glycosuria, are all liable to cause irritation in the genito-urinary passages. Bennett says Varicocele sometimes produces an amount of irritation and sensitiveness about the sexual organs at the time of puberty which

is sufficient in some cases to lead to habits of self-abuse. Other sources of local irritation, of which phimosis is one of the commonest, have already been dealt with in the preceding pages.

Among the various causes of irritation from outside may be mentioned accidental friction from the clothes and in climbing, in certain kinds of gymnastics and in cycling with an unsuitable saddle. The last named cause was not uncommon in the early days of the bicycle, but since more attention has been given to the form of the saddle, has become infrequent. Judging by the number of patients who say that sexual excitement in boyhood was first felt during the climbing of trees or poles or ropes, or the use of bars in the gymnasium, I am inclined to think this beginning of masturbation far from uncommon. Irritation of the gluteal region, flogging for example, is a well-known sexual stimulant and, as in the case of Rousseau, may be the means of rousing the sexual impulse in early life. Among other excitants of sexual activity are suggestive spectacles of any kind and various other things already mentioned.

In all these cases prevention consists chiefly in the removal of the cause, and this in healthy

people will probably suffice unless there are other influences at work, or unless the bad habit has continued long enough to become fixed. In these, as in all other forms of sexual irregularity, the question of neurosis is of the first importance. In the case of babies, when no source of irritation can be found, careful dieting and watching and mechanical restraint if necessary appear to be the only available remedies.

3. *Teaching. Seduction. Bad Example.*— One or other of these is probably responsible for a large majority of the cases of abnormal sexual indulgence both in childhood and youth, especially in schools and other places where young persons of the same sex are collected together.

Teaching unfortunately may begin in the earliest period of life, as we may learn from many physicians, and particularly from some of those who have special experience in neuro-psychology. Blandford says children may even be taught habits of self-abuse by nurses to keep them quiet. He also says nurses teach it to make children go to sleep. Langdon-Down refers to morbid sexual erethism in infants being too often induced by nurses who procure the quietness of their charge by

means which, even if the mental health is not sacrificed, may lead eventually to grave moral delinquencies. Moll says nurses sometimes touch, stroke and stimulate the genitals of children to keep them quiet, or for the gratification of their own lustful feelings.

As regards the prevention of abnormal indulgence later on, there appears to be, strangely enough, a difference of opinion even among medical men as to whether boys should or should not be warned against masturbation and its consequences. I myself have no doubt that they ought to be warned. It has been said that the warning might suggest an unknown evil, but surely such an argument is out of place in this age of newspapers and penny dreadfuls and other so-called literature and picture shows, when no one who is able to see or to read can remain long ignorant of sexual matters. Even if a boy should chance to be ignorant, it would obviously be better to anticipate by giving him useful information properly imparted than to leave him to pick up his knowledge later on in some undesirable way from companions or others, when it might be too late to prevent the acquirement of bad habits.

Granting then that it is desirable that information should be given, the next question is *Who* should give it? The answer is that as a general rule one or other parent is the proper person, always supposing that parent and child have confidence in each other. Whether it should be the father or the mother might well depend on circumstances, of which the parents themselves should be the best judges. If neither parent feels competent, or if for any reason both parents decline to undertake this duty, they ought at any rate to take care that it is undertaken by someone else. It does not so much matter who does it provided there be a feeling of confidence and trust on the part of the boy towards his informant.

The head masters of Eton and Rugby in their evidence before the Royal Commission on Venereal Diseases (recorded by the *British Medical Journal*, July 18, 1914), "considered that the ideal was that boys should be instructed in matters relating to sex by their parents, but their experience showed that that method was not likely at the present moment to be successful to the extent that was desirable." Dr. Dukes of Rugby, writing in 1884, stated that a large experience made him certain that not

one per cent. of parents help their children to guard against this evil when they first part with them for school.

The next question is, *When* should the warning be given? This again might depend on circumstances, for boys vary greatly in sexual as in other matters, and the proper time could best be chosen by those who have the best opportunity for judging, namely the parents. But it should always be done before the boy leaves home for school, however young he may be, for, as I have learned from a number of patients, masturbation may begin as early as the ninth or tenth year of age. And it should also be noted that cases in which it has been begun and continued before puberty are liable to turn out less satisfactorily later on than others in which bad habits have been delayed until after puberty.

Next, *What* should be said? All that is really necessary can be said in a very few minutes. The boy should be told in plain and simple language that his sexual organs are intended for a certain purpose, the begetting of children, and that they are not fit to be so used until the body comes to maturity, and that if used earlier or in any other than the

natural way there will be great danger both of present injury to his own mental and bodily health and also of failure when the time arrives for their natural use in married life. So much no doubt should be said. How much more may be desirable would depend on circumstances, and of these and of what is most likely to carry weight the informant should be best able to decide.

The boy approaching puberty might also be told that if relief is necessary it will occur spontaneously in sleep. This information I think should not be left to chance, as some boys who have never been spoken to about sexual matters are alarmed by the first nocturnal emission, and try to check it as something that ought not to occur. I lately saw a man of 40 who, from the time of the first emission at puberty, had always done his best to check the flow, and had succeeded so effectually that he had never had any complete emission in his life whilst awake, either in coitus or otherwise. He had been married three years, and there was no difficulty about erection or penetration, but though both he and his wife greatly desired children he had never been able to complete the sexual act.

Some think knowledge and warning about sexual matters should be conveyed to boys by *Books*, and many have been written for this purpose by medical men, schoolmasters and others. But it seems doubtful whether this method is either necessary or wise. I myself have not yet happened to meet with any book written with this particular object that seemed likely to fulfil its mission satisfactorily. If I were asked for a book likely to deter from masturbation I should give the first place to a certain French novel written many years ago with quite a different purpose and whose title need not be given here, as I do not recommend that or any other book as a vehicle of elementary information on sexual subjects to boys. It seems most likely that a well brought up boy will pay far more attention to what his father or mother tells him than to what he reads in any book. If books are required they should be read by those who feel unable to advise without them, and not by the boy under puberty.

Again, it has been said that a knowledge of *Physiology and Anatomy* would be the best way of informing boys as to sexual matters and therefore the best safeguard against bad

habits. But this also seems doubtful, for beyond such homely physiology as may be needful to teach temperance, cleanness of mind and body, self-control and such like, the less a young and healthy boy troubles himself about his various bodily functions the better. On this point I must confess to a decided sympathy with that practical mother of a family who appealed to the pushful school mistress who had been trying her hand at teaching physiology, somewhat to this effect: "Please don't teach my little Polly no more about her insides. It don't do her no good and only makes her rude." If a knowledge of physiology is deemed requisite it might well come later in life. The boy before puberty has quite enough to do in learning other things.

In connection with this aspect of the subject it may be mentioned that the teaching of "Sex-hygiene," which was adopted by some of the schools in the United States, does not seem to have been an unqualified success, judging by the following extracts from the *British Medical Journal* in January and March 1914: "At this time, when so much is heard about the education of school children in what is called euphemistically sex-hygiene, it is

interesting to learn that on January 7th the Chicago Local Board of Education decided to discontinue courses of lectures on the subject in the public schools after a trial of one year." Also "The school authorities of Montclair, New Jersey, have issued orders prohibiting the teaching of sex hygiene in the public schools. The teachers are also forbidden to lend or to offer to lend books on this subject to their pupils." In the case of at least one English town too, about the same time a public meeting was called to protest against the giving of unnecessary information to girls in the local council school, and a resolution against the giving of such information was passed.

More recently (1915) Sir Robert Blair in his evidence before the Royal Commission on Venereal Diseases stated that the London County Council had decided, in accordance with the result of an inquiry by its Education Committee, that "under no circumstances should sex hygiene be introduced into the class teaching in elementary schools." And later still the Commissioners themselves arrived at the conclusion that "In elementary schools detailed instruction in class on sexual matters should not be undertaken."

The prevalence and prevention of sexual irregularities in *Schools* has always been a matter of difficulty and anxiety to schoolmasters, which would be greatly alleviated if all boys were fortified beforehand by their parents' warning, which unfortunately, as we have seen, appears to be by no means always or even generally the case.

If for any reason a boy arrives at school in total ignorance of sexual matters, the proper person to enlighten him would probably be the schoolmaster in small schools, and the headmaster or the housemaster in large schools, but this is a matter which might well be decided by consultation with the school doctor. The headmasters of Eton and Rugby think that instruction at school should be given with much caution, and that it should be the special responsibility of the headmaster to give it or to see that it is given.

Dr. Dukes stated in 1884 that although no complete evidence could be accurately obtained, he gathered that masturbation occurred in somewhere about 90 to 95 per cent. of all boys at boarding schools. Let us hope things have improved since that time.

Dr. Lyttelton when headmaster of Haileybury (and since of Eton) College, in a small

book called *Mothers and Sons*, said that when impurity exists in a school of generally healthy tone, it takes its rise and receives its impetus from boys 15 or 16 years of age who have a constitutional propensity to it, and whose wills are feebly developed, because the idea of restraining their bodily appetites has never entered their heads. This experienced observer also thinks that up to about 14½ no boy ought ordinarily to be in much danger. With this last statement I should be glad to agree, but it is unfortunately true, as already mentioned, that bad habits may begin much earlier.

Those who have the care of youth should of course take care to discriminate between errors of ignorance and errors of vice, and should bear in mind that in most healthy boys the first lapse is due to ignorance.

But probably in most large schools there are a certain minority of boys, it may be only one or two, sexually precocious and badly trained who become really vicious, and who deliberately try to seduce others and make them as bad as themselves. Once the presence of such a persistent evil doer is ascertained beyond doubt, prompt removal should follow without hesitation.

Various preventive measures have been proposed and advocated, such as vigilant supervision, the abolition of cubicles and so on, as well as appropriate diet. More important still is the question of alcohol. Dr. Dukes has written strongly against the use of alcohol in schools and particularly as regards beer with supper. Dr. Lyttelton also condemns both beer and meat at night. But the best plan would be to prohibit alcohol in any form or at any time to schoolboys, except as a medicine and under medical advice. The regulation and supervision of work and play are also important, but as regards sexual irregularity it must be remembered that even the closest supervision by day or by night could only affect co-operative indulgence. It could not prevent individual indulgence.

All these things no doubt are valuable adjuvants, but the first and chief aim of the schoolmaster should be to establish a good moral tone and a spirit of sympathetic understanding and confidence between master and pupils. It would then be not so much a question of cubicles or open dormitories, of private studies or general class rooms, of day schools or boarding schools, of private or

public schools, but of striving to establish a firm conviction and belief among the whole community of boys in all schools, that sexual indulgence of any and every kind is simply outside the sphere of school life altogether and against the best interests of every schoolboy big or little, and that any departure from such a rule will certainly endanger his present health and will also entail the risk of failure of his sexual capability in manhood and marriage.

The Boy Scout movement, for which the Nation owes a debt of gratitude to General Baden-Powell, is admirably calculated to be of the greatest service as a preventive of precocious sexual indulgence, as well as of many other undesirable developments to which boyhood is liable.

4. *Compensation.*—Under this head come those cases in which artificial sexual gratification is resorted to not from choice but because there is no opportunity for natural intercourse owing to the absence of the other sex, as in prisons, reformatories or other places or circumstances in which the sexes are kept apart. As regards these it is only necessary to say that in ordinary healthy persons the abnormal

is usually abandoned for the natural as soon as the opportunity offers.

Still this is not always so, for in certain cases the bad habit for one reason or other becomes fixed and is continued indefinitely. A man of 59 who consulted me about marriage had gone on with masturbation for many years because his business obliged him to live in a foreign country where only native and unattractive women were available. Sometimes the abnormal is met with in still older men, for example, in a clergyman aged 71, who had practised masturbation for many years and who consulted me about marriage with a woman under 30. I advised strongly against it, but he did marry nevertheless.

Voltaire is said to have been a masturbator all his life, and Rousseau is another example. Shuttleworth mentions the case of a lady of 40 who said she was never conscious of a period when she had not been addicted to the habit, which she declared she was powerless to resist. In such cases the abnormal habit may be called perversion.

5. *Self-Suggestion.*—To self-suggestion, conscious or subconscious, are attributed cases in which the subject somehow finds out

masturbation for himself, apart from physical stimulation and without the co-operation of others.

The usual cause in these cases, which in my experience are the least common of all, would appear from the statements of such patients to be the suggestion of self-gratification by a dream, but of course it would only be possible to explain matters satisfactorily by finding out what caused the dream, which is not always easy. Perhaps what Moll calls the desire for Detumescence may be considered one of the exciting causes of such dreams. But whatever may be the etiology, such patients are not infrequently more difficult to deal with and less promising as regards the future than others. They also seem more likely to be perverts or to suffer from profound depression, sometimes with a tendency to suicide. One patient of this type, a young naval officer with apparently a brilliant future before him, ended by shooting himself.

6. *Neuro-Psychical Disorders.* — Abnormal sexual indulgence leading often to Impotence is frequently associated, as has already been explained in a preceding chapter, with neuro-psychical disturbance of some kind either as

cause or effect, and notably in what is called Neurasthenia. Savage says it is at the adolescent period that the neuroses such as hysteria and hypochondriasis which almost always have a sexual basis, are most evident.

All psychologists agree that masturbation is a very common symptom in insanity, and also among idiots and cretins and the feeble-minded, but many consider it to be also a cause of insanity. Clouston for example says that as a complication and symptom of almost every form of insanity masturbation is lamentably common. But he also says, " There is a form of mental disease in which masturbation is the chief cause of the malady. It is the chief symptom present and gives the whole case distinct features." Blandford says it unquestionably causes insanity in a certain number of cases. A middle-aged clergyman who became insane and had to be put under restraint told me he was convinced that by practising masturbation he had committed a deadly sin.

Thus it would seem that the prevention of masturbation may be looked on as to some extent a preventive of insanity. But apart from actual insanity it should be borne in

mind that the success or failure of preventive measures depends greatly on the nervous organisation of the patient. The truth seems to be that masturbation like some other things is a general nerve-disturber and weakener, and so may disturb or weaken the function of any organ or part of the body, and like other morbid influences is most likely to affect first and chiefly whatever may happen to be the point of least resistance in each individual.

CHAPTER II

SEXUAL PERVERSION

THE subject of Sexual Perversion, which is probably as old as the inhabited world, is a curious and in some respects an obscure one which it is not intended here to consider in detail, but which can hardly be left out altogether because of its intimate connection with the question of sexual disability and its prevention.

Masturbation as we have seen may in some cases be a perversion, and as an aid to determining whether it is so or not, Forel advises inquiry into the kind of erotic images associated with it. If in a man, he says, the image is of men it is perversion, and if of women it is not. Krafft-Ebing says that with opportunity for the natural satisfaction of the sexual instinct, every expression of it that does not correspond with the purpose of Nature, that is propagation, must be regarded as perverse. The same observer points out that perversion of the sexual

instinct must not be confounded with perversity in the sexual act, and that in order to distinguish between disease (perversion) and vice (perversity) we must investigate the whole personality of the individual and the original impulse leading to the perverse act.

A large number of books and papers have been published on Perversion since about 1870 when Westphal drew special attention to the subject. Most of what has been written is German or Austrian but some is American, and Havelock Ellis in this country has written a series of volumes dealing with this and kindred subjects.

Sexual perversion in its complete form may be regarded as a variation, such as in plants and animals is called a Sport.

For the original cause of the variation it seems that we must look back to the time of the fertilisation of the ovum by the zoosperm. Seeing that, as we are told by embryologists, the human embryo at a certain period of its development is sexually undifferentiated and therefore potentially bisexual, it is perhaps hardly to be wondered at that things occasionally get mixed or inverted or otherwise perverted. We know that this happens as regards

physical characters in what is called Hermaphrodism, so there would seem to be no reason why it should not also happen as regards the psychical in what is called Perversion, though curiously enough the two do not necessarily or even usually go together in the same person.

While it seems to be generally agreed that perversion, at any rate in its complete form (inversion) is congenital, most observers also admit that it may be or at least appears to be sometimes acquired, especially in a modified or partial form.

Sexual perversion may show itself spontaneously in childhood or it may remain latent, and only become manifest at the time of puberty or afterwards, and apparently owing to some exciting cause, in which case it may become doubtful whether the abnormality was congenital or acquired, or in some young people merely due to postponed or arrested differentiation of the sexual feelings. For many believe that the sexual impulse remains, if not latent, more or less indefinite until puberty and sometimes later still.

Sexual perversion may be *hetero-sexual*, or *homo-sexual* or *bisexual*.

Sadism is a name that has been given to the association of active cruelty or a desire to cause pain with sexual gratification. This is regarded by some as a reversion, and it may vary in degree from a mild desire on the part of a man or woman to bite during the sexual act (which is mentioned by Lucretius) up to murder and mutilation as in the Whitechapel outrages some years ago, and the still worse crimes of the Germans in the present war.

Masochism, so-called by Krafft-Ebing after an Austrian author named Sacher-Masoch who wrote certain novels dealing with sexual perversion, is the converse of Sadism, and signifies the association of passive cruelty or a desire to experience pain with sexual gratification. These two are sometimes included under the term *Algolagnia,* and they as well as what is called *Fetichism,* in which objects such as (to quote Havelock Ellis), "a woman's hair or foot or even clothing becomes the focus of a man's sexual aspirations," do not necessarily imply perversion as regards sex, but only as regards acts. Probably in most cases they are heterosexual.

Homosexuality or Sexual Inversion.—Forel says Homosexual sensations are a pathological

product of abnormal hereditary sexual dispositions, at any rate as a general rule which has few exceptions. Bloch says Homosexuality is an anthropological phenomenon, not a manifestation of degeneration, and that most original homosexuals are healthy, free from hereditary taint, physically and psychically normal. Which is absurd, for it is of the essence of inversion that its subject is psychically abnormal to some extent.

Bisexuality would seem to be much more common than true inversion, but this is a difficult question, because probably only a small minority of either class seek medical advice directly on account of this particular disability. But however this may be, it is beyond doubt that perversion in one or other form affects a large number of people of both sexes, in all stations of life, and probably in all countries. Even from the newspapers we may learn that perversion, owing to the stigma attached to it, frequently leads to blackmail, not infrequently to disaster, and sometimes to tragedy. And we may gather also that the English law regards homosexual activity in the male sex as one of the blackest of crimes, to be punished, unless the

man be judged mad, with the utmost severity; and that the question whether the accused person may be possibly neither mad nor bad, but in some cases may be merely obeying an abnormal instinct which to him seems natural, has apparently no place in our legal code.

As regards the relation of sexual perversion to *Insanity*, the evidence of Dr. Hyslop to the Royal Commission on Divorce and Matrimonial Causes (*British Medical Journal*, Nov. 5, 1910) may be quoted: "I have seen dozens of instances in which the insane patient has been the pervert, and not only brought about the actual attack of insanity, but has been the cause of much misery and apprehension and fear on the part of the husband or wife, lest recovery from the insanity should bring about a return to the practice of the perverted acts. The anxieties betrayed by the relatives of such patients lest the patients themselves should be allowed to return to their homes is not infrequently due to the existence of such perversions. It must also be noted that some insane patients are made insane by sexual perversions of their marital partners. I know of many instances in which relapses are not only common, but there is actual dread of

home relationships owing to the sexual perversions of those who are still at large and presumably sane."

From what has been said it is evident that sexual perversion is important from several points of view. It is also, or should be, a bar to marriage, and thus has a certain influence on the general population. For all these reasons it is desirable that the effects of perversion should, as far as may be possible, be prevented, or at any rate minimised. It should be borne in mind that though the tendency to perversion appears to be in most cases inherent, yet in favourable circumstances it may probably sometimes remain latent indefinitely, unless roused to activity by an exciting cause, such as abnormal indulgence of some kind. Hence it becomes important that masturbation, and especially mutual masturbation, should be avoided. Perhaps alcoholism might also be considered an exciting cause, for Branthwaite includes sexual perversion among the accompanying characteristics of habitual inebriety.

Havelock Ellis considers example at school, seduction and disappointment in normal love, to be " powerful exciting causes of inversion ;

but they mostly require a favourable organic predisposition to act on, while there are a large number of cases in which no exciting cause at all can be found, but in which from the earliest childhood the subject's interest seems to be turned on his own sex and continues to be so turned throughout life." He also states that an invert has frequently "hereditary relationships that are markedly neurotic."

Thus by preventing neuroses we may perchance do something towards the prevention of perversion. It may be too that wider and more accurate knowledge concerning the ductless glands and other organs of internal secretion may throw light on what is at present obscure in regard to the sexual instinct and functions, and thus on the several disabilities which form the subject of this book.

CHAPTER III

VENEREAL DISEASES

As the diseases called Venereal, *Syphilis* and *Gonorrhœa*, are certainly among the most potent and frequent causes of sexual disability, and as both in somewhat different ways are the enemies of good breeding, it becomes of the greatest importance that everyone, both doctors and laymen, should do whatever can be done towards the prevention of these diseases. Their influence on Sterility and Impotence has already been considered in the preceding parts of this book. It remains to say a few words about their Prevention.

The disastrous results of Syphilis and Gonorrhœa in causing death and disablement are becoming more and more apparent as knowledge increases and, notwithstanding recent discoveries and improvements in diagnosis and treatment, it still remains true that once either disease has been contracted no man can say what the end may be. And

further, the person who becomes infected is not only a danger to himself but to others. The need for Prevention is thus urgent, not only as regards individuals but as regards the general community. It must also be remembered that neither disease, especially Syphilis, is necessarily venereal, for wherever or whenever the virus of either of them comes in contact with a susceptible surface the disease may be implanted.

As regards Legal prevention, the Contagious Diseases Acts of 1864-6-9, though much abused and misrepresented in their day, did much valuable preventive work, but they were repealed in 1886, and since then nothing of much importance had been done till the appointment in 1913 of a Royal Commission on Venereal Diseases, whose report has lately (1916) been issued. Both the Evidence and the Report contain a great deal of valuable information and, as they are now freely available to everyone, much of what it had been intended to say in these remarks has been omitted. It is to be hoped that the suggestions and conclusions of the Commission will receive all due attention and that the Government will see that they are properly carried out.

But apart from legislation a good deal could be done towards Prevention in several ways.

First, by informing our youth of the dangers of promiscuous intercourse and the risk and effects of venereal diseases. This information might be given at any time after puberty, the sooner the better. In connection with this the following recommendation of the Royal Commission may be quoted: "The practice which has been followed by some head-teachers, of having private interviews with pupils before they leave school, or if they show special need of guidance, in order to give moral instruction and to offer warnings against probable temptations should be general." The Commissioners also remark that "Much remains to be done in the Universities by those who are responsible for the moral welfare of the undergraduates." And they also recommend that certain cards of instructions, to be provided at the public expense, should be handed by doctors to their patients who are suffering from venereal diseases. Specimens of the suggested contents of such cards are included in the Report.

Every man ought to know that the first signs of syphilitic infection are often attended by so little discomfort and, to the untrained

eye, are so insignificant in appearance that they may be easily overlooked, and he ought to be told also that if anything unusual is noticed at any time during the six weeks following exposure to risk, medical advice should be sought at once. Warning as regards extra-genital infection should also be given.

Some recommend instruction respecting venereal diseases by books, some by lectures, and in Germany they have gone so far as to call in the aid of pathological specimens and museums. By all means let books or lectures or anything else be employed by anyone who thinks them desirable. But really all that the average non-medical youth need know, like information as regards abnormal indulgence in earlier life, can be told in a few minutes. The important point is to get him to attend to what he is told and to act accordingly.

It should also be impressed on every infected man that he is not only a danger to himself but a potential danger to all those with whom he may come in contact, and that as a good citizen he is bound to take every possible precaution against spreading infection.

As regards the chances of infection following exposure to the risk of syphilis, it may be

confidently stated that the man who is least vulnerable, that is with a sound epithelium, has an infinitely better chance of escaping infection than he who has an abraded or easily abradable mucous membrane, and the more skin-like the mucous surface the less risk of abrasion. The means of keeping the parts in a sound and healthy condition have already been indicated in a preceding chapter.

Given then a sound epithelial surface, and premising that there is no infallible way, save abstention, of avoiding infection, it is pretty certain that it could be avoided in an immense number of cases by taking certain simple precautions. The following suggestions for preventing infection are given in the order of their value :

First may be mentioned the Protector or Capote. This appliance which oddly enough is called French in England and English in France is theoretically, and when properly and carefully used actually, the best preventive at present known ; for it is capable of preventing both giving and taking infection, just as the surgeon's hand or finger is protected by his glove or finger-stall. But, owing to the different circumstances in which it is employed,

the protector is not so easy to manage effectively, and hence it is quite common to meet with cases of infection after it has been used. This generally means that the appliance has slipped or has been torn, or that sufficient care has not been taken in applying or removing it.

Failing the protector, some antiseptic lubricant should be used, and, judging by the experiments of Metchnikoff and Roux, an ointment containing 30 per cent. of calomel appears to be, if not the best, quite as good as anything else that has been suggested so far. Such an ointment put up in a small collapsible tube, as it is in France, is easily carried and easily used. It should be smeared on freely, especially over the meatus, *before* exposure, and should also be well rubbed in afterwards, as soon as possible after urination and washing with soap and water.

Failing the foregoing, a simple lubricant such as a mixture of lanolin and vaselin, sticky enough to cling but not too stiff to spread easily, applied beforehand, and urination and washing immediately afterwards, would probably do much in preventing infection.

Failing the foregoing, the use of any available

lubricant is much better than nothing, followed of course by urination and washing. Urination in these circumstances should be forcible, that is, the flow should be interrupted once or twice by closing the meatus. If no greasy substance of any kind is available nor water for washing, the flowing urine should be utilised for the purpose.

One or other of these measures is within the reach of everyone, and everyone who exposes himself to infection should feel bound to adopt them according to his ability and opportunity, and not only for his own sake but for that of others.

If for any reason no precautions have been taken at the time, the calomel ointment should be rubbed in for 5 minutes as soon as possible, even up to 24 hours after exposure.

Antiseptic urethral injections have been recommended for the prevention of gonorrhœa, and have apparently been used successfully in the American and German navies, but injection means the use of a syringe, and the nozzle of a syringe if roughly used may easily damage the urethral mucous membrane, and thus may possibly increase rather than lessen the chances of infection through the resulting open door.

So that it would probably be best to limit injections to those who know how to use them. For others, one of the simpler and easier methods mentioned above would seem to be more suitable, for the more easily it can be carried out the more likely will it be to be widely adopted.

All hospitals and dispensaries should be ready and willing to treat venereal like other diseases.

Removal of the *Stigma* which at present attaches to these diseases would do something towards their prevention and cure. Many people, especially certain writers in newspapers and reviews, seem to be unable to refer to these diseases without the use of such terms as "foul," "horrible," "vile" and others, which of course as applied to disease of any kind are absurd and out of place, not only from a medical but also from a common-sense point of view. Some of the people who contract venereal diseases may be vile, but surely not more vile than those who habitually give way to drunkenness or gluttony. The vast majority are not vile at all, for even apart from the many unfortunate cases of syphilis in which people, especially doctors and nurses, become infected

accidentally in the course of their duties, a large proportion of those who contract disease sexually are those who as a rule are continent, and many become infected through a first and single exposure.

Other writers use terms which if not actually abusive are vague or ambiguous, for example, "a certain disease," "social evil," "hidden plague," and the like. All such expressions should be avoided, for even those which do not plainly imply stigma are liable to promote misunderstanding and prejudice. Syphilis and Gonorrhœa are names which now have a fixed and definite meaning, and people who feel called upon to mention or to write about them should use these names without unnecessary adjectives, and if they mean Venereal they should say so.

Closely connected with this is the question of Compulsory Notification, which has been recommended by some people. It is not necessary to enter into this question here, as the Report of the Royal Commission on Venereal Diseases gives very good reasons why notification should not be adopted at the present time. It must always be remembered that these diseases differ from all others in

the stigma attached to them in this country, and this alone would be sufficient to render compulsory notification abortive. When venereal diseases are treated like other diseases will be time enough to talk about notification.

There are, of course, other aspects of Prevention which well deserve further consideration, for instance, in relation to Continence and to Married Life. These may possibly be dealt with on some future occasion. For the present, it has been suggested, enough has been said already.

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