A CLINICAL LECTURE ON SOME POINTS RELATING TO VARICOCELE.

Delivered at St. George's Hospital

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In lectures of this kind it is well as far as possible to avoid considering the same subject too frequently. It follows, however, as a necessity in dealing with common subjects—which are the most profitable for consideration with an audience like my present one—that from time to time the same subject should come under review.

HYPOCHONDRIASIS AND VARICOCELE.

A very common condition which has the advantage of being familiar to most of you is varicocele, and eleven years have passed since I have spoken of it in these lectures.¹ In the interval I have naturally much increased my experience. It is therefore excusable, I hope, if I make some points relating to varicocele the text of my lecture to-day. I am more particularly led to do this because I have seen, in the course of the last few days, two very remarkable examples, which show how a complaint which in itself is of no consequence whatever may become to the patient as a result of the circumstances in which he lives a very serious condition. One of the patients to whom I refer came to the hospital two days ago, a man who made a long journey from the country to seek advice on account of a large varicocele on the left side. He was an emaciated, miserable-looking creature. Judging from his face and aspect you would have thought him the subject of some almost mortal disease. He had a worried and frightened look, in fact he had the aspect of a hunted man, his look being furtive and suspicious, as if he were expecting some dire calamity to come upon him. I once had an interview with a highly educated person who was "wanted" by the police for a crime. He had exactly the same hunted and furtive expression as this patient, an expression which I have seen in a number of these sufferers. The general condition of misery in this patient was very much as you would have been led to expect from the aspect of his face, his condition being one of utter despondence. I saw a similar case recently in private practice in the person of a very intellectual man, who also has a varicocele on the left side, which in itself is of no consequence. It has never given him any pain or local inconvenience, and, excepting for the effect it produces upon his mind, it could be dismissed as being unworthy of notice. But so much does he, like the first man I have spoken of, suffer from the worry of the mere existence of this thing that he presents the same weary, hunted aspect, and he is really brought to such a condition of absolute misery that he does not know what to do from hour to hour, he does not sleep, he cannot eat, and he is getting weaker every day; what will happen to these two men unless something can be done to relieve them of their apprehensions it is impossible to say. I receive a large number of letters from people in this condition whom I have never seen and many of whom I never shall see, all couched in the same terms of despondency, and all craving for comfort of some sort. I mention these things because there is rather a habit—which was more common some few years ago than now—for practitioners coming in contact with cases like these, to rather "pooh-pooh" the whole matter, the patient being perhaps spoken to somewhat in the following way: "It is true that you have some large veins in the scrotum or spermatic cord, but the matter is of no consequence; it cannot possibly shorten life, and there is no reason why your health should suffer; if you will dismiss the whole affair from your mind you will be perfectly well in a fortnight." This is absolutely true: for if these patients could dismiss the matter from their minds they would be well in a few weeks; but, unfortunately, they cannot do this, they brood and brood continually upon their state until they get into the wretched condition of the man you saw in the hospital yesterday, and

of the other of whom I have spoken. I have here a letter which I received yesterday from a person whom I have never seen in my life. These people write in this way because they are so truly wretched. After going into some particulars, he says, "I have suffered for several years with varicocele caused by my sin and folly when young." That is the general impression of such people, that these varicoceles are the result of sin and folly in youth—in other words, self-abuse. He goes on to say, "I have tried several doctors; in fact, a great many doctors, patent medicines, and some quacks. In spite of all this treatment I have got gradually worse. I am compelled to give up my employment on account of my sufferings, these being at times more than I can bear; and I therefore should be eternally grateful for any advice you can give me; even if it is only a word of comfort it would be heartily welcomed." This shows very clearly the mood of these people. Although I have not seen this man I can surely say that he has the same condition as these two whom I have mentioned—a condition which in itself is a matter of no consequence, but to these men it is everything.

Then comes the question, if a complaint of this sort, which in itself is so harmless, produces such dire results in the minds of some of the sufferers, what is to be done for it, and what sort of attitude should be adopted towards patients of this description?

FREQUENCY OF VARICOCELE.

Before going into the best means of dealing with these people and of treating the trouble from which they suffer, let me call your attention to two or three facts in reference to the complaint itself. For practical purposes varicocele is merely varix of the veins of the spermatic cord, which is always congenital; to this is added in many cases some varicosity of the veins of the scrotum. The peculiarity (it cannot be called a disease) usually escapes notice until puberty, and when noticed it is most commonly discovered by accident, unless some injury has occurred to attract attention to it. As a rule no trouble arises from the abnormality. The majority of cases coming under treatment are discovered when recruits and officers present themselves for the public services, especially for the army and navy. The existence of varicocele being considered enough of a physical defect to unfit the subject of it for admission into the public service. For this view there is, without doubt, good reason in many cases. Taking the community generally it will be found that 7 per cent. of males have varicocele. If therefore a thousand men are examined, 70 will be found to have well-marked varicose veins in the spermatic cord. Eighty per cent. of that number will be affected on the left side only; about 15 per cent. will be affected on both sides, and occasionally a case of varicocele on the right side only will be met with, but such cases are rare. The condition, therefore, as you will see, is comparatively common. The percentage of cases of varicocele which give rise to trouble (in the absence of injury) is very small indeed, excepting from mental causes. From mental causes a considerable number of persons suffering from varicocele are led to seek treatment, and the majority of these are worried about their condition because they exaggerate its importance, and fancy all kinds of strange things in connection with it. Many of them have been assiduously reading medical works, some have fallen into the hands of quacks. Such people are very difficult subjects to deal with.

In a general way, if a patient presents himself with varicocele which has been detected during the examination for one of the services, or which has become prominent or come into evidence in consequence of a slight injury, or from some other cause, supposing that he is a healthy person, and under middle age, by far the best plan is to cure the varicocele by operation, a very simple proceeding if it is properly carried out. It is a measure which is certain in result so far as my experience goes, and is free from risk or inconvenience in the absence of accidental failure of antiseptic precautions, which may happen in the course of any operation. The treatment of such cases is simple enough.

With the unhappy people who are in the condition of the men whose cases I have described, the problem from the point of view of treatment is a very different one. The mere existence of the condition to such people is a matter of vast importance. As I have already said, they brood upon it night and day; they adopt all sorts of treatment at the instigation

of quacks and others, which I need not discuss here. The question is, What can be done in a rational way to help people like these? Upon inquiry it will be found that they are nearly always people who live more or less alone. I do not mean that their whole time is spent in solitude. They may, indeed, be working the whole day long amongst crowds of people, but after the day's work is done they retire to spend their evenings absolutely alone, without society or recreation—a kind of solitude which tells especially upon educated people like, for example, many workers amongst the poor in the East End or elsewhere, whose duties lie amongst those of a lower social and intellectual grade than themselves, with whom companionship in the true sense is impossible. The loneliness of such a life is often greater than that of real solitude. And with the weariness and exhaustion following upon long hours of work, the mental mood which leads in solitude to the exaggeration of trivial affections fits well enough. These sufferers are always unmarried and to whatever class they belong are sensitive and intelligent beyond the average. I have never known a dull, a stupid, or an uneducated person develop the symptoms which I have described. Unsatisfied sexual desire is sometimes at the bottom of the trouble, which in many cases could be cured by marriage—a condition upon which, although other things may be favourable, the majority of these men hesitate to enter because they think they are impotent, a belief which it is most difficult to overthrow. This apprehension about the effect upon the virile powers is not confined to the morbid class of subjects of whom I have been speaking, but is felt more or less by a considerable number of healthy men upon the discovery of the existence of varicocele; in fact it is one of the common causes which lead to advice being sought. The question therefore arises, Does varicocele as such ever produce impotence in an ordinary individual? I suppose certainly not; there is no reason why it should do so. And there is equally no reason—although you will sometimes hear the contrary stated—why self-abuse should produce varicocele. No greater mistake could be made than to think that it does so, although it is of course a useful view for quacks and other unscrupulous people to adopt, because it impresses the class of individual upon which they flourish. Although self-abuse cannot in my opinion be a factor in the production of varicocele, I have had sufficient evidence to show that the existence of 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, which are relinquished after the cure of the condition, a very important point. The possibility of this affection being produced by anything like self-abuse may, I am sure, be at once dismissed, but about the time of puberty, when the whole of the generative system is in excessive growth, an abnormal amount of sensitiveness, probably from congestion, may certainly arise in some cases of varicocele which tends to bad habits.

VARIETIES OF VARICOCELE.

I have just said that certain sorts of varicocele tend sometimes to produce this undesirable end. In a general way, from the manner in which this affection is commonly spoken of, it would be inferred that it is a condition presenting very little variety. There are, however, several varieties of varicocele, as I have long ago pointed out, a fact of more importance than some people imagine, because there is one form of varicocele which is always harmless unless it meets with injury, and there is another kind not always harmless, because, by reason of its structure, it may have considerable effect upon the sexual apparatus about the time of puberty and sometimes later.² There is a third variety, with which I need not deal now. If you will take the trouble in the out-patient department, where a good many of these cases may be seen, to examine a dozen or twenty of them, you will find that varicoceles vary a great deal in different subjects, the main variation being in the size of the veins. One variety is composed simply of very large veins passing down from the inguinal canal and the external abdominal ring to the testicle, the veins reaching sometimes to a very large size. It is to this particular variety of varicocele that the comparison to a bag of worms is applied, a resemblance which is very much increased, a fact you do not always find mentioned,

by the way in which the long veins writhe and wriggle with the contraction of the cremaster muscle. They writhe precisely like a number of worms in a bladder. That is the commonest form of varicocele, and in the absence of injury it is generally harmless. Injury may, of course, lead to thrombosis and to other evils like those which may follow injury to veins elsewhere. In the second kind the veins are small and exceedingly numerous; they may in a dissection be counted by hundreds, and they are massed around the testicle, the upper part of the cord being practically normal, the appearance at first sight resembling merely a very large testicle. These masses of veins of the smaller sort clustered round the testicle are more commonly associated with defective growth of that organ than the larger ones. In the case of the large vein form of varicocele difference in the size of opposite testicles is the exception, although it sometimes occurs, but in the small vein variety the testicle on the side affected is generally smaller than that on the other side. I must remind you of the elementary fact, which is sometimes forgotten, that these small testicles in varicocele are not wasted testicles; they are not shrunken, but they are testicles which have been checked in their growth. There is no atrophy of the testicle because it has never grown; there has been arrest of growth at the period of puberty in consequence of interference with nutrition, the result of the abnormal growth of veins.

The practical bearing of what I have just been saying is this: In reality there is no reason at all why a man who suffers from the large vein varicoceles should be considered to have any physical defect apart from liability to injury. The patients, on the other hand, who suffer from the small vein sort, have a defect which is liable to be followed by trouble; it therefore should receive consideration.

OPERATION IN HYPOCHONDRIACAL CASES.

I fear this digression has taken us far away from the subject I had in mind at the commencement of this lecture—the management of patients who develop morbid symptoms in connection with varicocele. Is it of any use in these morbid cases to operate? Let us take for example the case of the man who was at the hospital two days since, and who is coming for admission shortly to enable us to arrive at a conclusion as to whether it is likely that he can be helped by operation or not. There is nothing more difficult in my experience than to decide whether, in these cases, it is or whether it is not wise to operate. In this respect one of the most difficult matters to deal with is the acute intelligence of the patient. As I have already said, I have never seen these morbid symptoms arise in any but intelligent, well educated, or intellectual people—any treatment, therefore, which is suggested is always subjected to criticism, often of the most searching kind. Such patients argue very precisely, and upon sound bases. It must be borne in mind that the ailment is practically their only care—from morning till night they wonder what can be done for their trouble, and how it can be done—hence for every treatment suggested the reasons are eagerly canvassed. Arguments from the moral point of view are, so far as I have seen, useless, excepting very temporarily, *unless in the first instance the conditions of life ordinarily led are entirely changed*, which in many cases is of course impossible. Failing this, is it worth while in the majority of these cases to operate? The answer to this question depends to a very great extent upon the faith of the patient in the treatment.

Should the patient come fully convinced that if the varicocele is cured and the defect removed relief will follow, you may generally operate without hesitation, and in about 60 per cent. of such cases in which the operation is attempted the patient is cured; in the other 40 per cent. the treatment will fail, because with the mind so peculiarly constituted as it is in these people, although the varicocele itself may be cured, the patients are constantly examining themselves to see whether the parts are exactly the same as on the opposite side. If they find, as sometimes happens, a little heaping up of hard tissue above the testicle, the remains, in fact, of the distal portion of the obliterated veins, curiosity is excited as to the reason. Suspicion soon follows curiosity and if these patients became suspicious after an operation I have never known them to be relieved of their morbid symptoms, no

matter how complete the cure of the local condition may have been. I have, under great pressure, had on two occasions to perform castration after operations for varicocele, in patients of this kind, for the reason which I have mentioned—namely, that they were not satisfied with their condition. In each case the varicocele was cured, not a vestige of it remaining beyond, in one case, a little hardness about the testicle, so that it felt very slightly larger than that on the opposite side, a condition which many men, especially among the lower orders, would look upon with some satisfaction. In these morbid sufferers, if the first operation fails to give relief, strong pressure is nearly always made to get a second operation of some sort performed. In two of such cases, as I have already said, after great pressure, and then only at the written request of the persons most nearly related to the patient, I have performed castration. In each of these cases, as I predicted, the castration did no good; the condition of the patient was no better (indeed it was worse) than before the operation. In patients of this sort your unalterable rule should be this: in the event of the original operation failing to give relief, no further operation is to be thought of. Patients like these very frequently develop suicidal mania—for example, one of the patients whom I castrated made repeated attempts to commit suicide, and there is good reason for thinking that the other would have done the same had he not been carefully watched. I mention these two cases as they came under my immediate observation, and because they show how grievous is the state to which some of these people come. In the event of operative treatment being undertaken it is well that an operation should be performed which will certainly cure the local condition without any fear of recurrence of the complaint.

DESCRIPTION OF OPERATION FOR VARICOCELE.

Various operations have from time to time been devised for the cure of varicocele. About twelve years ago I went into the question of the radical treatment of varicocele very thoroughly, and came to the conclusion that the only operation which could be performed with perfect certainty of completely curing the condition without fear of recurrence was one which effected the complete division of the whole of the spermatic cord with the exception of the vas deferens and its vessels. I have now performed this operation more than two hundred times, and am convinced that it is the best method for effecting the desired object at present devised. The details of the operations which I now use differ a little from those which I published in 1891, although the effect of the operation is practically the same. Briefly the details of the operation I now employ are as follows: An incision of half to three-quarters of an inch—not more—is made over the cord on a level with the upper border of the root of the penis, that is to say over the external abdominal ring. The whole of the spermatic cord except the vas deferens is pulled out of the wound (the veins are not laid bare, the spermatic fascia only being exposed) by means of an aneurysm-needle or hook which is passed around between the vas deferens and the rest of the cord (Fig. 1). The essen-

Fig. 1.

Fig. 2.

tial point here is that the veins are not denuded, they are only seen through the translucent fascia; in-

side this fascia, with the veins, is generally the spermatic artery. Having pulled the loop out through the wound in the manner mentioned, the next step is to tie a stout ligature of carbolised catgut around the proximal end of the portion of the cord which has been drawn out in the manner shown in the diagram. (Fig. 2.) This having been done, the distal part of the loop is seized with pressure forceps (Fig. 2) and the loop divided below the upper ligature (Fig. 3), a good stump being left. The portion gripped by the forceps is then turned back, separated from any fibrous connections which happen to cling about it, and drawn out from the wound until the upper end of the epididymis appears, in advance of the epididymis there comes, arching up through the wound, a rounded whitish cord, which is the vas deferens. (Fig. 3.) Having seen the arch of the vas

Fig. 3.

Fig. 4.

Fig. 5.

deferens projecting upwards in this fashion, a second ligature is placed around the pulled-out portion of the cord just above it. The cord is then severed above the ligature, leaving a condition of things like that depicted in Fig. 4. All that remains to be done now is to unite the ends of the two stumps.

These are drawn out a little more, placed in contact and sewn together by means of kangaroo tendon or catgut (Fig. 5). The united stumps are then returned into the wound, when they will be found to fall back into the sheath of the cord almost like the way in which a piece of gut drops back into the peritoneum; the bringing together of the superficial wound by fine silk completes the operation. As a rule the proceeding is a dry one, for hardly a drop of blood is lost, and as I have said, the wound does not exceed three-quarters of an inch in length at the most. The wound in the skin heals generally by first intention if the parts are properly cleansed before the operation, and provided that it is made high up so that it does not encroach upon the scrotum proper, a very important point. That, I believe, is the best operation for the cure of varicocele. It is simple, and cures with certainty, for the reason that if it is properly done recurrence is impossible, seeing that no veins are left in which recurrence can follow.

TREATMENT OF THE SPERMATIC ARTERY.

You will have noted that a point upon which I have laid stress in the details of the operation is that the veins are not denuded, but taken up *en masse* with the surrounding spermatic fascia, and therefore, as a rule, with the spermatic artery—one of my objects in the operation being, in fact, the obliteration of a portion or of the whole of the spermatic artery. If, then, I include, as I do, a segment of the spermatic artery in the structures, which I remove—in some cases a length of as much as four inches—why does not the testicle slough? And, further, if no sloughing follows, how is it that

the organ does not subsequently waste, seeing that its main channel of blood has been closed?

The answer to these questions lies in the fact that the vessels which accompany the vas deferens, together with a few small vessels which are derived from the sub-vaginal cellular tissue, are sufficient to nourish the testicle. From these sources the testicle derives sufficient nutrition, over and above that which it gets from the spermatic artery, to prevent its necrosis. When I first began to perform this operation I was a little apprehensive that if the attempts at obtaining asepsis failed, the testicle would be in danger of gangrene, or at all events of very rapid wasting, but this fear would appear to be groundless, for a short time since a patient in whom I performed the operation removed his dressings in the night, profuse suppuration resulting. No bad effect upon the testicle followed; the patient recovered with a perfectly sound organ in spite of the strain thrown upon its diminished vascular supply. All fear of atrophy or gangrene on these grounds may, I am sure, be dismissed, although there are still some surgeons who hesitate to use the operation as they are fearful of its possible consequences.

Wasting of the testicle after operations for varicocele certainly should not occur. Occasionally, however, wasting happens, although I have never known a case occur in my own practice. I have no doubt that wasting of the testicle is more likely to occur if the veins only are dealt with in the operation than when the principal sources of arterial supply are obliterated with them. It is also certain that fatty degeneration of the tissue of the testicle which follows sometimes after operations for varicocele is more likely to occur when all the veins are removed and the full arterial supply left intact than when the arterial supply is proportionately diminished. This is what may reasonably be expected as I pointed out long ago,³ and it has been proved that it is so beyond doubt by some experiments on animals on animals which were carried out by Dr. Joseph Griffiths at Cambridge.⁴

Let us consider for a moment the reason of this result—for at first it hardly seems rational—the spermatic artery is at all times a rather large vessel in proportion to the work required of it. In varicocele the vessel is often larger than usual, and is, indeed, sometimes more than double its normal size.⁵ Given a large spermatic artery pumping a great quantity of blood into a delicate organ like the testicle, nearly all the efferent vessels of which have been removed, it is clear that there must be an enormous engorgement of the organ for the time being, which in some cases persists long enough to lead to the fatty degeneration which undoubtedly occurs in the testicle in some of these cases. On the other hand, if the main artery is obliterated, the blood carried by the artery of the vas deferens and others is sufficient to nourish the testicle without producing engorgement, since the remaining efferents are of sufficient capacity to secure an evenly-balanced return of blood from the organ.

Before concluding, allow me to say one word further with regard to the fatty degeneration of the testicle which sometimes occurs in these cases. If, after an operation for varicocele, the testicle visibly wastes, it is naturally regarded by the patient as a serious matter, since great importance is attributed to the shrinkage of such an organ—for although it may with some truth be said that a single testicle, if it be sound, is for practical purposes functionally as useful as the double organ, it is difficult to induce the ordinary patient to regard the matter from the purely physiological point of view. In the fatty degeneration of which I am now speaking the testicle does not waste—that is, it does not diminish in size; it merely becomes abnormally soft as compared with the opposite organ. I have seen one of these soft testicles which, after removal, consisted almost wholly of fat. Such organs are sterile—a fact of some importance, perhaps, if both were concerned in the change. The surest way of avoiding the risk of this form of degeneration is, I believe, as I have already said, to proportionately diminish the arterial supply when the veins are removed. I have never known any diminution in size or any softness follow the operation I have described, although my experience of it is large.

Such are a few points which are, I think, worthy of your attention in connection with this very common complaint;

they are not altogether without interest. It is remarkable how much there is sometimes to be found of interest in these common diseases or abnormalities which are very frequently regarded as unworthy of much consideration simply because they are so common.

NOTE AND REFERENCES.

¹ *Lancet*, February, 1889. ² *Varicocele, a Practical Treatise*. ³ *Ibid.*, p. 97; also *Lancet*, March 7th and 14th, 1891. ⁴ *Lancet*, vol. i, 1895, p. 91. ⁵ This abnormal size of the main arterial channels is not confined to varicocele, but occurs in other varicose conditions; see *Clinical Lectures on Varicose Veins*, p. 44.

AD TERRAM.

II.

THE EARTH AND THE SOIL.

By SIR FRANCIS SEYMOUR HADEN, F.R.C.S.

I HAD hoped, after the record which you were good enough to enable me to make, in the *BRITISH MEDICAL JOURNAL* of May 27th, 1899, of my views as to the competency of the earth, properly treated, to deal effectively and harmlessly with all forms of organic decay returning in the course of Nature to its surface, that I should not again have to trouble you on the subject; nor should I be doing so now if continued investigations had not satisfied me that we hold in our own hands a key to other equally great truths which, in our engrossing pursuit of the microbe, we have allowed to escape us—a key also which, if applied with a firmer faith in the ordinary operations of Nature than we seem just now disposed to accord them, I would fain hope may one day win us back to those larger methods of inductive research which we associate with the name of Bacon, and to which, indeed, we owe, directly or indirectly, nearly every great discovery that we have made our own since his time.

It is, however, not alone to regret our growing tendency to break away, on grounds which I must consider altogether speculative, from the surer methods of the Baconian philosophy, that I am again venturing to address you, but rather to invite the attention of the profession to the experiments we are making and the language we are employing to chronicle their results; experiments which, since we are making them not in the earth, but in the soil which covers the earth, do nothing to prove the latter the hotbed of infection which some would have us believe it to be, but rather suggests one of two things—either that we are failing to recognise the real nature of the medium we are employing in our investigations, or, which is even more likely, that we are taking for granted that the soil and the earth are one and the same thing, whereas, from the point of view of the present article, not only are they not the same thing, but in all but the equal and independent share which they have in the conversion of effete organic matter into its elements, two essentially different bodies; different in their origin, different in their nature, and different in the parts which they play in the world's economy.

Nor is there, I would respectfully submit, any room to doubt the prevalence of the additional oversight which we are now making, since evidence of that tendency confronts us at every turn: in our choice of the soil as a medium in which to make our experiments—a medium in which we may, if so minded, cultivate anything from a microbe to a mushroom; in the adoption of a terminology, fast degenerating into a vernacular, which is intelligible only to those of us who are content to live under the predominant dispensation of the microbe; in our lectures, our correspondence, our reports, and even in our textbooks, which one and all, so far as I can see, speak of the earth as a sort of composite body which they describe as “the soil,” or it may even be, when put to it for a pseudonym, as the “subsoil.” Thus we are in no way surprised when so accurate an observer as Professor Poore candidly tells us that when he speaks of “earth” he means “humus” (which is soil),¹ or when so practical and conscientious an experimentalist as Dr. Klein uses the term “earth” in the same sense as his equally careful fellow reporter, Dr. Houston, uses the word “soil,”² or, finally—