CLINICAL LECTURES

ON THE

EXAMINATION OF PATIENTS BEFORE OPERATING ON THEM.

Delivered at St. Bartholomew's Hospital.

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I.

THE truth still needs enforcing, that the duties of an operator are by no means limited to his work on the table. What would be thought of a general who, however brilliant his supervision and direction might be in actual conflict, was heedless or ignorant of the management of an army before it was brought face to face with the enemy? What chances of success would remain to mere personal prowess or skilful manœuvring, if, from lack of previous discipline, defect of the commissariat, or stupid indifference to the health of his troops, he led them into action a sickly and disorganised band? The wise and enlightened general reaps the reward of his previous care and attention, of his forethought and providence, not so much before as on and after the day of battle. And so it is with the operating surgeon. No ingenuity of conception or brilliancy of execution of the operator can cover the shame of the surgeon who neglects to secure for his patient, by previous preparation, every possible advantage which can in any way, however trivial, minister to success. No prospect of success—nay, no issue, however successful—can justify you in subjecting your patient to any avoidable risk. Very often has it been remarked, that the success of an operation frequently bears no proportion to the dexterity with which it is performed. The explanation of this apparent anomaly lies beyond the operating-table, but it is not far off. It is because, too often, the importance of previous examination and preparation is unheeded or ignored. Such is my apology, if the seeming triteness of the subject call for one, for troubling you with some remarks on this head to-day.

Just, then, as the purpose of a soldier is to bring the greatest number of men, in a state of the highest efficiency, to bear at once upon the enemy, so should it be the purpose of the surgeon, when called upon to perform an operation, to see that his patient is in the best possible state for it, and that he has the advantage of every practicable circumstance that may tend to secure him against risk.

Now, in considering how this great object can be best carried out, let us remember that operations may be divided into those of necessity and those of expediency. That it is to say, in the one class it is a question between presumptive death and the performance of an operation, and in the other it is a question whether a patient's health and strength and efficiency for the duties of life will or will not be advanced by an operation. Anyhow, in the last case he will continue to live on; but will an operation place him in a better condition than he was in before? And, again, let it be remarked that in the last case the surgeon is not under any great pressure in regard to time; he can afford to wait and watch, and to select the most favourable period for stepping in with an operation. And the first class—the operations of necessity—may be subdivided into those which must be at once performed, if performed at all, which admit of no delay, which afford no time; and into those in which, although an operation must be performed in order to save life, yet there is, within limits, a choice of time. Here we have to decide the question whether it shall be done at once, or postponed to a more favourable opportunity.

Now, with regard to operations of necessity which must be done at once, the question is reduced to a very simple issue. Has the patient a reasonable prospect of surviving the shock of the operation? Whether or not he will ultimately recover from it, is a further question into which we can hardly look. Such an operation is justified—nay, called for—if it give him a better chance of life. If he must die without it, then the poorest chance with it is better than none at all; and, in these extreme instances, all other questions are put out of court. If the patient do not die on the table, or sink directly afterwards, the surgeon has but done his duty, albeit the statistics of surgery are burthened with an

unsuccessful operation. Take, as an illustration of such cases as these, the example of a shattered limb, where the shock of the injury has reduced the person to a state of collapse. We may not dare to wait. The occurrence or probability of hæmorrhage, a very trifling amount of which would turn the scale, forbids this. If the patient can only live through the amputation, it had better be done. Or, even a yet stronger example, a case of strangulated hernia which has been left too long: Can we stand over a patient dying with a stricture unrelieved? No; though she be on the verge of dissolution, we must make the attempt to give relief. Aye, even though she should die, as it might be said, under the surgeon's hands, his act was a good and wise one; he was doing the right thing, in the face of all possible discouragement.

In operations of necessity in which we are allowed some choice of time, the disease or injury varies most widely in its nature. In some, the mischief is so rapidly progressive that the period allowed us for preparation is very limited indeed; in others, the disease or effect of injury is so stationary or indolent that such operations pass by insensible gradations into those of expediency, in which an operation may be declined unless we are well assured of success. Of the former class, it may be said that, as a rule, the sooner they are done the better. With disease of such a nature as to call imperatively for removal, and which is rapidly or even steadily progressive, a patient's state for the trial that awaits him is not at all likely to improve. Therefore, except under extraordinary circumstances, there should be no delay. If the patient's general health be satisfactory, so much the better; but what chance is there of the amendment of any chronic disease while subjected to the distress of a malady for which he seeks the surgeon's aid? With evidence, then, of damaged kidneys, heart, or lungs, a great risk must be run; and it is for the surgeon to measure, so far as he is able, the degree of risk, and to decide accordingly. In such cases, the momentous question is, Is there a fair chance of recovery from the operation? If not this, then, indeed, nothing short, it would seem, of extreme intolerable agony, calling at all risks for the relief, should induce the surgeon to interfere.

But the few cases in which, while an operation is urgently called for, it may be wise for a time to delay it, are those in which, at this critical period, there appears some active, though it may be transient, disturbance of the system. If some acute disease should actually set in, an operation is, for the hour, out of the question; but suppose, short of this, on the day previous to, or on the morning of, the operation, the temperature should be found to have suddenly risen two or three degrees; or suppose a smart attack of diarrhoea, or some anomalous eruption of the surface, or a bad sore-throat, or something else,—the surgeon would postpone an operation under such circumstances if he could. Sometimes, too, in women, the period of occurrence of the catamenia has been miscalculated, or they appear irregularly at the critical moment, from anxiety or excitement. Surgeons generally, and no doubt with good reason, are averse to operating then; although, for my part, I do not think we act wisely in postponing, even as a rule, an operation for this cause. It is a choice of some difficulty. It must depress and otherwise sorely try a woman who has, by a supreme effort, brought up all her courage and resolution to the hour, to put off an operation only for a day or two. To her it is as if, while she lay counting the minutes, some mocking finger moved back the hands on the dial. Certainly it is good physiology and sound surgery to avoid all interference with the regular flow of the catamenia. No careful surgeon would omit inquiry into this; but, when they appear at an intermediate period, the case, I fancy, is somewhat different, and much, of course, must depend on the patient and the disease; but, for myself, I believe that, by sometimes running whatever risk there may be in proceeding with the operation, I choose the lesser evil of the two.

But now, having cleared the way of those cases which give us little or no choice or time for preparation, let us consider those in which, although, so far as concerns the local mischief, it has been determined that an operation is necessary or advisable, there is yet some considerable choice of time and opportunity of improving, if need be, the general health. There must be a full and exact inquiry into his present state—an inquiry not less full and exact than has been made of the local mischief. First, hear his own description of his present health, and the evidence he can offer in support of his statements. Then inquire as to the existence of any present or past deficiency. Listen patiently to the whole of his personal history, and to whatever account he may give of his habits; what he has been able and accustomed to do; in what respects he has been sensible of being unequal to ordinary exertion. Get him to contrast his present health and strength and weight with what it was three, six, or twelve months ago. Have too, if you can, any report which his friends who know him best can give of him. Then go diligently through his family history. Do not be in too great a hurry

to cut short a long and tedious story signifying nothing; but be rather on the alert to secure, if you can find them, any grains of wheat in a heap of chaff. And when you have ascertained all that he can tell, you have to make an inquiry of a far more exact and reliable kind for yourself. You have to make a searching appeal to his various organs and to hear what each has to tell. The heart, lungs, and kidneys can speak directly to you, and, for the most part, clearly. The brain, stomach, and liver will respond by indirect signs.

I have sometimes thought that it would be useful practice for the dresser of the patient, in every case, previously to an operation, to fill up a scheme similar to those employed by our insurance offices. You know, perhaps, that the list of questions set down in these papers to be answered by the person whose life is proposed for insurance, and by his own or some other doctor, have been drawn up and arranged most carefully, with the view of guarding the office, as far as possible, from all unnecessary risk. And the risk which the office seeks to avoid is just that of which an operator should beware. But, then, how vastly greater is the need of foresight on his part, for presently he has to subject his patient's powers to the severest test, and he has far more than a mere sum of money depending on the result.

With regard to the first point—the personal history of your patient—you will, of course, often obtain very valuable information, but at the same time you may be led into false security. Do not confound strength—muscular power—with health. A man may be physically very strong, and yet the subject of rapidly destructive disease. This is notorious. Many a man, you know, ignorant of the flaw within him, has brought about his death suddenly by some great effort. And men who are strong are usually proud of it. So, while evidence of great endurance is satisfactory so far as it goes, be not, by any account of the amount of work a man can go through or the number of miles he can walk or row, thrown off your guard. Better, I think, if such a history be forthcoming, is that of the way in which he has gone through any previous illness or effect of injury. On the other hand, a person physically very weak, of delicate mould and aspect, and, as the saying goes, easily knocked up, may yet be, and often is, a very excellent subject for an operation. Such people will tell you that they have never been very strong, but still have never had any damaging illness; that from such affections as may have assailed them they have always recovered well; that their flesh is very good for healing. Such persons are usually less gross and full-bodied than others; but about this I shall have something to say further on.

The most common of evils in the way of past history is the habit of intemperance, and without doubt one of the most mischievous. Of course, almost everything depends upon the extent to which the vice has been carried, and the length of time during which it has prevailed; but this, at least, may be safely said, that very few persons who have long indulged to excess in intoxicating liquors retain good health. They may, and usually do, report themselves sound and strong, but an operation, perhaps too late, exposes the delusion. Much difference of opinion prevails amongst those best qualified to judge upon the kind and degree of mischief wrought by adulterated alcohol. The opinions of authorities are at variance, for example, upon the relation which intemperate habits hold to disease of the kidneys. But, waiving questions of detail here, this general conclusion may be accepted: that constant saturation of the blood with alcohol interferes with healthy nutrition; that degeneration is thereby promoted, and a tendency to the production of fibroid formations of a low kind; and, more especially in relation to surgery, that the power of producing good vigorous euplastic lymph is largely interfered with or destroyed; that such effusions in habitual drunkards are either cacoplastic or aplastic; that in such corpuscles abound to the exclusion of fibres, or, in plainer terms, wounds fail to heal by adhesion, and are very prone to suppurate. And then, of course, there is the risk of evils which are prone to wait on wounds indisposed to heal, such as erysipelas and the like. Another danger which besets these cases is this. Suppose there be signs of depression or failure of power after operation, as indeed there are likely to be, stimulants in additional quantity are called for, but they do little. Their effect is so reduced in such cases that very little can be got out of them. They are very often necessary, even in large quantity, as every one knows, but with the extreme purpose of saving life, and with scant hope of speedily bringing about healthy action.

Under these circumstances, then, in the case of a sot who requires an operation—what had better be done? Why, if we can afford to wait, we may take time to bring about, as speedily as practicable, a more promising state of health by rigid regulation of the habits. Every one is alive to the fear of suddenly depriving a man, who has been accustomed to them, of his stimulants. Is not the danger of this, in some measure, over-rated? No doubt, it would be better to bring about the change gradually if we had time; but our choice lies between the chance

of improvement, which is often signal, from two or three weeks' very moderate allowance of stimulants, but with the effect also of making him low and miserable, and the risk of an operation upon a person soddened with alcohol. And if two or three weeks' comparative abstinence should try him so much, what prospect is there of carrying him through a considerable operation? I have often been struck by what can be done for such cases by a week or two of comparative temperance. It is astonishing how often the signs of healthier action will rapidly appear; how quickly the breath will lose its foulness, and the tongue its thick coating; how the appetite will improve, and the eyes and whole expression brighten. The man seems to have shaken off a load, and in great measure to have become himself again. I say, therefore, make a decided change beforehand when practicable; for, whatever the risks of that may be, they are assuredly far less than those which otherwise you must inevitably encounter.

Family history bears upon the case in two ways. First, it affords evidence, though it must be confessed vague and indirect, of the constitution and general powers of our patient. Every one knows, and every insurance company acts upon the knowledge, that the prospect of life and health is rendered more favourable by a good family history. On the other hand, when several members of a family have died prematurely, although it may be from apparently different diseases, the risk of such a life is very materially augmented.

But evidence within this of a more definite kind is often afforded by family history. It is familiar knowledge that certain diseases are hereditary—that they are transmitted from, or through, parents to offspring. This needs no illustration. Who is there that cannot refer to many examples of it? The subject has, in our day, been much attended to. Our knowledge of the number of diseases, inherited or acquired, that may be transmitted has been extended, and we begin to understand something of the laws or conditions under which such transmission occurs. The subject is far too vast to be entered upon here. You must study it by itself as fully as you are able, and be assured that, in your practice, it will repay all the attention you can give to it; its bearing, however, upon the question now before us is much more limited. We are not now even concerned with diagnosis, upon which it sometimes bears strongly—as, for example, in the suspicion of the cancerous nature of a tumour—but with calculations of the risk of operation. And here family history will affect our views in this way: suppose the existence of some deformity or disease which is so far quiet as not to be productive of any material evil to the general health, and suppose the subject of such an affection to be a young person, say about twenty, in whom no present disease can, by any scrutiny, be discovered, but who had, nevertheless, lost several, perhaps all, his brothers and sisters of phthisis between twenty and thirty years of age; surely no prudent surgeon would subject such an one, except under very exceptional circumstances, to the ordeal of a severe operation. He may, perchance, even with his deformity, live on and escape, for many years or altogether, the fatal outcome of his inheritance; but his constitutional powers would probably be inadequate to the stress of an operation. And although he might recover from the immediate effects of the operation, so far as to save ostensibly the credit of the surgeon, yet he would rise perhaps too heavily weighted for the chance of ever becoming again the man he was. The great question, however, of the influence of operation on the tubercular diathesis will be brought before us more directly by and by.

THE AGUE-PLANT.—Dr. Bartlett of Chicago has forwarded to the Editor of *Grevillea* (No. 6, 1872) specimens of the palmeloid plant, in which Dr. Salisbury believed himself to have discovered the germs of the ague. He says: "Desiring to investigate the subject, I sought for the plants described by Dr. Salisbury in the ague bottom of the Mississippi river, opposite Keokuk, Iowa, lat. 10° 25'. Not being provided with a suitable microscope, I was unable to discover the microscopic algæ described by the doctor. I was pleased, however, to find the fungi, samples of which I send you. Generally, it answers Salisbury's description." He adds: "By placing the cake of earth sent you in a plate, and adding water enough to make it of about the consistence of potter's clay, and keeping it at a temperature of above 60 deg., you will find a fresh crop of the plant to develop, and you will thus have an opportunity of studying them. Should you allow them to flourish and remain uncovered in your room, you might have the satisfaction of demonstrating the 'cause of ague'. This fungus was first found, so far as I know, by Dr. J. P. Safford of Keokuk, who was kind enough to search for me while I visited an ague patient. In the locality of their growth they are to be seen in myriads, and near them, even on elevations of over one hundred feet, everybody had the ague. The course of this disease seemed *pari passu* with that of the plant."