CLINICAL LECTURES

ON THE

EXAMINATION OF PATIENTS BEFORE
OPERATING ON THEM.*Delivered at St. Bartholomew's Hospital.*

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III.

THEN, for the physical or other examination of the internal organs—of the heart, lungs, kidneys. Are they sound, or do they betray any evidence of disease or defect? If so, of what probable nature is it? Is it present or past? Are morbid changes still in progress, or is there evidence only of the damage done by former mischief? And what of such damage; how does it tell? What risks does it engender? In what direction is it suggestive of inability to bear the shock or strain of an operation?

First, of the heart. Suppose there is evidence of insufficiency of some of the valves. This would probably be the result of past mischief; and it may be, if there have been time enough, that the difficulty to be overcome has been, in large measure, met by augmented power. As a rule, one might say of such mischief, if it stand alone, that it does not add largely to the risk of an operation. By its mechanical effect it is not, perhaps, in relation to an injury, a very great evil; but the worst of it is, that in many cases it is suggestive of a constitutional flaw. The public are easily alarmed about chloroform, and patients who hesitate to take it will often urge, in justification of their fears, a real or supposed affection of the heart. I do not know that there is any evidence to show that the risks of chloroform, when judiciously given, are materially increased by defect of the cardiac valves. But change in the substance of the heart—fatty degeneration—is a far more formidable disease for the surgeon, and, unfortunately, a far more treacherous one too. Its signs are not so obvious: the earlier stages of it especially are not usually, I believe, revealed by definite signs, and yet we know how terrible a crisis awaits this affection. Sudden deaths, even without any obvious determining cause, are only too familiar to us. The shock of an operation then must surely be extremely hazardous. And if an operation must be done in the face of evidence suggestive of such degeneration, it is well for the surgeon if, beforehand, he has put the case clearly and strongly before his patient's friends, making them fully understand and appreciate the danger.

Suppose there is evidence of aneurismal dilatation of the aorta, I would repeat shortly what I have said of valvular imperfection—that it is not, perhaps, so material in itself as in its suggestion of degenerative changes proceeding elsewhere. Such a condition is very likely to be brought to our notice when considering the question of operation for an external aneurism; and here, of course, it tells with especial force, when it is so important that the artery we secure by ligature should be in a healthy state. Evidence of degeneration of a part of the arterial system elsewhere than about the aneurism would furnish an argument—though I think by no means a conclusive one—in favour of compression against ligature.

Then, with regard to the lungs. No one, if he could possibly help it, would operate in the presence of any inflammatory disease, if there were any prospect of it passing away. Embarrassment of the pulmonary circulation tells sadly upon a patient after any considerable operation, and, at the least, is very sure to add largely to his distress. A constrained position, then, becomes terribly irksome. Every effort at coughing shakes him and produces much suffering, and immediate danger arises from the difficulty or impracticability of expectoration. After certain operations, indeed, the presence of cough is particularly mischievous—after those for hernia and cataract, for example, for obvious reasons.

But the great majority of affections of the lungs which are brought under the notice of the surgeon before operation are those which are placed collectively under the head of phthisis. I hardly know how to handle this subject in the space which I can give to it. Under the head of phthisis—of disease destructive of lung-substance—are now included changes differing most widely in their issues and in the degree of mischief wrought by them. But the surgeon, for his part, can bring these questions to two or three points. First, assuming that there is evidence of mischief in the lung, is the disease active or quiescent? If active,

what is its probable issue and duration? If it be quiet, how much damage has been done; and in what condition of health and strength has it left the person? What has been its history hitherto? How far can we judge of the future by the past? And of the operation, in relation to this point, what is the nature and extent of the demand it will make upon the powers of the constitution? And last, chief and most critical question of all—How, in relation to the health and strength, will the operation stand in comparison with the disease for which it is proposed as a remedy? You see, in the face of such mischief in the lung, the question comes to this—How can the patient's health and strength or constitutional capital be best preserved? Will the operation make less demand upon it than the disease? With lung-mischief in progress, who would think of subjecting a person to the stress of a considerable operation if it were merely one of expediency—say for the remedy or removal of deformity? Even with lung-mischief at the time quiet, but recently active, who would wantonly incur such a risk? But now, supposing disease of a joint or other part which, from pain or discharge, was telling steadily and surely upon the powers, if by an operation the local tax could be lessened, ought it to be declined on the ground of considerable lung-mischief? Ought we not to choose the less evil of the two? Sometimes it is said we ought not to run the risk of stopping a local drain, which may be serviceable in keeping quiet disease in the chest. But if such a local drain be exhausting, the smaller question is swallowed up in the larger, which, I repeat, in such a state of health is this—By what means can we best reduce to a minimum the demand upon the powers? When this great question is urgent, all minor ones, about the appearance or usefulness of a part, have little place. Nay, we may not hope to be able to save life; we can only aspire to prolong it. You see, then, my view of the matter comes to this. We have to consider the question of operation, in the worst of such cases, only in reference to the disease of the lungs. However unpromising that may be, if the operation, in its relation to the constitutional power, be a local mischief less than the disease it sweeps away, it should be done. Truly, the surgeon's work, in such a case, is not an encouraging one; but surgeons expect no privilege in the choice of cases. But there is this further consideration. An operation may be preferable to the mischief it proposes to remove, inasmuch as there is no chance of the disease abating; but then the operation itself will inflict a shock, and the remedy, for a time, may be more severe than the disease. Now, the shock in such a case, and for reasons already given, is not, perhaps, of serious moment, but has the patient a chance of weathering the subsequent storm? If the wound can be repaired he has gained largely, perhaps gained everything; but what if he should sink prematurely, and so die, as it will be said, of the operation? Why, the surgeon must weigh this momentous question in every such case for himself. He can have no guide in the matter but his clinical experience.

But, then, the disease in the chest may be so slight as not to rise into such urgent importance. Here again, if the operation, in relation to the system, be a less evil than the disease, there can be, ordinarily, no hesitation about performing it. But, in operations of expediency, the surgeon must, in each such case, measure for himself the risk, taking into consideration other circumstances in respect of which, perhaps, no two cases will prove to be alike. If the patient be an adult, the whole matter must be laid before him; if a child, before his friends. Only remember that, in such cases, we have the chance of waiting and watching long, and so of arriving at a much sounder conclusion.

A surgeon has the strongest possible reason for not neglecting to examine thoroughly into the state of the kidneys. Physiologically, the kidneys are not so immediately essential to life as the heart or lungs; but, surgically, a healthy state of the kidneys is more important to the issue of an operation than that of any other organ. And cannot we understand why this is so? The kidneys, like all other organs, in some degree share in the shock of an operation, but after this there is, as we know, often a considerable stress put upon them, inasmuch as they have to excrete from a blood strangely disturbed, even, perhaps, materially altered in its composition by the local mischief in progress, or extraordinary action. Now, when the kidneys are healthy or tolerably sound, they respond to the call—prove equal to the extra work—and are, no doubt, the chief means by which the blood is enabled to unburden itself. But if the kidneys are at fault, what ensues? They may be much damaged, and yet with working power sufficient for the purposes of a quiet existence. Week after week, or month after month, during the calm of a regular life, they betray no evidence of flaw or weakness. Such impairment of health as may ensue, is unheeded or otherwise explained. The urine might tell the tale if questioned; but no complaint, perhaps, points to the need of examining it. But the storm of an operation coming suddenly upon them, they give way altogether; fail to answer to the call, and the patient rapidly sinks. Gentlemen, never

be tempted to do an operation without, when possible, looking thoroughly into the working condition of the kidneys. Fortunately you have, in the urine, an honest and straightforward witness which it may be well to question, not once only, but several times. And if the urine should prove to be abnormal, you must learn to weigh the evidence it yields; and I need not tell you that you find far better guides in works on or teachers of medicine, than I can prove. So on this head I will venture to offer only a single remark. I have observed that, when a dresser is asked to examine and report upon a patient's urine, he sometimes understands this to mean only looking for albumen; or, at least, he reports next day—no albumen, or much albumen, as the case may be. If there be albumen, he usually examines further for tubercles, and may take the specific gravity of the urine. But this last observation is occasionally not made at all, and sometimes thrown into the background as merely a supplement to the others. Now, to the surgeon, I think the last point—the specific gravity of the urine—in the question to which he seeks an answer, is of supreme importance. The damage done or change of structure is told more in detail no doubt by heat, nitric acid, and the microscope, but the working power of the kidney which is still left, is told, I fancy, more surely and directly by observations aimed at the amount of its normal constituents carried off in the urine. I am not so stupid as to tell you that you may learn this by simply taking the specific gravity of the urine; but, and especially when from any other signs there are grounds of suspicion, repeated observations on the specific gravity checked by measurements of the quantity of urine, will, I think, most satisfactorily indicate to you your future course, either of having nothing to do with an operation, or of pursuing further the inquiry.

I cannot, need not, point out the bearing upon the question before us of disease or unsoundness of other organs, such as the liver or stomach. Of course, any weakness, in any part, is unfavourable so far as it goes; but, on the other hand, it is well to know that these subordinate organs may be much damaged and yet the patient may be carried safely through a formidable operation. And the great point here is the same as in the case of the kidney. Setting aside active or acute disease, the question chiefly turns upon the amount of working power left. I can give you a striking illustration of what is here meant. A girl, about fourteen years of age, was the subject of incurable and destructive disease of the knee-joint, which, moreover, was the seat of intense pain. For all this there was no remedy short of removal. But, then, her state of health and general condition were very unpromising. Her powers had been greatly reduced and she was very feeble. And with all this her liver was very much enlarged, reaching far down into a distended abdomen. The diagnosis of both physicians and surgeons was that the liver was the seat of very extensive amyloid or lardaceous deposit; and the mischief appeared to all so grave that I could get no encouragement in the way of operation. But day after day the poor girl with pallid and anxious face begged that something might be done; and, watching her for some time, I was led to believe that a considerable amount of working power must be still left to the liver. In her appetite and digestion were some of the best signs about her, and there was nothing materially wrong in her urine. Under these circumstances, then, I ventured to amputate her thigh, declaring, however, that I had little hope of complete recovery from the operation, and that I interfered rather with the view of escaping the reproach which has been attached to the profession for not paying greater regard to euthanasia. But the girl not only recovered completely, but even rapidly, from the operation. The relief was absolute. Her progress in health and strength was, for some weeks afterwards, uninterrupted; and at length she left the hospital with a sound stump, and in general condition much improved, but with a liver as large as ever. On one or two occasions, at intervals of a few months, I saw her subsequently. She appeared to be a thorough invalid, with no immediate prospect of any material change.

One other great question still remains for consideration. I have hitherto spoken of an operation only in general terms—only vaguely, as large or considerable. But, of course, even of capital operations, there is a vast difference in the degree of danger; and thus we have to reckon, so far as we can, the amount of risk to which each one exposes the patient, independent of any particular weakness on his part. Now, of course there is much in the way of statistics on this subject, but I would advise you not to trust such figures too far. They can only point to general conclusions, and must be applied, with all caution, to particular cases. The question, after all, must of course be, in each case, a personal one. Each patient, apart from any special unsoundness, is sure to present certain individual features which mark him out, in some way or other, from the average. And there can be no more difficult and delicate duty for the surgeon, none calling into exercise higher qualities of his art than the application of general knowledge derived from statistics or previous experience, to the formation of a just prognosis in

any individual case. For example, statistics speak of primary and secondary amputations, but in each case of proposed secondary amputation almost everything, perhaps, turns upon the question of time—upon the state of the patient on whom such an operation is performed. Then, again, think how very much must be allowed for in applying statistics of operations in hernia to any one case. Still, with all this, there are certain large conclusions on which we may securely rest. Removal of the breast, for instance, is an eminently favourable one among large operations; and the same may be said of great operations on the face, for example, removal of the upper jaw. How marked is usually the contrast between the proceeding itself and the subsequent progress of the case! So, again, patients usually recover very rapidly from operations on the tongue, even when the greater portion of it is removed. On the other hand, as we know very well, grave results are apt to follow operations apparently trivial, if they involve the exposure of a serous or synovial cavity; and operations on the male urethra are sometimes very treacherous.

And here, gentlemen, I must stop, although, in truth, I have hardly begun. When it occurred to me that I might devote a clinical lecture or two to some consideration of the matters I have hinted at, I saw at once that, in the time allowed me, I could do no more than trace the barest outline of the subject; and now I find that, as usual, I have fallen far short of my purpose, even of this one. Still, I venture to hope that I have not altogether failed of the chief object I had in view—to direct your thoughts to questions too often unheeded or overlooked, and to impress upon you the paramount importance of sparing no pains in the endeavour to answer them.

THE ACTION OF MERCURY.

By ROBERT FARQUHARSON, M.D.

THE unfortunate idiosyncrasy of Dr. Cheadle's patient reminds me of a case in which severe symptoms were produced even by a smaller dose of mercury.

A relative of my own spent many years in the West Indies, and was treated there for fever, according to the fashion of the day, with almost incredible quantities of calomel. Ever since that period, she has been so susceptible to the action of the drug as to find it necessary, when consulting any fresh medical man, to lay her peculiarities in this respect fully before him. On arriving in London, however, she was seized with what is popularly called a bilious attack; and, unluckily forgetting to make her usual stipulation, the doctor in attendance naturally enough prescribed a couple of pills containing three grains of calomel and five of colocynth. Furious salivation almost immediately set in, with marked gastric disturbance and general debility; and several months elapsed before either her gums or her strength were restored to their normal condition. This lady's daughter exhibits an almost equal intolerance of mercury in any form; and I am thus led to infer that prolonged residence in a tropical climate may serve to encourage, if not actually produce, such a type of constitution.

We also know that debility has a decided tendency to cause excessive action of this therapeutic agent. Of this I remember a typical instance, which occurred in the Coldstream Guards' Hospital some years ago; two privates having been salivated, one by three, and the other by two, calomel vapour-baths, each containing twenty grains. This naturally excited some surprise, as the men were robust, and as such accidents rarely happened; but all became clear when we found that they had inadvertently been kept on very low diet during the four or five days following their admission. The rectification of this error speedily put them all right; but the circumstance impresses forcibly on us the necessity of combining tonic diet and regimen with anything like a mercurial course. If we feed our patients well, give them a moderate allowance of stimulant, with iron or quinine, they will fatten and do well; whereas the semi-starvation enjoined by the dogmas of former days proved its fallacy by the results. With syphilis as the whip, and mercury as the spur, patients went downhill with sad rapidity; and not a little of this must have been due to the debilitating influence of low diet.

In conclusion, M. Diday (*L'Histoire Naturelle de la Syphilis*) tells us to beware of the action of mercury in persons with light or reddish hair. I think I have seen some reason to accept this caution; and it obtains confirmation from the ladies above referred to, whose hair was of a light reddish mauve colour.