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.