rendered available for the relief of obstinate cystitis produced by other causes than the presence of stone. By means of this simple incision, also, an opportunity is obtained of making "digital exploration of the bladder," on the plan which I recently proposed as a systematic procedure for the diagnosis and treatment of obscure cases. While the patient is fully under the influence of ether the operator is to make, with his right hand, firm suprapubic pressure, by which means he is able to bring every portion of the inner surface of the bladder consecutively over the tip of the left index finger, introduced by the opening to the neck of the bladder, and thus to ascertain its condition and contents. I fancy that calculous deposit, or impacted calculus, is thus detected. Its removal may be accomplished, supposing it to be movable, as it mostly is. I have now performed the operation described in ten cases for various purposes, and in two of these I have been able to remove adhering and impacted calculus where its presence was little suspected, in one instance, with a remarkably successful result. Both these cases I had the advantage of seeing in consultation with Sir William Jenner before deciding on the operation.

I am aware that proposals have long ago been made to "perform lithotomy" for cases of intractable chronic cystitis associated with enlarged prostate, no doubt partly on the ground that division of the prostate itself might be serviceable. This, however, is a measure of far greater risk than the operation I have employed, which is simply a very limited external urethrotomy, leaving both bladder and prostate free from any action of the knife. But I am satisfied that no benefit follows even the incision and dilatation which necessarily take place in the operation of lithotomy in prostatic cases, as far as restoration of the power of the bladder is concerned. I have performed the lateral operation for several patients who had been long previously unable to pass any urine except by catheter, and in operating I have sometimes removed considerable masses of tumour, and have always been disappointed subsequently at finding no improvement whatever in regard of the patient's power to micturate without artificial aid. The performance of lithotomy, then, ought not to be contemplated in any case with the object in view now under consideration. The withdrawal of the urine, however, by an opening into the membranous part of the urethra is a very safe and simple proceeding, and will, I am satisfied, afford more or less relief for a considerable period of time to patients whose sufferings are due to the action of very frequent catheterism upon passages which have long been severely inflamed.

NOTES ON A CLINICAL LECTURE ON CHOREA AND RHEUMATISM:

THEIR RELATIONSHIP ILLUSTRATED BY THE TIME OF THE
OCCURRENCE AND THE TREATMENT OF THE FORMER.

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of Edinburgh.

GENTLEMEN,—There is at present under my care in Ward xvi a patient who recently presented in a very exaggerated form the symptoms of the disease chorea. Many of you will recognise the case as that of a boy, 15 years of age, who was admitted a few weeks ago into the hospital. When we examined him on the day following his admission, he presented a remarkable picture of ceaseless disorderly movements. His face was constantly exhibiting the most grotesque grimaces, sometimes one set of muscles being affected, sometimes another; but these movements appeared most marked in the muscles of the eyelids and of the face, the eyes and mouth being opened and shut, and the latter also distorted, almost without ceasing. You observed, further, that the patient tossed about in bed, jerking his head, arms, legs and body in all directions, irregularly and without pause; and we learned that it had been found necessary to restrain the movements of the body by tying a sheet over the bedclothes, in order to prevent the patient from being thrown out of bed by the unceasing jerks and contortions that were occurring. This strange madness of his motor functions was evidently beyond the control of his volition. However emphatically he was asked, he was unable to remain quiet, although at times, by a strong effort, he succeeded in diminishing slightly the general unrest for a few seconds. When he attempted to stand, his limbs were jerked about in all directions, and they refused to support the body. When he was invited to extend his arms or fingers, they were suddenly projected and withdrawn, or the arms rapidly assumed the positions of flexion, exten-

sion, pronation, and supination. He could not convey a cup of water to his lips, nor hold a pen properly in his fingers; and when he attempted to do so the pen was twisted about in all directions, and sometimes fell from his grasp. His attempts to write resulted in jerky scrawls all over the paper. When he was asked to put out his tongue, although no effort to do so was obviously made at once, the tongue did not appear for fully half a minute, and then it was suddenly shot out and as suddenly withdrawn. Co-ordinated movements were altogether impossible, and it even appeared as if this riot of the muscles had extended to the involuntary muscles, as the swallowing of liquids and solids was attended with delay and great difficulty; but the difficulty seemed to depend upon the conveyance of the food from the mouth to the entrance of the oesophagus, and to cease after it had once entered that canal. His bowels had been confined for several days, but subsequently several involuntary evacuations occurred. Micturition was disordered; when he attempted to micturate he failed in doing so for several minutes, and at other times he was unable to retain his urine. I think you were able to convince yourselves that the intelligence and memory of the patient were unaffected; that he was free from hallucinations: that his special senses were unimpaired; and that, with the exception of slight hyperæsthesia over the chest, the general sensibility was not modified.

It is not, however, to this picture of a well known disease, although presented in bolder outline than is usually seen, that I wish to specially direct your attention. Many of you will recognise the patient as one who was first admitted into the hospital eleven days before he again came under my care, suffering from the symptoms I have described. On the former occasion (October 21st), the illness for which he sought relief was of an altogether different character. He then suffered from rheumatic fever, which began two weeks before his admission, and affected—with its ordinary symptoms of pain, tenderness and swelling—the ankles, knees, hips, and elbows. He also suffered from lesions of the mitral and aortic orifices, which had undoubtedly originated during this illness, and previously to his admission. In my absence from town, the resident physician had treated the patient—as such cases are always treated in my wards—with salicylate of soda. Twenty grains were administered thrice daily in the first instance; and, three days afterwards, the temperature had fallen from 102.6° Fahr. to 99.4°, while the joint-symptoms had become greatly relieved. In a few days, he appeared to have completely recovered from the acute polyarthritis, but he was permitted to leave his bed sooner than is advisable; and, on two occasions, a relapse occurred, which again disappeared after a few days of strict confinement to bed, and more frequent administration of salicylate of soda. These accidents, and the state of his heart, led to his being detained in hospital for a longer period than would otherwise have been necessary; and, at the end of November, while he was convalescent and an invalid only because of the cardiac disease, an event occurred of much significance in respect to his subsequent history. On the 30th of that month, one of the other patients in the ward is stated by him to have threatened to punish him for some petty fault, and it was noticed that his manner became depressed, that he wept bitterly at times, and refused to assign any cause for his distress. These circumstances were ascertained only several days afterwards. On December 1st, he disappeared from the ward, and we discovered that he had gone home. On December 3rd, his father, and the medical gentleman who had sent him to hospital, reported that our patient had become seriously ill, and urgently requested that he should be again admitted. When he returned, he presented the remarkable symptoms, totally different in their character from those for which he had been originally admitted, which I have described at the commencement of my remarks. He was now suffering from the characteristic phenomena of an exaggerated attack of chorea. The history of this illness strikingly illustrates the causal relationship, now familiarly recognised, between chorea and acute rheumatic polyarthritis on the one hand, and mental perturbations on the other. He had scarcely recovered from the former disease when the chorea appeared. The time interval between the mental perturbation and the chorea was a very brief one; for, on the day following the threat of punishment, we now learned that he became very restless; two days afterwards, when he had left the hospital, he observed twitching in his hands, feet, and face; and on the next day, his condition was as remarkable in the exhibition of general contortions and uncontrollable jerking of the limbs, as when he came under my observation.

The former relationship is still further illustrated by the further course of the disease, and, I think, very distinctly, also, by the course it pursued under treatment.

When the patient returned to hospital, the violence of the choreic symptoms, and their interference with sleep, led to our giving him bromide of potassium, in doses of fifteen grains thrice daily. The effect

was only slight during the two days in which the bromide of potassium was continued. On the third day after admission, the patient complained of pain in the left wrist and shoulder, and right knee, which were found to be swollen and red; and after some trouble—caused by the difficulty the patient had in speaking; the result of the involvement of the tongue and muscles of articulation in the choreic disorder—we ascertained that the pain in the left wrist had existed for several days. He was obviously suffering at the same time, from both chorea and rheumatic polyarthritis. He was, therefore, given twenty grains of salicylate of soda every three hours, and the bromide of potassium was discontinued. Two days afterwards, the pain had disappeared from the wrist and shoulder; the temperature had fallen from 100.8° to 98.9°; and the choreic movements had conspicuously abated, being now present, in the continued and involuntary form, only in the face, although, when voluntary movements were performed, they still appeared in the limbs and tongue. Four days after the commencement of the administration of salicylate of soda, the rheumatic polyarthritis had entirely disappeared, and the only remaining symptom of chorea was the jerking movement of the tongue when it was protruded and withdrawn. The very satisfactory result had, therefore, been obtained that, in four days, an acute rheumatic polyarthritis had been cured, and that, much beyond any anticipations I had entertained, at the same time, and under a treatment not usually followed in chorea, a specially severe example of this disease had apparently been cured.

The vicissitudes of our patient, however, had not yet come to an end. After continuing the administration of salicylate of soda for ten days, the appearance of its disagreeable effects in connection with the stomach and the sense of hearing, and the entire absence of any symptoms of rheumatism, led to its being discontinued and arsenic substituted in its place. This change in treatment was most disastrous. On the third day following its adoption, the right wrist of the patient became swollen and red, the morning temperature rose to 100° and the evening to 102°, and involuntary choreic movements appeared in both upper extremities. The salicylate was resumed, and on the second day thereafter the left wrist had returned to a normal condition, the temperature had fallen to 99°, and the chorea had almost disappeared. In a few days afterwards, the chorea entirely and finally disappeared. In order to complete the narrative of this case, and place you in possession of all the important facts that have occurred, I must add that on two subsequent occasions relapses occurred, which were restricted, however, to purely rheumatic manifestations, and to periods during which the patient was not being treated with salicylates; owing, to a great extent, to our desire to avoid the inconvenient toxic phenomena, to which he was peculiarly susceptible.

The relationship between chorea and rheumatism, and especially acute rheumatic polyarthritis, which is so forcibly illustrated in this case has long been recognised. First referred to by Bouteille and Berndt, it was afterwards acknowledged by Copland, Scudamore, and Abercrombie, and more recently stated in the exact form of statistical enumeration by Hughes, Kirkes, Sée, Roger, and many other physicians. Its existence is now generally admitted, although occasionally it is regarded as a mere coincidence, the relationship being relegated even to the trivial bond which connects any depressing agent with the production of a disease. A case such as that which I have to-day described, undoubtedly affords very strong support in favour of a causal relationship. It affords support from two aspects of the case, from its time of occurrence, and from the results of the treatment. The former is so significant, in the first occurrence of the choreic disease as well as in its subsequent appearance during a relapse of the rheumatic fever, that it is impossible to overlook it. The latter has, in addition to its equally clear significance, the further value that it constitutes a description of evidence, the quantity of which, so far as I know, is very limited. I can refer for evidence of probably a similar description only to the fact that some cases of chorea have been treated with success by Dr. Weir Mitchell and Dresch, with the same remedy as produced such striking results in my patient. The details of these cases I have not learned, and I therefore cannot tell you if they illustrate in so clear a manner the relationship between rheumatism and chorea by showing that the most certain remedies for the former disease with which we are acquainted—the several compounds of salicyl—may exert a like curative action upon chorea. It would be important to still further test this point by treating a number of cases of chorea by salicyl compounds, and especially cases where the chorea does not present so close a relationship to the rheumatic affection as to suggest the possibility of its being a mere symptom of rheumatism. This view is, indeed, one that has been already adopted. Its existence leads me to impress upon you the importance of avoiding any all-pervading opinion in regard to this disease. Nothing will appear more obvious, when the known facts in regard to chorea were considered,

than that it is far from being the product of any single pathological condition. There is now much evidence to show that, at times, it is accompanied by a lesion of the corpus striatum, at others of the medulla oblongata, at others of the medulla spinalis, at others of some part of the peripheral nervous system, at others of the heart, and at others by no lesion that can be discovered in any of these situations.

I can scarcely hazard an opinion as to its production in the case I have brought before you. The embolic theory is here entirely inapplicable, because of the rapidity with which the disease disappeared on two separate occasions. The mere existence of cardiac disease, of rheumatic origin, seems equally insufficient to afford an explanation. It existed before the chorea, it has persisted after its disappearance; and, further, the chorea was rapidly cured by salicylates, whereas salicylates do not directly affect the occurrence or the course of cardiac disease in acute rheumatism. A reflex influence, originating from the inflamed joints, cannot account for the chorea, as it often appears in rheumatic patients, while no inflammation of joints is present; and, in our case, the joints were on several occasions acutely inflamed, without a re-appearance or an exacerbation of the chorea. Such a case would almost indicate that chorea may be a mere manifestation of acute rheumatism, in the same sense as the joint or heart affections, a mere complication of that disease, produced, it may be, a rheumatic inflammation of some portions of the central nervous system, whether true nerve-substance or surrounding media.

STRICTURE OF THE COLON.

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THE following case of annular stricture of the colon is instructive. Its gradual formation and the attendant symptoms, which were the result of the slowly progressing obstruction, are of clinical interest, whilst the pathological changes are worthy of notice. The discovery of an epitheliomatous growth (on the limb), which had been carefully concealed during life, suggested the possibility of malignancy in the bowel; but, on careful examination, the stricture proved to be simply fibrous, and devoid of any trace of malignancy.

The previous health had been good; there had been neither diarrhoea, dysentery, nor ulceration to account for the stenosis. Latterly, the health had deteriorated, and there was emaciation, but the appetite had by no means failed. It was evident that an obstruction existed, and was increasing in the colon above the sigmoid flexure, but there was nothing to indicate its true nature. The gradually increasing distension of the bowel showed that fecal matter was accumulating in a large portion of the bowel, though beyond reach by the hand through the rectum.

In the hope that it might yield to treatment, and in the absence of urgent symptoms, operative interference by abdominal section was deferred. When at length permitted, though it gave some relief, it did no more. It is worthy of note that, beyond obstinate constipation, there was no very prominent symptom until just before the end; there had been neither tenesmus, tormina, blood, nor mucus; no vomiting, though occasional nausea; the urine had been freely secreted, and, though there was much inconvenience from distension, there had been little pain.

The appearance presented by the gut, when the opportunity for examining it arrived, was that as though a cord had been tightly tied round the bowel, just at the splenic flexure, constricting the calibre to an orifice through which a pin would pass with difficulty, this constriction consisting of a ring of dense fibrous tissue. For the rest, the bowel was healthy, showing no trace of former disease. The other viscera were also healthy. A certain amount of peritonitis had resulted from extravasation of fecal matter where the over-distended bowel had given way. Beyond this, and the existence of a large epitheliomatous growth, pendulous from the thigh, there was no evidence of disease; and careful microscopic examination failed to detect any sign of malignancy in the stricture itself.

The result of this case seems to show that earlier colotomy might have prolonged life. The indications for the operation were not sufficiently urgent at first to overcome the objections offered to it; but the importance of early surgical interference in similar cases is obviously suggested.

CASE. A widow lady, aged 64, with no children, had resided in India for some years, where she had good health, excepting for occasional bilious attacks. She returned to England in 1871, her general health unimpaired by residence in the Indian climate. During one or