

the chloroform had passed off, the boy could actually speak in a hoarse whisper. The respirations became quieter, and the suffocation was quite prevented. Food and medicine were administered entirely by the rectum, as it was impossible for him to swallow even water without causing a fit of coughing. A short time after the operation the mucous discharge became much less, and only took place occasionally. After a day or two he took a little water every now and then on purpose, in order to cough it out through the tube, which was thus kept clear. The air of the room was kept warm and moist, and eucalyptus oil was constantly vaporised; carbolic acid and glycerine were frequently applied to the fauces, and the exudation therein was kept under, and on the 21st had disappeared on one side, and was breaking up on the other. On the morning of March 20th, three days after the operation, he was breathing comfortably, twenty-six per minute, but there were indications of septicæmia, pale face, half-opened eyes, pulse 132, small. Carbonate of ammonia, quinine, and extract of bark were administered *per rectum*, and in the evening he was better, pulse 96, respirations 24. On the 21st he was apparently much better, his face had regained colour, he could speak, smile, and sit up; he had had sleep during the night, the exudation was disappearing from the throat, and the tongue was cleaning; pulse 96, respirations 24, breath coming freely both through the tube and the mouth. All seemed to promise well; his friends described how well he could swallow the water, and cough it up, and asked him to show me. This he did, and the cough was evidently looser, indicating that the false membrane was breaking up in the larynx, as elsewhere. The cough, however, this time was unusually severe, and in a few minutes he had a very bad struggle for breath; this became easier, but soon returned, and from that time became worse and worse; collapse set in, and he died in the evening.

A *post-mortem* examination was made next morning. The exudation was found to extend about three inches down the trachea, becoming gradually thinner, but not reaching below or occluding the tube; the trachea contained muco-purulent fluid which had collected before death; the exudation in the larynx was ragged and evidently breaking up. The cause of death was found in the lower lobe of the right lung, from the bronchial tubes of which, on section, purulent matter exuded; some of the exudation had become detached, and been drawn down into the lung, and hence the fatal result. This must always be a source of danger, but the means of obviating it I will discuss after a brief narration of the third case.

The third child was younger, only three years old. All the usual symptoms of diphtheria were present, and after the fourth day laryngeal symptoms supervened, proceeding as too usual to impending suffocation. Naso-laryngeal intubation with a catheter gave immediate relief, and the next day the child was playing about with the tube in his nose, tied in with a tape round the head. All went well for two days, when the father very foolishly and contrary to orders gave him beef-tea, which evidently passed into the larynx and lungs, and caused violent cough; even then, however, he rallied again, though not to the same extent, but the breath was so free, both through and outside the tube, that the next day I removed it. Pneumonia, however, had set in and was developing, due, I think, to the mistaken administration of the beef-tea. The breath in a few hours became much worse, and as a last resort I replaced the tube without chloroform and without difficulty, but though it at first seemed to do good, he very quickly succumbed; there was no *post-mortem* examination.

The catheters I have procured for future cases are good gum-elastic, silk catheters. I have cut off the eye, and introduce the end furthest from the eye, which is nicely rounded off and smooth, and, of course, without any bone tip. It is slipped along the nostril easily, and the forefinger of one hand guides it into the larynx. I have also procured a smaller long tube of the same material, which slides easily down the lumen of the larger tube, and have made several perforations in the side near one end. This end I propose occasionally to pass down right into the larynx, and then to withdraw the larger tube a little way until the end is out of the larynx. Through the smaller tube I shall then inject a small quantity of solution of peroxide of hydrogen, as a powerful and non-irritating antiseptic, which will thus be brought into actual contact with the interior of the larynx and the false membrane. As the small tube will be in the larynx, it will act as a guide to the larger, which can then be pushed back into its place, after which the small tube will be withdrawn. I hope thus to obviate some of the sources of failure in the above cases.

I also propose to pass another similar catheter along the other

nostril at the same time, but into the œsophagus, so that food may be administered thereby from time to time. The tubes will be plainly marked, so that the food may not be accidentally sent into the larynx.

I trust that others may have an opportunity of testing this new method of procedure, and as it is bloodless one has less difficulty with the parents, the operation need not be deferred so long, and there is less risk of septicæmia.

## SENILE RHEUMATIC GOUT.

By WILLIAM BRUCE, M.A., M.D.,

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THERE is, perhaps, no disease as to which professional opinion differs more than as to rheumatic gout. This diversity of views is unfortunate, as it affects the kind of treatment and mode of life of the patient, and it disturbs the lay mind and gives occasion for remarks as to the uncertainties of medicine. One school leans more to the gouty origin of the disease and another to the rheumatic. The victim himself naturally prefers to believe he is suffering from rheumatism, and becomes thereby free from many of the restrictions he has got to submit to if dubbed gouty.

On what lines are we to go in diagnosing between rheumatism and gout? First as to acute gout, I fancy there can be no dispute; but the acute classical type as described for all time by Sydenham, like other types of disease, is not so very common as supposed. Acute rheumatism of the recognised kind is a disease *sui generis*; and for my part I have been for long strongly of opinion that it is of germ origin, and totally distinct etiologically from chronic rheumatism. It is an exception to most other zymotic diseases in its tendency to recur, and probably its victims are more likely to suffer from disease of the joints if they survive the original attack, and these diseases may be either rheumatic or gouty. Acute rheumatism must not be confounded with acute polyarthritic gout, which it resembles. The danger lies in mistaking the gouty attack for rheumatism, and not the opposite. The points of difference lie in the age, family history, the fact of previous attacks of gout, the general build of the patient, and the causes of the present illness, which will, if closely scrutinised, reveal irregular living, such as the abuse of alcohol, etc., as well as what the patient will mostly insist upon, fatigue and exposure. The following is a typical case, and they are not very uncommon.

X. Y., a professional man, aged 40, having gone through a severe Parliamentary contest, working night and day, is suddenly seized with pains in most of his large joints. Acute rheumatism is diagnosed, and he is treated strictly with salicylates, etc. Recovery is slow, and he is left with much stiffness of the articulations and is puffy and anæmic when he applies to me at Strathpeffer. Cross-questioning brings out a clear history of family gout, which is borne out by the style of living of the patient. Under the use of baths, waters, and very strict regimen, including complete abstinence from wine and spirits, he makes a brilliant recovery. Next year he returns, but not bad enough to be sufficiently cautious, and the results are not so pleasing.

We have spoken so far of acute rheumatism and acute gout: we now pass on to consider rheumatoid arthritis of the common (?) definite type, which I agree with Garrod (who has done so much in this field) to be a clear and distinct species of joint disease—distinct in its nature, origin, treatment, and termination. I need not enlarge upon this, unless it be to point out that it too may be inflammatory at the onset, and accompanied by pyrexia. It is undoubtedly more common in women than in men, and especially frequent in its origin about the periods of puberty and menopause. I believe that, long as it may be in coming, there is almost always a distinct crisis in its history, and a time when recovery tends to be spontaneous. Perseverance in suitable regimen, which must be liberal, and in baths, massage, change of air, etc., will in most cases ultimately keep in check, if not subdue, the disease. Of this result we have had some interesting cases at Strathpeffer, and one or two (after successive visits) undoubted cures. In this, as in so many other complaints, cheerfulness and hope are the best of all medicines.

Muscular rheumatism is, again, an affection of a clear enough type; but here I would warn practitioners to make sure that the joints also are not affected, as joint affections always involve the

muscles and cause reflex pains in the fleshy parts adjacent to them. Lumbago, deltoid rheumatism, etc., are particularly suited for the massage cure, and very good results may be thus attained, more especially if it be applied sufficiently early, and, as I have said, if there is no inflammatory action going on in the joints. If there be, I entirely agree with Thomas, of Liverpool, in the benefit of prolonged rest and the danger of cures by cunning *coups*. The same remark applies to sciatica, which, as a rule, is really a pain in the muscles of the back, hip, thigh, and leg, and that again reflected from disease of the hip joint, and is curable by rest, careful massage, and by the usual remedies for gout, as detailed further on.

We come now to consider rheumatic gout proper. In the majority of cases a distinct history of gout can be made out, and also some affection of the ears, fingers, or larger joints connected with an equally clear history of digestive troubles. It must not be forgotten that gout often affects the larger joints. Acute gout is very common in the knees, and chronic gout still more frequently in men, doubtless from exposure of these important and thinly-protected joints. The hand placed over the knee outside the clothes will in flexion and extension readily detect the roughness of gout, and affords the practitioner a simple and very ready means of diagnosis. Having shortly mentioned the above well-marked types of rheumatism and gout, I wish now to draw attention to what I shall venture to call acute senile rheumatic gout. I shall quote a few well-marked cases, and I hope to be able to show that here we have a distinct form of disease. I hold strongly with Garrod that gout depends upon uric acid, and look upon his discovery of uric acid in the blood as settling its pathology so far. I entirely agree, too, with his description of rheumatoid arthritis as clearly marking out another and of course different species, but I desiderate the further proof of the exact *materies morbi* in the latter. That there is such I do not doubt. But in the absence of this particular evidence I venture to suggest that there are other peccant results of, let us say, digestion, or, if the term be preferred, abnormal nerve influence, and that in the cases I am to describe such a poison must have been originally present. Or, looking at the question in another aspect, if uric acid be the result of disordered catabolism in a certain series of cases, is it not likely that dealing with such complicated substances chemically as urea other analogous products would be formed? In the February (of this year) number of the *International Journal of Medical Sciences* there is reference to the formation of such a new product in swine, which is called guanin. Nature works in a continuous manner without leaps or breaks, and instead of diseases being sharply defined as in our vocabularies, they probably run the one into the other, so as to leave no distinct boundaries or divisions. Why the joints should be the depositories of these products, which it may be supposed the kidneys, either from superfluity of production or deficiency in their own function, fail to eliminate, is only probable when we consider their physiological function. No portions of the body have cause to vary so much from almost complete rest, it may be in many cases for days, up to, even in the most lethargic, occasional bursts of very hard work. Again, many of the joints are exposed to all the trying changes of heat and cold, lying as they do near the surface, only covered with skin and light fascia. The circulation must vary immensely, and from hyper-activity must pass, it may be, as I have said, for long periods, into utter slowness, amounting nearly to stoppage. Could any condition be more likely to lead to effusion? And Nature, as far as we see, is only too ready, failing the proper emunctories, to take so good an opportunity of ridding herself of the poisonous matters that are hurting her system.

The following are short notes—in some of the cases I fear too incomplete—of examples of the form of disease which I have ventured to classify under a distinct category.

CASE I.—J. McG., aged 70, innkeeper, and from his occupation, imbibing stimulants rather freely, but enjoying very good health notwithstanding. (His medical attendant says that he had only once been laid up in the course of thirty years, and then with pleurisy and effusion.) He had been complaining of some "rheumatic" pains for a day or two. He was then exposed to cold and wet for some hours, and came home very ill, and took to bed. He became completely crippled with rheumatic gout, affecting his hands and feet as well as his wrists and ankles. He was most skilfully treated by my friend, Dr. Smith, with salicylates, alkalies, and iodide of potash. Drugs gave relief, but when he arrived at Strathpeffer, three months after his first seizure, he was completely helpless, and could not even turn him-

self in bed, or feed or dress himself. He took the sulphur waters internally, had frequent baths and thorough massage. He became completely cured, and left Strathpeffer walking about briskly, in three weeks. Last year he returned, but was merely suffering from slight twinges, and has been particularly well since his first visit. He has never had any urinary trouble, and there is no rheumatic history in his family. His jaws were not affected. The whole aspect of his case leaned more to the side of polyarticular gout, and yet the obstinacy of the attack, his age and history, point more to rheumatoid arthritis.

CASE II.—T. S., aged 70, in good health. Some weeks previous to April 17th, 1886, he had a chill. On the date mentioned, he was attacked by "rheumatism," and laid aside from work for five months. He was under ordinary medical treatment at home for two months, and subsequently went to Bridge of Allan and Crieff without experiencing any benefit. He came to Strathpeffer early in August, and took waters and baths for three weeks. He left very much improved, and has continued well ever since. The history shows no hereditary tendency to gout or rheumatism. This gentleman, when first seen, was in a very low state, and much depressed in mind from his long sickness, and almost helpless from pain and stiffness of his joints. It was with some difficulty he was persuaded to undertake the course of treatment. The results, if not so brilliant as in Case I, were highly satisfactory. April 30th, 1888, he writes: "I returned home very much improved, and have since been fit for my food and work."

CASE III.—J. B., aged 60, lately married again, and feeling very well when he left the country and removed into town about three months previous to his illness in the year 1885. The weather was very cold, but he did not seem to suffer from it till February, when he caught a chill and was seized with pain in his shoulders and limbs, and felt altogether unwell.

On February 24th he was laid up in bed; the pains increased and attacked his stomach, causing great suffering. The pains also attacked his feet and heels; for this salicin was administered, which, although it relieved the pains, did not suit him otherwise. Next a swelling appeared on his neck, behind and a little below the ear, causing great distress, with a feeling of choking, which brought him very low. The swelling, instead of coming to a head, began to decrease just when it had got to an unbearable point. Morphine was subcutaneously injected, and gave great relief; after this there was great weakness of the stomach, and only fluids could be digested. About this time, after he had been ill for six weeks, Dr. Jenner was called from London. He considered the illness was a kind of blood poisoning; he gave hope, however, of recovery. The rheumatic pains continued all through the body during his convalescence, but gradually subsided as he began to take more nourishment. The slight increase of strength he gained in this way enabled him to turn himself in bed, and this was one of the first signs of returning health. During his very weak state he had a succession of nervous attacks resembling fainting fits, about twelve in all; sometimes two or three came on in one day, and exhausted him greatly.

About this time he was getting a nightly hypodermic injection of morphine, which was continued for some weeks till he began to rise from bed again about May 23rd. A fortnight later he was able to be driven out to his country house, five miles from Edinburgh. He then began to go freely into the open air. Then there appeared in the joints of his fingers a swelling, which has continued more or less until now. In August he went to Strathpeffer and took the baths. At this time he was unable to rise from his chair without assistance, although when once on his feet he was able to walk after a fashion; but on his return home in September he succeeded in rising by himself. From that time he continued to gain strength, and in the end of November accomplished a long, continuous journey to Monte Carlo without material injury to his health.

On April 22nd, 1887, he went to Aix-les-Bains, took its baths under Dr. Brachet's directions, and returned home. After this he was well enough to go occasionally into his place of business in town while the weather continued moderately good, but in December he again took refuge from the cold and spent the winter at Ayr, where he gained in strength and weight considerably. He is now home and feels well, is able to go into town for two or three hours daily, and can take a walk of two miles without much fatigue. His colour is much fresher than before his illness, and he weighs 11 stone. It is two years and three months since the illness began. It may be added that the urine was of a dark colour, and often contained a sediment like red sand.

During convalescence (a very painful stage) there was much trouble from flatulence and constipation, for which hot poultices and injections of hot water and oil mixed were administered. A curious though distressing sensation at this time arose from intense itchiness of the back and arms. The diet consisted principally of milk with plain rusks, chicken tea, puddings with finely stewed figs and prunes, and brandy.

This case is an instance of the complication of the rheumatic affection with parotitis. The latter was of a most severe character, suppuration being at one time apparently imminent, and the patient's life in extreme danger. At this date (July, 1888) he is almost quite well in every respect except that there is still some lingering stiffness, especially about his finger-joints. (He has since had some pain in his back.)

CASE IV.—J. K., aged 74, was first attacked in April, 1886, with pain in his left leg. Having never had an attack of anything like rheumatism before, he thought it a sprain, and that with a little rest it would wear off. He gave it a rest, but it still remained. It next extended down his leg, and he was afterwards seized in the other thigh, and in the course of a week or two it extended down to the leg and foot. It was accompanied with a little swelling from the first, but now the swelling increased. As it got worse from day to day, he had to lie in bed, not being able to walk or stand. In bed it increased, laying hold of his arms, shoulders, and hands, which swelled and stiffened, and lost strength so much that he could not put his hand to his mouth, and had to be fed at meals like a child. He could not bear his hands to rest on his body, or one leg or foot to touch the other, for fear of causing a burning sensation. After the disease had passed its climax, and he gained sufficient strength to be able to rise, he saw that he was a skeleton of his former self. Fat and muscle were gone; the bones protruded; his joints were dry and stiff. When eating, his jaw-bones cracked. Even yet—two years after recovery—he sometimes feels this cracking sensation in his knee and shoulder joints when using them excessively; and sometimes, as if not quite extinguished, in his toes and fingers, when warm in bed, he feels the heat of the old fire. His appetite continued moderately good all through, which, with good sleep, sustained him. He had not much pain when he lay without moving in bed, nor when he sat up in a chair; only when he moved or excited himself it troubled him.

He can now walk nearly as well as ever, though of course his strength is reduced. He attributes, as the cause of his complaint, exposure to cold weather: but he lives in a low, damp locality, away from the sun. He was studious, and took too little exercise. No anti-gouty remedies proved of any service. Evidently tonics were most called for, but time was his great restorer.

CASE V.—P. R., aged 71, was seized in April, 1887, with severe rheumatism in his arms, beginning in the right, and by-and-by affecting the left. It came on after being heated and getting chilled. He had not suffered from rheumatism previously, except that he had a sharp attack of lumbago about twenty years ago, which lasted for four weeks. The shoulder-joints were the articulations chiefly affected.

When he put himself under my care the pain, especially on the left side, was exceedingly acute, and interfered greatly with his night's rest. He had an anxious expression, and was depressed in spirits. Sulphur water was prescribed internally, and hot douching and massage to his shoulder-joints. The massage was too vigorously and abruptly applied, contrary to my instructions, and the pain increased rather than decreased. Of the value of massage, judiciously carried out, after inflammatory symptoms have subsided, there can be no doubt; but I have learned from experience that here, as well as in purely traumatic cases, as is so well shown by Thomas, nothing is to be ultimately gained by any form of *coup*. After he left Strathpeffer, improvement gradually set in, and in the course of the winter he got rid of his pain almost entirely, though there was stiffness of the shoulder-joint and occasional aching. He is now again almost quite well.

GENERAL REMARKS.—I feel that I have been scarcely able to prove my contention that these acute senile cases belong to a different category from gout and rheumatism on the one hand and rheumatoid arthritis on the other; yet, if I have succeeded in drawing the attention of medical men generally to a remarkable type of disease—remarkable in its severity and complete curability even at a very advanced time of life—I shall, I hope, be pardoned for dilating on the well-worn subjects of gout and rheumatism.

## CASES ILLUSTRATIVE OF RENAL SURGERY.

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UNTIL the lines of practice in renal surgery become more stereotyped by rules laid down as the result of large and varied experience the reports of all operations on the kidney, whether successful or not, should be of interest to the profession.

The following six cases, which have occurred consecutively in my practice at the Leeds General Infirmary, include one of nephrectomy, one of nephro-lithotomy, two of nephrotomy, and two of exploration of the kidney for suspected stone.

I am indebted to my House-Surgeon, Mr. A. H. Smith, for the reports.

CASE 1. *Abdominal Nephrectomy*.—A. H., aged 57, married, was admitted on December 31st, 1884, on account of a tumour, about the size of an adult head, occupying the left half of the abdomen. It was freely movable by pressure from behind the left loin, and, to a limited extent, from side to side and from above downwards. It was not tender on pressure; the veins of the abdomen were not enlarged; the navel was a little stretched but not prominent. The tumour was dull on percussion, the dullness extending from the tenth rib to the left iliac fossa, and across the middle line to 3 inches beyond the linea alba. The right border of the tumour was convex, and was surrounded by parts resonant on percussion. There was a doubtful sense of fluctuation over the lower part of the swelling. The uterus was natural in every respect. There were no urinary symptoms, the excretion being normal in quantity; clear, specific gravity 1017, acid, and without albumen. The swelling had only been noticed by the patient six weeks, and was growing rapidly. At a general consultation it was decided that the tumour, which was probably renal, ought to be removed.

January 10th, 1885. An operation was undertaken with the usual antiseptic precautions, an incision of 4 inches being made in the left linea semilunaris directly over the prominent part of the tumour. The colon, which coursed over the front of the kidney, was drawn to the right, and the cyst aspirated, about 2 pints of grumous fluid being removed; the visceral peritoneum was then incised over the tumour, which was enucleated, and the pedicle, composed of ureter and renal vessels, was ligatured with strong silk. The cut edges of the visceral peritoneum were then brought up to the cut edges of the parietal peritoneum and then to the edges of the wound, being there carefully sutured with catgut, thus shutting out completely the peritoneal cavity; the wound was then brought together by silk sutures, leaving an opening through which a large drainage-tube was passed, down to the region of the cut ureter. An antiseptic dressing was applied, and the patient was treated as after ovariectomy.

For two days the temperature was normal; on the third and fourth days it rose to 100°, but on the fifth was again normal; on the sixth it rose to 101°, whilst on the seventh it was normal in the morning and 101° in the evening; on the eighth, ninth, tenth, and eleventh days it was quite normal, whilst on the twelfth and thirteenth it fluctuated between normal and 101°, and just at the last rose to 103°.

There was never any abdominal distension, and flatus was passed on the second day. After the second day and throughout there was some pain in the left loin. The urine was passed freely and in sufficient quantity, and after the third day the catheter was not required. From the drainage tube there was a discharge of clear sanious fluid, and on the fifth day, the discharge having lessened, the tube was removed. The sutures were removed on the ninth day, the wound being healed except the drainage-tube opening.

On the second day of the case, the news of the desertion of her husband was somehow conveyed to the patient, and from this time she became restless, and rapidly developed symptoms of acute mania. Dr. Eddison kindly saw her, and suggested hyosciamine; this was very fully tried, and gave some relief; other sedatives except morphine injections quite failed.

The acute mania persisted, and caused her death on the thirteenth day from exhaustion. Had it not been for this most unfortunate complication I believe she would have done well, as, although the drainage was not perfect, the collection in the loin would soon have made itself evident, and could easily have been evacuated.