whereas, in malignant disease, especially in cancer, not only is the tumour ulcerated itself, but the mucous membrane is indurated, infiltrated with inflammatory products, and not uncommonly marked by erosions. Again, in cancerous disease, or when the larynx is occupied by a soft round-celled sarcoma, hæmorrhage may be a prominent symptom, especially if the patient suffer from paroxysms of coughing. This symptom is seldom present in non-malignant disease. Unless the larynx be the seat of prolonged and intense inflammation, enlargement of the lymphatic glands may be regarded as pathognomonic of cancer. In the sarcomata, the glands are not affected. Another symptom which makes one very suspicious of cancer is pain, at first limited to the larynx, but subsequently radiating to the ear and cheek and neck, on the affected side. In the early stages of the disease, it is, in many cases, very difficult to come to a definite diagnosis. This is especially the case in the sarcomata. Associated with these tumours, you have not the distinctive symptoms, subjective or objective, that you have in the carcinomata. The patient seldom complains of pain; there is rarely enlargement of the lymphatic glands, or ulceration of the surface of the tumour; but still the tumour is malignant, and the patient incurs almost as great a risk to life as if he were the subject of a cancerous growth. What means have we, then, of ascertaining with absolute certainty the nature of the new formation? At the last lecture, you saw me remove from the larynx of L. a small portion of the growth. This I did in order that I might examine it microscopically, and be quite sure as to its nature. This method should always be employed when there is any doubt respecting the histological characters of a tumour. It is a very simple operation, is practically devoid of danger; if the tumour be benign, it is but a step for its complete removal by the endolaryngeal method; if malignant, the sooner the fact is ascertained the better. Some growths which are homologous in their origin—for example, the papillomata and adenomata, may, at a later period of life, become heterologous, and develop signs of malignancy.

The diagnosis of intrinsic from extrinsic tumours is important, especially when we have to deal with malignant neoplasms—so important, that I will not apologise for repeating some statements which I have already made. By the term intrinsic, we mean to convey the idea that the growth is strictly limited to the laryngeal cavity. When this is the case, the prominent symptoms are aphonia and dyspnoea. The lymphatic glands are seldom affected; as a rule, cachexia is not a prominent feature during the earlier stages of the disease, and dysphagia is not a common symptom. In patients suffering from extrinsic growths, on the other hand, aphonia is not usually present at the commencement of the disease, and, indeed, there may be only slight alteration in the voice; while dysphagia is, as a rule, present as soon as the growth has reached any considerable size. Pain in the larynx and pharynx, extending round the neck and to the ear of the affected side, is more characteristic of extrinsic than of intrinsic new formations. In the former, the glands also are involved at an early period, and cachexia is usually pronounced.

[To be continued.]

THE SALICYLIC TREATMENT OF GLYCOSURIA.

By J. SINCLAIR HOLDEN, M.D.,

Medical Officer of St. Leonard's Hospital, Sudbury, Suffolk.

A FRESH impulse has been received with regard to the treatment of glycosuria, or diabetes, from the recent valuable researches of Professor Latham on the pathological connection between diabetes and rheumatism. Dr. Latham considers that there are two distinct kinds of diabetes. First, there is that which arises from a neurotic disturbance of the function of the liver; this has the effect of arresting the metabolism of the glucose, and allowing it to pass unchanged into the general circulation and appear in the urine. Second, that which arises from a neurotic disturbance of the function of muscle; this allows glucose to form in that tissue, and to pass unchanged into the general circulation and appear in the urine. He has also shown that this second kind of diabetes is intimately connected with rheumatism; so intimately, that a degree of more or less oxidation determines whether the muscular tissue generates an abnormal amount of lactic acid or of glucose in the system. Moreover, he has shown that, when salicylic acid is administered, it has the property of arresting the formation of both lactic acid and glucose, by means of a chemical combination which it forms with the antecedents of these products.

These very important views of Dr. Latham, I think, are corroborated by the following cases of glycosuria which I have met occurring in rheumatic persons.

CASE I.—Mrs. C., aged 61, was crippled with rheumatic arthritis. In May, 1879, while attending her for eczema of both legs, I found that she was also suffering from diabetes, which, from her account, must have been going on for two years. Her urine had a specific gravity of 1055, was loaded with sugar, and measured nine pints daily. For six months, I treated her in the usual way—restricted diet and codeia—but never got the specific gravity of the urine lower than 1047, nor the daily quantity much below nine pints. As she had some acute pains in her joints, I then left off treating the diabetes, and gave her salicylic acid, in doses of twenty grains thrice daily for three days, and then in ten-grain doses. At the end of a fortnight, not only were the joint-pains relieved, but I found that the specific gravity of the urine was 1035, with less sugar, and she was passing only five pints daily. I continued the salicylic treatment, and only restricted from her diet sugar and potatoes. On December 13th, 1879, the urine was quite free from sugar, of specific gravity 1020, and normal in quantity.

This improvement continued for two and a half years, when there was a return of the same condition of glycosuria; a month's treatment with the salicylic acid completely arrested the attack, and there has been no symptom of it since. At the present day, she is in good health, except for the rheumatic arthritis.

CASE II.—Mrs. F., aged 56, of a very rheumatic family, suffered from rheumatic pains. For the last four years, she had been under medical treatment for diabetes. From being a strong robust woman, she had become helplessly weak. She consulted me in May, 1880. She was then passing daily from nine to twelve pints of saccharine urine, of specific gravity 1040, and suffered intensely from pruritus vulvæ. I thought her case hopeless, but put her on the salicylic treatment, the diet to be what she fancied except sugar and potatoes. During the four weeks following, the urine fell to three pints daily, of specific gravity 1030. She had gained in flesh and strength, and was quite free from pruritus vulvæ; she was able to resume the duties of managing a large boarding school. This improvement continued for nearly four years, when cancer of the liver set in, from which she died. In this case, I could never get the urine free from sugar, nor its specific gravity lower than 1030; yet, at the same time, the quantity remained normal. She took the medicine at intervals up to the last.

CASE III.—Mrs. H., aged 51, had, on the fingers of both hands, nodes of rheumatic arthritis. Symptoms of diabetes had existed a year; she had wasted greatly. I saw her in February, 1881. She was then passing eight pints of urine daily, of specific gravity 1040, loaded with sugar. After two weeks' taking of the salicylic acid, forty grains in the day, I found the specific gravity of the urine 1020, and only a trace of sugar; and she was passing a normal quantity. She continued the medicine, in less doses, for a month. At the end of that time, she wrote to me that she was in every respect quite well. I had no further visits from this case, as she left the neighbourhood while under treatment.

CASE IV.—Miss W., aged 52, was subject to rheumatic pains and cramps. I saw her in consultation in March, 1885. Diabetes had existed four months, rendering her unfit lately for household duties. Her urine was highly saccharine, of specific gravity 1030, and seven pints were passed daily. She was ordered salicylic acid, fifteen grains in mixture, three times a day, for a week; and then in ten-grain doses. At the end of the second week, the specific gravity of the urine was 1010, with no sugar. The quantity was six pints daily. She said she always passed about this quantity, but now felt quite well. The medicine was shortly afterwards discontinued; and there has been no return of the glycosuria. In this case, no restriction of diet was ordered.

CASE V.—Mrs. P., aged 59, had rheumatic arthritis in the fingers and wrists, and muscular pains and cramps frequently. She first consulted me on February 3rd, 1885, for cataract forming in both eyes. Symptoms of diabetes dated back a year. The urine was highly saccharine, of specific gravity 1035; and eight pints were passed daily. She commenced the salicylic acid, taking thirty-six grains daily, and from her diet she was ordered to exclude sugar and potatoes. On February 10th, urine eight pints, specific gravity 1028; much sugar. On February 17th, urine five pints, specific gravity 1020; less sugar. On February 26th, urine four pints, specific gravity 1010; no sugar. On March 12th, she was in the same condition as at the last report. I had to leave off the salicylic treatment, as she complained of it giving her indigestion. She said she was very much stronger. The above rapid improvement, under the salicylic treatment, only lasted three months, as, on May 28th, the urine, though only four pints in the day, had a specific gravity of 1030, and there was a return of the sugar. On resuming the medicine, the glycosuria again disappeared. Owing to the dyspepsia which the medicine causes, this lady cannot continue it long.

enough to do more good. The cataracts have not increased, and she gains instead of losing strength; but, up to the present, she returns about every three months with glycosuria, but no polyuria.

CASE VI.—Mr. D., aged 59, had frequent rheumatic pain and stiffness of joints, also cramps. I first attended him on January 13th, this year for a peculiar clonic spasmodic action of the left arm, and at the same time discovered that he had been suffering for about six months from diabetes, passing daily twelve pints of saccharine urine, of specific gravity 1042. I prescribed salicylic acid in mixture, 36 grains daily, and ordered him to avoid sugar and potatoes, also to take whiskey instead of beer. In four days, the quantity of urine was reduced to four pints in the day, containing less sugar, and specific gravity 1025. He is still under treatment. He has had no return of the spasms or rheumatic pains; the specific gravity of the urine varies between 1025 and 1032, but the quantity has no day exceeded four pints.

In addition to these six cases of glycosuria in rheumatic persons, I have tried the salicylic treatment in four other cases in which no rheumatic symptoms existed, and, in all, failed to make any impression on the polyuria or sugar. Two of these cases were carefully observed in hospital; they improved on restricted diet and sedatives, but not on salicylic acid. These four were doubtless glycosuria of hepatic origin; in age they were under 30, while the cases I have described were all over 50.

GENERAL REMARKS.—The first and most marked effect of the salicylic treatment in the glycosuria of rheumatic persons, is the almost complete removal of the distressing polyuria which accompanies it.

In Case VI, after four days' treatment, the daily evacuation of urine was reduced from twelve to four pints, and, in all the cases, this effect was one of the earliest and most constant; at the same time there was a considerable fall, both in the specific gravity of the urine and its proportion of sugar; even when the treatment fails to remove the sugar entirely, it reduces it to such a trifling amount, that the patient is unconscious of any ailment, and gains in flesh and strength. This improvement persists for weeks after suspending the medicine, as is the case with two patients now under observation; the quantity of urine never exceeds three to four pints in the day, nor does the specific gravity rise above 1028 or 1030, though containing sugar. Even this condition must be safer and less serious than when the patient is passing daily nine to twelve pints of saccharine urine, of a specific gravity of 1040 and upwards.

As to diet, the careful restriction which is so imperative in the diabetes of hepatic origin is not so necessary in this kind; still I think it greatly helps to restrict the formation of glucose in the system, by prohibiting potatoes, farinaceous puddings, and sugar, as much as possible.

In administering salicylic acid, the following mixture has given good results: R Salicylic acid ℥ii, bicarbonate of soda ℥j, carbonate of ammonia ℥j; mix in water ℥i, and, when effervescence has subsided, add water to ℥xii. An eighth or twelfth part to be taken three times a day. This is a soluble neutral mixture, and is not unpalatable when given in a wineglass of water, with a little tincture of orange-peel added. The ammonia prevents any depressing effects. I have tried the free acid made into three-grain pills with mucilage, as recommended by Dr. Latham in rheumatic fever, but have not found them superior to the mixture, while many patients object to swallowing five or six pills as a dose.

It is a matter of much importance, with regard to treatment, to be able to distinguish between the two kinds of diabetes. The presence or absence of rheumatic arthritis, pains, and cramps, is often sufficient; but Dr. Latham has recently called attention to a more certain mode of distinguishing between the two, as he has found that in the diabetes of rheumatic persons—that is, originating in the muscular tissue—the urine contains some substance which dissolves cuprous oxide; so that a larger quantity of Fehling's test has to be added before getting the brown precipitate in this urine, than in the diabetic urine of hepatic origin. I have lately been able to confirm this observation.

To judge from the proportion of cases of diabetes in rheumatic persons which I have met with in this neighbourhood, this kind of glycosuria can be by no means rare; and the early treatment of it with a salicylic acid offers a real hope of cure, or, at any rate, it will relieve and prevent that tendency to wasting and exhaustion which has but one issue.

PRESENTATION.—Dr. A. Harrison Thomas, Senior Medical Officer to the Fisherton House Asylum, was, on April 16th, presented with an address, together with an inkstand and tankard, by the officials of that institution, on the occasion of his resigning his appointment.

NOTES OF A CASE OF SUPRAPUBIC LITHOTOMY.

By J. RUTHERFORD MORISON, M.D., F.R.C.S. Edin.,
Hartlepool.

Removal of Three Pure Uric Acid Stones; largest, about the size of a Cocoa-nut, weighing one pound six and three-quarter ounces, long circumference 12 inches, short circumference 9½ inches.

S., aged 52, married, a seafaring man, residing at West Hartlepool, complained of pain and difficulty with his urine. His general health had been good, with the exception of the trouble complained of. He had been somewhat addicted to alcoholic excess. He looked a strong man, but much worn by pain and loss of rest.

For the last thirty years, he had had attacks of pain and difficulty in micturition. He thought that an accident, a fall on the perineum over a railing, which he met with when a boy, might have been the cause. During the attacks, he had had a frequent desire to micturate, accompanied by straining pains in the perineum and rectum, and a shooting into the point of the penis. These attacks lasted a variable time, occasionally passing off in a few days, at other times requiring months. He said they had to reach a height, after which followed a gradual return to health, and for a time he remained perfectly well. Several years ago, during one of the attacks, he passed blood with his urine. At different times he had consulted a variety of physicians and surgeons, but nothing did him any good except morphine, which relieved his pain. He had been frequently sounded for stone, but without result.

His present attack began four months ago in the usual way, with painful and frequent micturition, for which, up to the time of my seeing him, he had been under medical care, and steadily becoming worse. At the time of my first seeing him, I was going away for three weeks; therefore, on examining his urine, and finding it to contain one-third albumen, some pus, and to be of a low specific gravity (1008), I ordered him to live on milk, and to take 15 minims of tincture of perchloride of iron three times a day, postponing any instrumental interference till my return.

On August 14th, three weeks having expired, I again visited him. So far as could be ascertained, all his organs were healthy, with the exception of the genito-urinary system. He was wearing an urinal, as his urine was constantly dribbling away. As a consequence, his thighs were excoriated, and he had a strong urinous odour. On palpation, a rounded swelling could be felt in his lower abdomen, reaching midway between the umbilicus and pubes, which was dull on percussion, and pressure on which caused a desire to micturate, and the escape of some urine by the natural channel. Pressure over both kidneys, posteriorly, caused pain. By the rectum, a round, hard, tender swelling was easily felt, projecting into the lower part. A soft rubber catheter entered as far, apparently, as the prostatic urethra, but here it hitched, causing great pain, and about a teaspoonful of urine escaped in little gushes. The catheter could not enter the bladder. I arranged, after explaining that, in his dangerous state, even the passing of an instrument and the emptying of his bladder was attended by considerable risk, to give him chloroform the following day, and make a thorough exploration.

August 15th. On giving chloroform, the distended bladder could be distinctly felt as a rounded swelling in the lower abdomen. A *soit coudé* instrument struck at the same spot as the one introduced yesterday, and no more urine could be obtained through it. A silver catheter, now tried, struck a stone at the point of obstruction lying in the urethra, and could not be passed beyond it. I arranged to make an incision, and, by that means, empty his bladder next day.

August 16th. The staff, when introduced, hitched on the urethral calculus, but passed on into the bladder, where it struck another calculus. The ordinary (as for lateral lithotomy) incision was now made, and bled profusely from the whole surface. The transverse perineal artery was so active as to be formidable, and a Péan's forceps was fixed on each end. When the urethra had been incised, a small flat stone escaped into the wound, and was extracted with my finger, which was then passed into the bladder on to the stone there, and the staff was removed. The stone was of such large size, that I enlarged the wound in the bladder with a probe-pointed bistoury before introducing the largest size of lithotomy-forceps. Expanding the forceps widely, I grasped the stone, which was so large and of such a shape that the instrument slipped off. After repeating the process in a variety of directions, it was plain that the stone could not be removed through this incision, and that, if the stone were to be had, it must be by the suprapubic operation. The wound had all