possible avoided. In none of my cases was there any trace of blood in the urine passed after the operation. The results in the first and third cases of the series now reported must be regarded as eminently satisfactory, and well illustrate the advantages of Bigelow's method. No local or general disturbance was set up by the operation, while the relief afforded was immediate and complete.

Harley-street, W.

ON GLYCERINE IN FLATULENCE, ACIDITY, AND PYROSIS.

By SYDNEY RINGER, M.D.,

AND

WILLIAM MURRELL, M.D.

AN old gentleman, who for many years suffered from distressing acidity, read in a daily paper that glycerine added to milk prevents its turning sour, and he reasoned thus: "If glycerine prevents milk turning sour, why should it not prevent me turning sour?" and he resolved to try the efficacy of glycerine for his acidity. The success of his experiment was complete, and whenever tormented by his old malady he cures himself by a recourse to glycerine. Indeed, he can now take articles of food from which he was previously compelled to abstain, provided always that he takes a drachm of glycerine immediately before, with, or directly after, his food. He recommended this treatment to many of his friends—sufferers like himself—and one of these mentioned the above circumstances to us.

We have since largely employed glycerine, and find it not only very useful in acidity, but also in flatulence and pyrosis, and that it sometimes relieves pain. We meet with cases where flatulence, or acidity, or pyrosis is the only symptom, but more frequently these symptoms are combined. Some patients rift up huge quantities of wind without any other symptoms than depression of spirits; in others we get flatulence and acidity, one or other predominating; and we meet with others who suffer from acidity, flatulence, and also pyrosis. In all these various forms we find glycerine useful, and in the great majority of cases very useful. We do not mean to say that in all cases it is superior to other remedies for these complaints; indeed, in several instances it has only partially succeeded, where other remedies at once cured. On the other hand, in some cases glycerine speedily and completely succeeded, where the commonly used remedies for acidity and flatulence completely failed. We do not pretend to estimate its relative value to other remedies; we are only anxious to draw attention to its virtues.

Gas is in some instances formed in the stomach, in others in the large intestine, in some patients in both. Our observations were made on stomach flatulence, and as glycerine is so readily absorbed we should hardly expect that it would influence the formation of wind in the colon, except given in large doses, and when it acts as a slight laxative, and so expels the putrefying mass which forms the wind.

In some cases it removes pain and vomiting, probably, like charcoal, by preventing the formation of acrid acids, which irritate delicate and irritable stomachs.

We suggest that it acts by retarding or preventing some forms of fermentation and of putrefaction. J. Mekulics¹ shows that glycerine prevents putrefaction of nitrogenous substances, as of blood diluted with water, which speedily decomposes at the ordinary temperature of the air. Two per cent. of glycerine retarded decomposition for twenty-four hours; 10 per cent. for five days. If the fluid were placed in the hatching oven, then 2 per cent. retarded decomposition for several hours, 10 per cent. for forty-eight hours, and 20 per cent. altogether prevented putrefaction. He also proves that glycerine destroys bacteria and prevents the formation of septic poison, though it will dissolve and preserve the septic poison itself.

Dr. E. Murk² finds that 2 to 3 per cent. will delay lactic fermentation in milk from eighteen to twenty-four hours.

Burnham Wilmot, 1860, says glycerine preserves meat so that after several months' immersion the meat is sweet and

can be eaten; and Demarquay proves that both animal and vegetable substances may be kept for six weeks to two months by glycerine.

Glycerine, however, does not prevent the digestive action of pepsin and hydrochloric acid; hence, whilst it prevents the formation of wind and acidity, probably by checking fermentation, it in no way hinders digestion. We administer a drachm to two drachms either before, with, or immediately after food. It may be given in water, coffee, tea, or lemon and soda water. In tea and coffee it may replace sugar, a substance which greatly favours flatulence, as, indeed, does tea in many cases. In some instances a cure does not occur till the lapse of ten days or a fortnight.

A CASE OF LITHO-NEPHROTOMY.

By E. HOOPER MAY, F.R.C.S.,

SURGEON TO THE TRAINING HOSPITAL, TOTTENHAM.

MRS. B—, aged fifty-five, a pale but fairly healthy-looking woman, complained, in July, 1879, that her urine was thick and very offensive, and that for some time past, though able to perform her duties, she had not been feeling well. The urine was found to contain pus. Upon examination on the 17th September, a large tumour was found on the right side of the abdomen, occupying the space between the last rib and the crest of the ilium, and bulging anteriorly and into the loin. This was believed to be a suppurating kidney, and the opinion received confirmation from the fact that although at the time of the examination the patient had been passing clear healthy urine, almost immediately after the manipulation she passed a quantity which was thick and offensive. On the 15th October the patient was admitted into the Tottenham Training Hospital. During the preceding three weeks there had been more or less pyrexia. The tumour had increased in size, and the urine, which had varied, was clear. When thick, it had been found to contain a large quantity of muco-pus and many blood-cells, but no casts. The history of the case was briefly as follows:—Thirteen years ago the patient had a sudden attack of vomiting, and pain in the right side, which lasted for a week. A lump, about the size of an egg, was found by the doctor, examination of which caused great pain, followed within a day by its disappearance, nothing abnormal being noticed about the urine. About a year later she had a similar attack, the pain lasting eight weeks. At this time she was seized with a straining sensation, and passed a large quantity of thick urine, after which the lump disappeared; and until recently she has continued free from all urinary troubles.

Dec. 4th.—Since last note the patient has continued much the same. The urine has varied in quantity from twenty to forty-nine ounces in the twenty-four hours, it has been acid and free from albumen, and has been occasionally thick and offensive. The escape of pus with the urine has always been followed by a sense of relief to the patient. She has felt able to sit up easily in bed, whilst before the size of the tumour had impeded such movements.

In consultation with my colleague, Dr. Lichtenberg, it was determined to open the cyst through the abdominal wall, after inducing adhesion by the method advocated by the late Dr. Simon of Heidelberg. The most prominent part of the tumour having been selected, two long silver exploring trocars were introduced in a line with the anterior border of the axilla, at the distance of five centimetres from each other, and two others in a transverse direction midway between the two first, and two centimetres apart.

Offensive pus flowed from each cannula. A small quantity was thus allowed to escape, and afterwards the cannulas were stopped and carefully fastened in.

11th.—The patient had continued much as before the introduction of the trocars. The tumour was slightly reduced in size, and upon it a circular area, of which a line drawn from one vertically-placed needle to the other formed the diameter, was prominent. In this line, from needle to needle, an incision was carried through the abdominal wall and into the cyst; a considerable quantity of offensive pus escaped, and, on introducing a director, a stone was at once felt. This was grasped by a lithotomy forceps with some

¹ Archiv. f. Klin. Chirurg., Bd. xxii., Heft 2. 1878.

² Virchow's Archiv., 1879.

difficulty, owing to its size and position, but it was found impossible to move it. The incision being somewhat enlarged, the finger was introduced to its full extent, and the stone could then be just reached. It was felt to be very large, and so firmly fixed across the pelvis of the kidney, that it could not be moved. It therefore became necessary to relinquish the attempt, for, owing to the position of the stone, no ordinary instrument could be used to divide it. After this operation a large drainage-tube was kept in the sac, which was washed out twice daily with a solution of salicylic acid. The condition of the patient improved through the next three weeks, and the temperature was but little above normal.

Jan. 1st, 1880.—Being provided with a cutting forceps of which the blades could be introduced separately, I proceeded to remove the stone. The wound, which had considerably closed, had to be enlarged, and then the blades of the forceps were introduced. The portion B being cut off the stone was easily caught by a lithotomy forceps, and by a slight twist raised from its bed, to which it closely adhered. The finger then being introduced, another portion, A, was felt imbedded in its calyx, and was easily extracted. The calculus weighed 1·3 ounces, and appeared to consist of lithic acid with a very thin covering of phosphates. A slight bleeding followed, but this was soon over, and the drainage-tube was replaced.

Actual size, weight 630 grains.

In the evening the condition of the patient appeared satisfactory, but at 11 P.M. she began to complain of severe pain and became collapsed. After a while she rallied, and the next morning (Jan. 2nd) she seemed comfortable, but the abdomen was full. Temperature 100° in the morning, 101·5° in the evening.

Jan. 3rd.—Abdomen rather fuller; urine welled up through the tube. An enema was followed by good evacuation. Morning temperature 100·3°; evening 99·6°.

On the 4th the tympanites had increased. An enema was followed by another evacuation. In the evening she wore an anxious expression and felt sick. Temperature 101·3°. Afterwards the sickness increased so that nothing could be retained. Ice was given and the abdomen covered with lint frequently soaked in lead and spirit lotion, after which the sickness soon abated. The next day the temperature rose to 103°, and for three days after remained high, and there was great tympanitis, but being kept under the influence of opium she had little pain or sickness.

On January 12th the urine contained a good deal of pus, and smelled badly. The abdomen was getting less distended and softer. Morning temperature 99°, evening 100°.

13th.—Urine clear and pale. About this time it was noted that there was no albumen in the urine, which was always acid, and the condition of the patient was such as to lead to the expectation that she would make a good recovery.

15th.—The abdomen very soft and flat. She was beginning to enjoy food, but had a bad cold.

18th.—Coughed up rusty sputa. Evening temperature, 103·2°.

22nd.—Patient had become drowsy, and the urine was found to contain a large quantity of albumen, a subsequent examination revealing the presence of a multitude of tubercles. After this the patient became gradually worse. The chest symptoms increased, there was cedema of the face and legs, and she died on the 31st of January, the thirty-first day

after the removal of the calculus. The wound through the abdominal wall had for some time been healed, except the sinus kept open by the drainage-tube.

At the post-mortem examination the apex of the liver was found to be firmly adherent to the upper extremity of the incision, and there were adhesions between the kidney and the colon, but no sign of general peritonitis. There was also near the incision a small collection of pus. The right kidney had shrunk to about its natural size; it consisted chiefly of thickened pelvis and calyces, little of the gland tissue remaining. The ureter was pervious, but much smaller than its fellow. The left kidney was congested.

Remarks.—Surgical literature does not appear to be rich in precedents for such an operation. The monograph¹ of the late Professor Simon of Heidelberg may, perhaps, be said to have exhausted the subject at the time of its publication. In this admirable treatise the author alludes to two cases published by Dr. Andrews and the late Mr. Callender in the 9th vol. of St. Bartholomew's Hospital Reports, and one of these is the only case alluded to which bears a close resemblance to that now under consideration. In this case Mr. Callender removed through the loin a large renal calculus, weighing more than 1·55 ounces; the patient, already worn out by pain and suppuration, dying three days afterwards. In the remarks suggested by it Mr. Callender says:—"I may also add that the term litho-nephrotomy has been used for the case here reported to distinguish it from other operations of a comparatively insignificant nature." Besides cases of nephrotomy (or the removal of stone from the kidney by cutting through the muscles of the back), to which allusion is made by Mr. Callender in the paper just referred to, one of a similar nature was reported in the *Gentleman's Magazine* for 1733.² It is there stated that "Mr. Paul, a surgeon at Stroud, extracted from the kidneys of a woman, by an incision through her back, a rough stone as large as a pigeon's egg, and made an entire cure, the first of the kind ever performed in this kingdom." But Mr. Callender also refers to an article on nephrotomy, so-called, in the *Cincinnati Lancet*, by Dr. Kearney, "in which, referring to the literature of the subject, he shows that the greater number of cases of so-called nephrotomy have been simply instances in which abscesses connected with disorganised kidneys have been opened, and the calculi extracted." How little of the surgeon's skill is required in these cases was once illustrated by the appearance of a renal calculus in a poultice which had been applied to a swelling in the loin of a patient whose case had not been thought to require medical assistance till this unexpected event alarmed his friends.

The advantages claimed for operations through the abdominal wall are the comparative thinness of the structures covering the tumour, and also that in this situation the incision being carried directly into the dilated pelvis, the substance of the kidney suffers less injury, and the risk of hæmorrhage is thereby greatly lessened. In the case of a large-branched calculus, it may be added that the attempt to withdraw it is made at much greater advantage through the pelvis of the kidney than in the direction of its branches through the substance of the kidney itself.

The operation practised in this case was designed and carried out by Simon for cases of pyonephrosis and hydro-nephrosis, and has been more recently performed by another German surgeon, and the success attending it in their hands led to its adoption in this instance.

High Cross, Tottenham.

COLOUR-BLINDNESS: ITS EXAMINATION AND PREVALENCE.

By DR. B. JOY JEFFRIES.

IN THE LANCET of October 25th, 1879, Mr. Herbert W. Page regretted that he could not have been present at the Cork meeting of the Association to take part in the discussion on colour-blindness opened by my friend Dr. Swanzy. I also regret that I could not accept the polite invitation extended to me on that occasion. Had Mr. Page and myself met and taken part in this discussion I am assured he would not have written what he did in that

¹ Chirurgie der Nieren. 1876.

² Medical Times and Gazette, December 13th, 1879.