The variations in the three cases with regard to the responses to electricity will be noted, and also the differences with regard to the condition of the knee-jerk.

NOTE ON THE VALUE OF PIPERAZIN AS A SOLVENT OF URIC ACID STONES IN URINE.

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I HAVE been conducting experiments in connection with the above subject during the past year; and, in view of the paper published by Dr. Gordon in the BRITISH MEDICAL JOURNAL of June 16th last, I think that some of my results may be of interest.

METHODS EMPLOYED.

1. Fifteen grains of piperazin were given daily for two weeks to a presumably healthy young adult. The urine for the following twenty-four hours was collected and allowed to drip over a stone during the subsequent twenty-four hours at such a rate that the whole was passed over the stone in that time. The stone was placed in a Soxhlet's fat extractor. This acts automatically, so that when the urine reaches a certain point in the tube it is siphoned off into a receiving vessel below. The whole apparatus was kept in a water bath, so arranged that the temperature of the urine was approximately that of the body. The stone was dried at 110° C. and weighed to a constant before and after experiment.

Weight of stone before experiment ... 2.400 g.

At end of first week ... 2.404 g.

Weight of stone before experiment ... 2.4435 g.

At end of second week ... 2.6155 g.

The stone used in the second week was analysed for me by Mr. Coram, and found to contain 78.5 per cent. of uric acid. The slight increase in weight was undoubtedly due to a deposit of phosphates on the stone, which on being carefully scraped off gave the characteristic reactions.

After such a dose of piperazin the urine then is quite useless as a solvent of uric acid stones. Mendelsohn has also shown that outside the body the solvent action of piperazin in urine is *nil*.

2. The urine of the same individual, as in the above experiment, was collected every day for fourteen days. Two pieces of the same stone were taken. One was placed in the urine, to which 15 grains of piperazin were added each day, the urine being changed every morning. The other was placed in a solution of piperazin in water, 15 grains to 1,000 c.cm. of water, the latter changed each day and fresh piperazin added. The conditions of the experiment were the same as in the former case. The stones were dried and weighed at the end of each week.

i. Stone Suspended in Urine.

Before Immersion.	At End of 7 Days.	At End of 14 Days.
3.6395 g.	3.6591 g.	3.734 g.

ii. Stone Suspended in Watery Solution of Piperazin.

	Before Immersion.	At End of 7 Days.	At End of 14 Days.
First week	3.4795 g.	*2.9636 g.	—
Second week	2.8636 g.	—	2.484 g.

* The stone had crumbled somewhat and some few small particles may have passed through the fine muslin bag in which it was suspended. The decrease in size, however, was extremely marked and very little, if any, had passed through. The bag was then opened, the small pieces washed away, and the stone dried and reweighed for the second week's experiment.

CONCLUSION.

Although a watery solution of piperazin has a marked effect, yet a solution of piperazin in urine of the strength used—that is, about 1 in 1,000—has no effect whatever. The slight increase in weight was again, no doubt, due to deposit of phosphates on the stone. In Dr. Gordon's experiments the strengths of solutions of piperazin in urine were 1 per cent., 2 per cent., 5 per cent., and 7.5 per cent., and no experiments were done with solutions weaker than these. But according to Dr. Gordon's own showing, when 2 grammes of piperazin were taken daily only 0.3 gramme of unoxidised piperazin was excreted. This is about 0.02 per cent., taking 1,500 c.cm. as the normal amount of urine passed daily. As, therefore, his experiments do not deal with anything like such a percentage of piperazin in the urine, they do not in any way prove the therapeutical value of piperazin as a solvent of uric acid.

It appears, however, from the powerful action of piperazin in a watery or an alkaline medium that it is along these lines any real advance in testing its therapeutical value can be obtained, and I am at present conducting experiments from this point of view.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

CASE OF PERFORATING ULCER OF STOMACH TREATED BY LAPAROTOMY, STITCHING, AND WASHING OUT.

THE following are the concluding notes of the case of perforative ulcer of stomach reported in the BRITISH MEDICAL JOURNAL of November 3rd, on page 982:

The operation was performed on October 27th, 1894. J. L. has gone on steadily improving. The rectal feeding was entirely depended on until the seventh day, when she was allowed half a pint of peptonised barley water by the mouth, the next day a like quantity of milk.

On November 3rd I removed all stitches. Two stitch abscesses had formed, which healed in three days. On November 6th she was allowed peptonised beef-tea, and on November 11th half a pint of bread and milk with beef-tea peptonised. Rectal feeding was still continued, but at longer intervals. The temperature, pulse, and breathing had been normal since November 2nd. The drainage tube was removed on October 31st. On November 18th the patient was on a couch in the ward looking very well. She had no pain after her food. On November 22nd rectal feeding was discontinued, and the patient was allowed farinaceous food with beef-tea peptonised. Discharged cured November 30th.

REMARKS.

I attribute the success in this case to:

1. Being enabled to operate so soon after the perforation occurred (three hours).
2. Thorough washing out of the peritoneal cavity with an aseptic and non-irritating fluid—namely, boiled water at 110° F.
3. Drainage.
4. The two sets of stitches fixing the infolded stomach.
5. The insistence on rectal feeding being continued for a long period.
6. Favourable situation of perforation, thereby enabling the operation to be quickly completed.

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DISLOCATION OF THE HUMERUS BY MUSCULAR ACTION.

As cases of dislocation of the humerus or any of the long bones caused by muscular action are comparatively rare I think the report of the occurrence of such an accident is worthy of record.

Mrs. D., aged 28, is a strong, rather stout individual, and is about seven months pregnant. She has never suffered from any previous injury to her shoulder-joint. She went to bed perfectly well about 11 o'clock on the evening of November 24th. She did not fall asleep till about 12 o'clock, being rather restless previous to that. About half-past 12 she found herself sitting up in bed suffering from very acute pain in her left shoulder-joint. Her husband tells me that she awakened him by starting up with a cry, and for some time she did not recognise those around her. The pain was very acute, and as hot fomentations did not relieve it the husband came for me.

The condition I found at 3 A.M. was as follows: The arm was lying helpless on the bed with the elbow flexed and away from the side. There was marked flattening of the shoulder and the acromion process stood out distinctly. On palpation the head of the humerus was found lying below the coracoid process. The case was one of undoubted subcoracoid dislocation of the humerus. The dislocation was very easily reduced by Kocher's method, and, as soon as the head of the bone returned to its normal position, which it did with a distinct snap, the patient experienced great relief.

The probable explanation of such an unusual accident is that the patient was suffering from nightmare, and that in her fright she had started up suddenly and displaced the head of the humerus.

Whether the dislocation was caused by her trying to raise herself from her elbow or whether it was due to the direct action of the pectoralis major I am unable to say, but un-