tested as control by the Stas process yielded only 4 mg. of non-crystalline ether extract.

The crystals were dissolved in alcohol and a drop allowed to evaporate on a microscope slide. (Fig. 1.) A rough quarter of a tabloid was then dissolved in 1 oz. of normal urine, which was put through the same process; 53 mg. were recovered and crystallized from alcohol. (Fig. 2.) A single large crystal of veronal was also photographed. Fig. 3 shows sulphonal crystals from

Fig. 3.—Sulphonal from alcoholic solution.

alcohol; the distinction between it and veronal is easy, as they belong to different crystalline systems, and, whether in single crystals or arborescent forms, could not be confounded together. Sulphonal appears to crystallize in the rhombic and veronal in the monoclinic system. Dr. L. C. Davis, Lecturer in Chemistry in the University of Bristol, has been kind enough to point out to me his ingenious method of identifying even small quantities of veronal and other crystals by taking advantage of the fact that when two bodies of similar melting point are mixed the melting point of the mixture is lowered; thus veronal melts at 191° C. and aconitine at about the same temperature, whilst a mixture of equal quantities of the two melts at 160° to 175° C. He also tells me that veronal was synthesized as far back as 1882.

REFERENCES.

- ¹ BRITISH MEDICAL JOURNAL, 1913, i, 566. ^{1a} Ibid., 1913, i, 752. ² Cent. f. Psychiat., 1904. ³ BRITISH MEDICAL JOURNAL, 1913, ii, 312. ⁴ Ibid., 1913, ii, 20. ⁵ Chitty. ⁶ BRITISH MEDICAL JOURNAL, 1913, i, 287. ⁷ Cent. f. Psychiat., 1904. ⁸ BRITISH MEDICAL JOURNAL, 1912, ii, 72. ⁹ Ibid., 1913, ii, 663. ¹⁰ Arch. exp. Path. Ph., 1911, 66, 241, 296. ¹¹ Biochem. Zeitschrift, 1911, 31, 131. ¹² Arch. exp. Path. Ph., 1910, 63, 228. ¹³ BRITISH MEDICAL JOURNAL, 1913, ii, 664. ¹⁴ Ibid., 1908, ii, 832. ¹⁵ Ibid., 1903, ii, 1154. ¹⁶ Ibid., 1909, ii, 1320. ¹⁷ Ibid., 1910, ii, 375.

A CASE OF VERONAL POISONING.

BY

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IN view of the ease with which veronal has been procured in the past by the general public, the following notes may be of interest.

Miss B., aged 40, had been suffering for some weeks with severe facial neuralgia accompanied by headache, and had been unable to sleep. For this she had on her own initiative taken at times 5 or 7 grains of veronal. On the night in question, her face and head being very bad, and having tried to sleep without avail, she got up and took the box, which contained five capsules containing each 7 grains of veronal, down to the kitchen, and sat down by the fire. She has a confused memory of taking the first capsule, and later on finding the empty box in her hand and throwing it in the fire.

It can therefore be reasonably assumed, in view of the effects to be described, that she took all five capsules—a dose of 35 grains altogether, taken on an empty stomach, and almost immediately absorbed. She does not remember returning to bed.

Her father, on hearing her snoring, which was not her usual habit, got up and found that she could not be roused.

When I saw her she was breathing quietly, the pulse rate was

normal, and she looked like a person in a natural but very profound sleep. The pupils were normal, and reacted to light. On pricking her hands or her feet with a pin she drew them away. She could be sufficiently roused by flicking her face with a wet handkerchief to turn her head away and screw up her face. Further efforts resulted in no conscious response, and on leaving the patient alone she relapsed almost immediately into the same profound sleep. She continued in this state for fully fifty hours, when the nurse succeeded in rousing her sufficiently to drink some tea, but she seemed thoroughly dazed, saying nothing, and at once dropping off to sleep again. After seventy-two hours she roused herself, but was able to speak only in a very hesitating and incoherent manner; she complained that everything "looked funny," some of us having three eyes, others four heads, etc. At this time she was quite unable to stand or walk, but could use her arms naturally.

From this time onwards she gradually improved, though she slept more or less thirty-six hours more, and it was not till then that her brain seemed to clear.

In this case there was neither burning nor itching of the skin, nor swelling, such as has been reported in similar cases, and there was no erythema and no vomiting.

THE RESULTS OF NEPHROPEXY.

BY

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SOME years ago I published a description of a method of performing nephropexy,¹ which subsequent experience has proved to be simple, safe, and efficient. This was followed by a second paper upon the indications for the operation;² both appeared in the BRITISH MEDICAL JOURNAL. Having now operated upon upwards of 500 patients and fixed in position more than 800 kidneys, the operations being spread over a period of nearly nine years, a review of the results obtained is interesting and instructive.

The results of nephropexy must be considered from two standpoints, mechanical and therapeutic. This is important, for only when operative success has been obtained is it fair to estimate therapeutic effects. Many failures as regards general benefit are really due to failure to secure successful mechanical results—that is, they must be classed as surgical failures. No one expects a man with a recurrent hernia to have benefited by the operation; and equally, benefit from nephropexy cannot be hoped for unless the kidney has been successfully and permanently restored to its normal position.

Surgical success in operations upon movable kidneys means (1) permanent restoration of the kidney to a position as nearly normal as possible, and (2) absence of unpleasant sequelae such as pain, sinus, and weakness of scar.

Judged from this standpoint, the surgical results in my series of 515 cases have been most satisfactory. There have been 4 deaths, 2 of which were due to pulmonary embolism, 1 to acute dilatation of the stomach and 1 to exhaustion from mania. This gives a mortality of less than 0.8 per cent., which must be considered low in view of the facts that the condition of many of the patients was very unsatisfactory at the time of operation, and that in about two-thirds of them both kidneys were dealt with at the same time.

To my knowledge, in only one instance has the kidney acquired fresh mobility after having been anchored, though almost all the patients have been repeatedly examined by myself and other competent observers. In a few instances there has been pain in the loin due to implication of a nerve in the scar. The pain comes on some weeks after operation, and when severe has been relieved by excision of a length of the affected nerve. In one case a small hernia developed in the scar as the result of a severe strain within a few weeks of the operation, and necessitated a slight further operation. In no case has a sinus resulted, and in no case has any subsequent trouble arisen in the kidney itself. The following extract from the report of a practitioner who performed a *post-mortem* examination upon one of my patients (death being due to a cause unconnected with the operation) seven months after nephropexy indicates how firmly the kidney becomes anchored: "The right kidney was very firmly attached to its moorings, and I could not separate it at all, so did not disturb it." These results compare very favourably with those obtainable in any other branch of surgery, and the operation described in 1907 has proved so satisfactory

that no essential alteration in technique has appeared to be desirable.

The results of nephropexy upon the general health and working efficiency of the patients are less easy to estimate. This is due to the great diversity of the symptoms from which they suffered and the length of time that must necessarily elapse before the full benefit of the operation can be obtained. Apart from such purely local disturbances as Dietl's crises, pain in the loin, etc., nephropexy does not effect a direct cure. The operation rather makes curable by ordinary treatment patients who have hitherto proved incurable. The time required to effect the cure when ill health has existed for many years is considerable, and this is especially so when, as is usually the case, a marked degree of neurasthenia is present. It is useless to estimate results until a full year has elapsed.

Some two years ago, for the purposes of an address before the Chicago Medical Society, I inquired into the progress of 100 consecutive cases, Nos. 151 to 250, in my series. In every case there had been an interval of at least a year between the operation and the report. It was possible to obtain information either from the patient or the doctor in 87 of these cases. Of these, 35 were described as cured, 15 as much better, 28 as better, 6 as slightly better, and 3 as no better. In other words, about 60 per cent. were cured or greatly benefited, 30 per cent. were better, and 10 per cent. were either no better or very little so.

In the above series of cases, 7 were males and 93 females. Of the 93 women, 37 were married and 56 unmarried. In 57 of the cases both kidneys were operated on at the same time; in 32 the right kidney only, and in 11 the left kidney only was fixed. The average age of the patients was 34, the extremes being 15 and 70. The average duration of the symptoms was five years, and in several they had persisted from fifteen to twenty years. In almost every case ordinary forms of treatment had been fully tried and had failed. Of the symptoms, in 21 these were purely local and definitely connected with the kidney; in 9, the digestive system was mainly disturbed; and 3 suffered chiefly from pelvic troubles. There were 31 cases of general neurasthenia, 8 of neurasthenia with mental symptoms, the latter being either suicidal impulses or delusions. Seven patients were quite insane at the time of operation. In 21 the symptoms were too mixed to allow of their being grouped.

It is very difficult to form a trustworthy opinion of the extent of the benefit that has resulted from patients' written replies to an inquiry as to their condition. In order to obtain more reliable information regarding the results, I have recently written to nineteen practitioners upon 97 of whose patients I have performed nephropexy. In my opinion the family doctor who has observed and treated the patient, both before and after operation, is best qualified to judge of the value of the operation in respect of that particular patient. Two questions were submitted:

1. Has the operation been a surgical success—that is, have the kidneys remained in position and is the patient free from unpleasant sequelae, such as pain, sinus, or weakness of scar?
2. Has the general benefit that has resulted justified the operation?

My very best thanks are due to these gentlemen for the interest shown and the great care they have taken in obtaining information upon which to base their answers. In almost every instance general impressions have been verified by direct inquiry or actual examination.

Summary of Reports.

1. Dr. Acland, Bideford, N. Devon: 3 patients. In each case the operation has been a surgical success. The general benefit in two patients has fully justified the operation. One patient has had a bad relapse of the old pains in the chest, and is very thin.

2. Dr. Avent, Handsworth, Birmingham: 6 patients. In every case the operation has been successful surgically. Two patients are absolutely cured. In one, the result was one of the most extraordinary and brilliant achievements that I have seen accomplished by surgery. Three patients, who were neurasthenics of many years' standing, without local symptoms, are no better. One patient has been lost sight of.

3. Dr. A. Brice, Moseley, Birmingham: 3 patients. One patient has been lost sight of. In the other two the operation has proved a surgical success, and has been followed by great general benefit.

4. Dr. Wigginton, Moseley, Birmingham: 7 patients. In every case the kidneys have remained in good position and there have been no unpleasant sequelae. In six cases the resulting general benefit has fully justified the operation. One patient, though better, still has her old attacks of abdominal pain.

5. Dr. Dain, Selly Oak, Birmingham: 3 patients. In all three cases the operation has been a surgical success. In the first, operation has made an ordinarily strong woman of a previous semi-invalid. In the second the patient had a stone in the loose kidney. Her general condition is much better than before the operation. In the third the patient recovered slowly from the operation; but her general condition is benefited, and she is improving steadily. In these three cases the general benefit has justified the operation most certainly.

6. Dr. Jerome, Sutton Coldfield: 6 patients. In every case the operation has been surgically successful and free from unpleasant sequelae. In all six cases the benefit has justified the operation, but in some instances the improvement has been greater than in others.

7. Dr. Woodhouse, Llandudno: 7 patients. In every case the operation has been successful surgically, and none of the kidneys have come down again. Further, I have seen other patients who have been operated upon by you, and in none have I found the kidney down again. Out of the many cases I have had operated upon all have been entirely cured of their symptoms or so greatly relieved that they have expressed their gratitude for the help. On the other hand, in several cases in which I have advised operation which has been refused, the patients are still invalids, doing repeated "rest cures" and relapsing every twelve months or so.

8. Dr. Thos. Nelson, Edgbaston: 10 patients. Six patients quite well. Two lost sight of. One much better, but still constipated. One improved, but other conditions interfere with her health.

9. Dr. Hewer, Stratford-on-Avon: 3 patients. In each case the operation has been surgically satisfactory. The first case is very successful and the patient much better. In the second case the nervous and neurasthenic symptoms are as before. The third case is eminently successful, from mental point of view especially.

10. Dr. Berlyn, Edgbaston: 6 patients. The operation has been a surgical success in every case. Four patients, including one lunatic, are quite well or almost so. One patient, a chronic neurasthenic of long standing, is slowly improving. One patient is no better.

11. Dr. W. Pemberton Fooks, Edgbaston: 11 patients. In every case the kidneys have remained in position. One lady has pain in the right side, which interferes with her playing golf. All the eleven patients are much better as a result of the operation, and results have fully justified it. The following is an extract from Dr. Fooks's reply to the inquiry: "You have invited me to state my experience of the results of this operation on patients under my observation. In the first place let me make it clear that from 1904-10 I would not consent to operation on any patient of mine for displaced kidney, but trusted to belts. During these six years I had many cases—some amongst servants—and became convinced that even a partial and intermittent support gives great relief to even housemaids, rendering them capable of carrying on their work with improved health. Provided the kidney could be properly fixed without risk of impairing its function, it appeared to me operation would be justified. Your operation came to my notice, and in March, 1910, I advised Miss M. to have both kidneys fixed in the manner you described. This was the first of a series of 11 cases you have operated upon at my suggestion, and I have no hesitation in saying that every operation has been successful surgically, and the improvement in the patient's general condition justified the operation. The mistress of case No. 1 was so convinced that she was operated on herself three years later, while the brother of No. 3 was operated on two years after his sister. These facts alone demonstrate that No. 1 and No. 3 were quite satisfied that operation cured them."

12. Dr. Walter Hues, Handsworth: 5 patients. In every case the operation was a surgical success. In all 5 cases the resulting benefit justified the operation. "The second case was a girl who was apparently drifting into hopeless invalidism, with only the workhouse infirmary in prospect, on account of her tachycardia, and had spent every penny she had saved in doctoring and rest cures with no result; even at rest her pulse was scarcely countable. I do not think she has lost a single day or even an hour from her work as a laundress since she restarted two months after her operation in May, 1909."

13. Dr. Mary Sturge, Edgbaston: 6 patients. The operation was a surgical success in every case. Five patients are well, or very greatly improved, as a result of the operation. One lady, suffering from delusional melancholia, improved so much that ten weeks after operation her friends, against advice, withdrew her mental nurse, with the result that one day she drowned herself. The following is an extract from Dr. Sturge's letter: "In all the six cases upon whom you operated at my request the kidneys have been efficiently anchored, and there have been no unpleasant sequelae. The general benefit to the patients has amply justified the operation."

14. Dr. Philip Hicks, Leamington: 3 patients. In two patients the operation was entirely successful surgically. Both they and their friends are satisfied that the operation has been justified by results. In one, albuminuria of eighteen years' duration has cleared up. One patient has been lost sight of.

15. Dr. O. R. Lewis, Perry Barr, Birmingham: 3 patients. In the first the patient, a lady, is in excellent health, and has gained 14 lb. in weight. She says she "feels a new woman." The kidneys are in excellent position. The second patient, a nurse, who had been compelled to give up work, writes: "I am pleased to say that I am very well indeed. With the exception of short holidays I have been on duty the whole time since March, 1911, my operation having been the previous August. I frequently walk six or eight miles after twelve hours on duty." The third case, a lunatic, operated on in 1907, I did not attend after her operation, but I see her sometimes looking very well, and have no reason to think that her operation was anything but a complete success.

16. Dr. Prichard, Banbury: 7 patients. In every case the operation was successful surgically. "One patient died of another condition eight months after his operation, and the kidney was found at the *post mortem* to be so firmly attached to its moorings that I did not disturb it." Three patients are quite well. Two are much better and still improving. One is improved. This is the only patient that has not received sufficient benefit fully to justify the operation.

17. Dr. Knott, Sutton Coldfield: 3 patients. In each case the operation has been a surgical success. One patient is perfectly well; one is better; and the third is no better of her nervous symptoms.

18. Dr. Thompson, Halesowen: 2 patients. Both operations have been surgical successes. In the first the operation was done three years ago. The indigestion, from which she had suffered for years, has ceased since she left the nursing home; she has gained 2 st. in weight, and can do her work better than for years previously. The second patient is improving, but sufficient time has not elapsed to estimate the full benefit received.

19. Dr. Starkie, Moseley: 3 patients. In each case the operation has been a surgical success. Two patients are much better, and the general benefit has fully justified the operation. The third case is no better.

SUMMARY OF REPLIES.

Of the 97 patients, information was obtained concerning 92. With the exception of one lady who has pain in her side, the operation has been surgically successful in every case in the sense that the kidneys are satisfactorily anchored, and there are no after-disabilities.

With regard to the general benefits resulting from the operation, 7 patients only are reported as being no better. A large number of cases are described as being "perfectly well," while others are said to have greatly improved in health and general efficiency.

REFERENCES.

¹ Movable Kidney from a Surgical Standpoint, BRITISH MEDICAL JOURNAL, November 30th, 1907. ² The Indications for Nephropexy, *Ibid.*, May 1st, 1909.

HEART-BLOCK IN A CASE OF PNEUMONIA.

BY

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HEART-BLOCK is a condition which in recent years has attracted much attention in chronic heart disease, but comparatively few cases have been reported in acute affections of the heart. This is probably not due to the great rarity of such cases, but rather to the fact that comparatively little attention has been directed to this variety of the affection. Cases have been described more especially in acute rheumatism and in diphtheria, but also in influenza, ulcerative endocarditis, typhoid, and *Bacillus coli* cystitis.

In the great majority of cases examined *post mortem* inflammatory changes have been found in the conducting tissues. In one described by Price and Ivy Mackenzie as a case of complete heart-block with auricular fibrillation, although there was extreme degeneration and cellular infiltration of the cardiac muscle, no definite change was found in the conducting tissue. As the authors point out, the interpretation of the tracings was not quite clear, and it is possible that the block was not complete. In pneumonia one case without necropsy has been recorded by Magnus-Alsleben:

CASE.

A Government mule driver, aged 27, took suddenly ill at Jelum on December 16th, 1913. He was admitted to the Followers' Hospital, Rawal Pindi, three days later. The upper lobe of the right lung was consolidated and the symptoms were those of typical acute croupous pneumonia. The pulse was 120 and the respirations 40. For the next three days his temperature remained between 102° and 104° F., and on December 23rd he had a typical crisis and seemed to be doing quite well. Quite suddenly he showed signs of collapse. He was seen for

me that night by the orderly medical officer, who noted that the pulse-rate was only 40. The medicinal treatment had been the administration by the mouth of ammonium carbonate, with 5 minims of liquor strychninae and 7 of tincture of digitalis every four hours from admission. In addition he had 3 oz. of brandy daily from December 22nd.

On the morning of December 24th the digitalis was stopped and strychnine hypodermically with salines rectally were ordered. Morphine $\frac{1}{4}$ gr. was prescribed for hiccough, which was very distressing and resisted local epigastric counter-irritation. This was continued till December 28th, when the hiccough was less persistent. The patient had a good night and on the 29th was distinctly better. The pulse-rate had fallen to 30 while the respiration-rate was actually faster than the pulse (35 to 40). On auscultation during the slow rhythm there was no evidence of extrasystoles.

From this date onwards the pulse-rate increased, occasional dropped beats being noticed, particularly after slight exertion such as turning in bed.

The chief interest of the case lies in the sudden incidence of heart-block complicating the pneumonia. That we were dealing with a true heart-block is, I think, clear, even in the absence of polygraphic tracings, as a regular pulse of 30 is unknown as the result of a sinus bradycardia. A pseudo-bradycardia resulting from recurring extrasystoles can be excluded by the absence of any auscultatory evidence of extrasystoles during the slow rhythm.

In view of the fact that the patient had taken 5 drachms of tincture of digitalis, it is probable that the block was due partly to the digitalis but chiefly to a functional defect in the conducting tissues the result of the pneumonic infection. That the block can have been solely the result of the digitalis is extremely unlikely, as, although toxic doses of digitalis may produce a mild degree of partial heart-block, the severer grades of heart-block are never observed except in cases in which there has been a previous defect in conductivity. Further, the fact that the pulse slowed steadily for five days after the digitalis was stopped is very much against the view that the block resulted solely from the digitalis.

Whether this defect in conductivity was the result of toxicæmic functional disturbance or of actual inflammatory changes in the bundle it is, in the absence of a necropsy, impossible to say. Judging from the recorded results of necropsies in other infective diseases, the probability would seem to be in favour of an actual inflammatory lesion. There is no evidence that this patient suffered from rheumatic fever or syphilis. The ventricles were perfectly regular so far as stethoscope and finger could judge as soon as the condition was observed, and remained so when the pulse-rate slowed. It was only as the block passed off that dropped beats were observed. These facts raise the presumption either that there was at first a severe partial block with only every third auricular impulse passing (original auricular rate 120), ultimately becoming complete when the pulse-rate fell to 30, or that the block was complete almost from the first, with a high idio-ventricular rate from the pneumonic toxæmia (40), just as one had a high auricular rate (120).

It was at first impossible to make out auricular pulsation in the jugular, and no evidence of auricular activity could be heard on auscultation. At present (January, 1914) the pulse shows occasional dropped beats, and after slight exertion every third beat is missed. During the pause a faint sound is heard, and a wave of pulsation is visible in the right jugular. There is a soft apical systolic bruit. I cannot account for the hiccough on any special grounds. It prevented sleep for three days, and nearly ended the exhausted patient's life.

I am indebted to Lieutenant-Colonel Gee, I.M.S., and to Lieutenant J. D. Wilson, I.M.S., for permission to publish the case, and to the latter for much valuable help in its conduct. Dr. A. W. Falconer, of Aberdeen, kindly looked up some references for me, which were not available here.

REFERENCES.

¹ *Heart*, 1911-12, iii, 233. ² *Zeitschr. f. klin. Med.*, 1910, lxi, 82.

THE Berlin Association of Medical Women and a Committee of the German Lyceum Club, formed to promote the foundation of a hospital for women officered by medical women, have combined under the name Hospital Union (E.V.) attached to the German Lyceum Club. The body of directors is composed of women doctors in the proportion of two-thirds to one-third of lay members.