ilium and a drainage tube inserted. Through this tube there was free irrigation with Wright's sodium citrate and saline solution.

On the following day, June 19th, the pneumococcic index was low, 0.81, and the coli index 1.05; a vaccine of 25 millions pneumococci and 50 millions *Bacillus coli* was injected, both organisms on this occasion, and subsequently, being isolated from the pus obtained at the time of operation. A rise in the opsonic power of the blood for the pneumococcus took place, and it was not again found below normal. Concurrently, the

patient's condition improved, the temperature became lower, the pulse less rapid though still very feeble, and the purulent discharge gradually ceased, though not before there had been a considerable amount of sloughing of the wound margins. On July 6th it was first noticed that a faecal fistula had formed, and the patient suffered great distress from the excoriation of the skin in the neighbourhood of the wound.

The range of the opsonic index for the two organisms can be well seen on the chart, and also the dates on which the injections of the two organisms were given, the amounts of which were as follows:

Date of Blood Examination or Injection.	Opsonic Index for Pneumococcus.	Opsonic Index for <i>Bacillus Coli</i> .
June 11th, 1908 ...	0.62	0.87
{ June 12th	0.81	1.22
{ " "	Injected 10 millions	Injected 50 millions
June 16th	0.71	1.4
{ June 19th	0.81	1.05
{ " "	Injected 25 millions	Injected 50 millions
June 21st	1.28	—
{ June 23rd	1.5	1.14
{ " "	Injected 20 millions	Injected 40 millions
June 25th	1.27	1.22
{ June 27th	1.75	1.13
{ " "	Injected 30 millions	Injected 60 millions
June 30th	1.46	1.4
July 3rd	1.19	1.14
{ July 6th	1.92	0.9
{ " "	Injected 15 millions	Injected 30 millions
{ July 14th	1.5	1.3
{ " "	Injected 20 millions	Injected 40 millions
July 20th	1.21	1.4

After the date of the last opsonic estimation the patient's condition was so satisfactory, except for the presence of the faecal fistula, that it was not considered necessary to give further injections of bacterial vaccines, and hereafter the treatment was of a surgical nature.

On July 26th she was taken to the operating theatre and the wound examined under an anaesthetic with the view of closing the fistula. The opening in the bowel was nearly the size of a shilling and as the patient was not in a condition to bear a prolonged operation, a purse-string suture was passed round the opening and a closure made. This, however, broke down again in the course of a day or so, and the condition was as bad as ever, except that the skin had improved around the wound.

Her general condition subsequently improved greatly, she took her food well and gained weight. Though the patient desired that the fistula should be closed it was wished to postpone this for a time in order to allow of absorption of adhesions.

Operation for Closure of Faecal Fistula (by Dr. Harrison).

On September 28th after chloroform had been administered, an incision was made to the left of the discharging sinus, after the opening in the bowel had been plugged with gauze. Except close to the faecal opening there were found to be few adhesions, so a transverse incision was made and the structures forming the abdominal wall divided with scissors round the opening in the bowel. The loop of intestine was then freed, and the opening, which was as large as a shilling, sutured in the transverse axis of the bowel with Lembert sutures. When this was completed the packing which had been placed round the site of the operation was removed, the part was then swabbed over and the abdominal sutures were about to be inserted when a great gush of intestinal fluid was seen in the wound. When this was swabbed up it was found that there was a second, very large opening in another coil of bowel situated rather deeply in the right iliac fossa. Fresh packing was then inserted and the rent carefully examined, when it proved to be a much larger opening than the first, triangular in shape and involving almost the whole circumference of the gut. The opening being so large and irregular and so deeply seated it was with great difficulty that a double row of sutures were inserted to close it. The whole operation lasted nearly two hours and the patient bore it much better than had been anticipated, although saline infusion and strychnine injections were thought necessary.

After the operation the patient's progress was uninterrupted. The openings in the bowel proved to have been satisfactorily closed and there was no further faecal discharge. The large wound filled with healthy granulation tissue and was quite healed when the patient left hospital on November 12th. The bowels were then acting quite regularly. She is at the present time quite strong and well.

THE INDICATIONS FOR NEPHROPEXY.*

BY

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This paper is the outcome of an experience of 150 cases upon whom I have operated for movable kidney during the past three years. First, it is necessary to refer to the surgical results, for these must be taken into account when discussing the indications for operation. The operation performed I have already described at length in the *BRITISH MEDICAL JOURNAL* of November 29th, 1907. In 96 cases one kidney only was fixed, while in 54 both were dealt with at the same time. Few changes have been made in the technique. I now use kangaroo tendon, medium size, instead of silk for suturing the capsular flap in place. This avoids the leaving of any non-absorbable material in the wound. Drainage of the cavity below the kidney by means of a strand of gauze is employed in every case. The gauze is removed in forty-eight hours. This prevents the accumulation of serum, and appears to diminish post-operative discomfort. At the end of the month, when the patient is allowed to get out of bed, a special belt is supplied. This belt is worn for six months. It is shaped to clear the hips and come down in front as low as the pubes. Just internal to each anterior superior spine are placed two soft pads covered with wash-leather. The object of this belt is to exert pressure over the lower abdomen in such a way as to push the intestines up towards the kidneys. The small pads give a little extra pressure immediately below the kidneys. The belt was made for me by Messrs. Salt, of Birmingham. The diagrams sufficiently explain its main features.

In my original paper I stated that where both kidneys are movable it is better to operate on one rather than both. My reasons for this statement were that the risk to life was less and the improvement which followed the single fixation was so marked that a second operation was rarely necessary. Extended experience has led me to correct this view, and I now know that when both kidneys are movable it is better practice to fix both. The double operation does not add materially to the risk, increases the prospect of complete cure, and spares the patient the possibility of a subsequent operation. It has been a surprise to me to find that double nephropexy is followed by no more shock or general disturbance than the single operation.

* A paper read before the Midland Medical Society.

The surgical results of nephropexy have been very satisfactory. Of the 206 kidneys dealt with, not one, to my knowledge, has become loose again. On one occasion, eight months after operation, I found a movable lump in the right side, which I thought was the right kidney. This opinion was confirmed by several observers. As the patient, though better, was not well, I decided to refix the kidney. On opening the loin, however, the kidney was found to be firmly tethered in its proper position, and the lump which was felt before operation was found to be a freely movable Reidel's lobe of the liver which was attached to the rest of the liver by fibrous tissue only. It was interesting to see that the capsular flap over the rib had become thickened into a strong band of fibrous tissue $\frac{1}{2}$ in. wide and $\frac{1}{4}$ in. thick. I have never had a permanent sinus of the back, a hernia, or weakness of the scar. Amongst the 150 cases there have been two deaths.

I have already recorded the first, which occurred in the case of a man operated on during an attack of mania. He went on very well for three days, but died on the fourth day in a state of collapse. There was no apparent cause for his death, and a post-mortem examination failed to show why he died.

The second case was that of a flabby woman who had been a semi-invalid for eighteen years. Both kidneys were found badly displaced. The wounds healed by primary union, and she was thought to be nearly well. On the fifteenth day, after a heavy sleep, she woke up complaining of pain in the chest and a feeling of suffocation, and died in a few minutes. The probable cause of death was cardiac thrombosis.

These deaths emphasize the fact that no major operation

because a kidney is movable so long as it gives rise to no trouble; in other words, simple mobility does not constitute an indication for operation. I would also at this point emphasize the fact that it is fallacious to suppose that the amount of trouble caused by a kidney is to be directly measured by the degree of its mobility. I have seen kidneys which were only slightly movable responsible for most severe symptoms, and, on the other hand, have seen the right kidney in the iliac fossa in people apparently in good health.

Group 1.

This group contains those cases whose predominant symptom was local pain. The pain is due to the perirenal inflammation resulting from recent sudden displacement of the kidney, to ureteral obstruction, or to obstructed venous return. I have known it simulate pain due to gall stones, to appendicitis, or to renal calculus. It may be so severe as to incapacitate the patient. The pain I am now referring to must not be confused with the dragging, aching pain in the back and sides which is much more commonly associated with movable kidney, but which is due to drag on surrounding structures, and is much more vague in character.

In August, 1908, I operated on a young woman who was sent to me by Dr. Garman of Great Barr. She had a very movable right kidney, and complained of "gnawing pain" in her right side. At times the pain assumed the characters of typical renal colic, and required morphine for its relief. Rest in bed was

Fig. 1.

Fig. 2.

is free from risk. They might, however, have occurred after any major operation performed on the same individuals. I have had no mortality from shock, haemorrhage, sepsis, or uraemia, which may be regarded as risks special to operations on the kidneys. With a full sense of the responsibility attaching to my statement, I say that nephropexy is as safe and as satisfactory a surgical procedure as radical cure of hernia. If it can be shown that in properly selected cases nephropexy is followed by real improvement as regards the health and working efficiency of the individual, there are no surgical reasons why it should not be done. No surgeon would say that radical cure of hernia is absolutely safe, and yet no surgeon would refuse to operate in a suitable case in view of the functional gain the operation gives. All I claim is that the same view be taken in respect to nephropexy, provided it be shown that equal gain be obtained from it.

No useful purpose would be served by giving a long list of the symptoms that may be attributed to movable kidney. It is the clinical picture depending upon the association of several symptoms which is so characteristic, and not the presence of any particular symptom. My cases arrange themselves naturally in four groups. I intend to describe briefly the characteristic features of each group and the indications for operation in that group. A fifth group, where the predominant complaint has reference to the female pelvic organs, might be described, but of these cases I have had insufficient experience to speak definitely. Before, however, proceeding to discuss the indications for operation, I wish to state that in my opinion it is not necessary to operate

always followed by entire disappearance of the pain. Complete relief followed nephropexy.

I have also operated upon a girl who was sent to me by Dr. Tangey of Coventry. She complained of pain in the right side, which was so severe as to prevent her doing her work as a parlourmaid. The right kidney was very movable, but the situation and character of the pain were such as to render it doubtful whether the kidney or appendix was at fault. I examined the appendix at the time of operation and found it to be quite healthy.

Two years ago I saw a lady, who stated that some months previously, while laughing violently in a theatre, she was seized with intense pain in the right side. The pain persisted, and she had to stay in bed for several weeks. A diagnosis of gall stones was made, and this was supported by the presence of an ill-defined, acutely tender swelling below the right costal margin. The acute symptoms subsided with rest in bed, and the right kidney was then found to be movable and tender. The kidney was fixed, and since then she has remained perfectly well.

There is another type of case in which local pain is very marked. The pain is more or less constant while the patient is up and about, and is made worse by exertion and stooping. Lying down quickly brings relief. I have seen five men who were incapacitated for work on account of pain of this type. The right side was affected in each case. In four the right kidney could be felt, but was only slightly movable, while in the fifth case the kidney could not be felt. The pain is referred to the loin, and from there radiates forwards along the costal margin, and upwards to the shoulder-blade; only occasionally does it extend along the ureter to the groin. All my cases have been men, and all have been engaged in heavy work or had met with an accident. In several the urine has con-

tained a little albumen, but neither pus nor blood. I have operated on two cases, and in each found the kidney displaced a little downwards and forwards, with the lower pole rotated inwards and surrounded by numerous adhesions. In other respects the kidneys were healthy. I believe the pain is due largely to obstruction of the ureter as it passes over the lower pole of the kidney. The mechanism is sufficiently explained by the illustrations.

The result of operation for the relief of local pain is excellent, and I think every one agrees that renal pain in association with mobility of the kidney is a sufficient indication for nephropexy when the pain is so severe or so persistent as to cause serious inconvenience. With regard to the second class of case which I have mentioned, I would advise exploration of the kidney with a view to nephropexy, even though the kidney were only slightly movable, provided that the pain was sufficiently severe to prevent the patient following his occupation. The important point to ascertain in these cases is whether the pain is made worse by the upright position and by exertion, and is relieved by lying down.

Group 2.

In this group I have placed cases whose predominant troubles were associated with the digestive system. In almost all my cases symptoms referable to the stomach or colon have been present, but in some these have been the chief cause of complaint. The cases present quite charac-

Fig. 3.—Normal kidney.

teristic features. They complain of flatulent dyspepsia, vague abdominal discomfort, and constipation. Vomiting is not usual, but there may be paroxysmal attacks of sickness, when everything is vomited back. The symptoms bear no very definite relationship to the taking of food, and may be at their worst several hours after a meal. Colon pains of all kinds are common, and the colon may be distended and thickened. Twice I have operated when mucous colitis existed in association with right dropped kidney, with great benefit. Generally there is loss of weight, and, if the patient has had to lead an active life, there may be great emaciation. These symptoms are associated with more or less hypochondriasis, irritability of temper, and restlessness. The history in all my cases has been a long one, in some extending over eighteen to twenty years. All kinds of medicines and diets have usually been tried without benefit. The only remedy that gives real relief is prolonged rest. On examination, nothing definite can be found. Often the stomach is moderately dilated, but there is no evidence of pyloric obstruction. The colon may be thickened, and a little tender on firm pressure. Usually, it is the right kidney that is movable, but often the kidney is not tender, and there are no symptoms which can definitely be attributed to it.

In March, 1908, I saw a married woman, aged 36, a patient of Dr. Newton. For twenty years she had suffered with her stomach. This took the form of periodical crises of severe epigastric pain and vomiting. On several occasions she vomited blood in large quantities, but there had been no hæmatemesis for five or six years. For the last two years she had been much worse generally, and was unable to do any work

—the epigastric pain was severe, and she suffered much from flatulence and constipation. When I saw her she had just recovered from an attack lasting nine days, in which the pain was intense and large quantities of bile were vomited. Medical treatment was quite useless, rest in bed being the only thing that gave relief. She was a stout, pale, flabby woman. There was diffuse tenderness over the whole abdomen, but no special tenderness in the epigastrium. The stomach was of moderate size. The right kidney fell into the iliac fossa on standing up.

I advised fixation of the right kidney, for these reasons: (1) that the kidney was obviously displaced, (2) the symptoms, though severe, were periodic and induced by exertion, (3) there was no direct evidence of ulceration of the stomach or of pyloric obstruction.

For some months after operation all her troubles disappeared, and she was able to eat ordinary food and do her housework, and said that she felt better than she had done for years. After indulging in a heavy meal of pork chops she had a mild attack of pain and sickness, and since then has had to be careful with her diet. All acute symptoms have subsided, and she looks, and says she feels, much better than formerly.

In September, 1906, I saw, in consultation with Dr. Suckling, a widow, aged 50. She had been ill for ten years with "indigestion." She complained of flatulence, fullness at the stomach, and pain at the pit of the stomach after food. No vomiting. She also suffered with frontal headaches, backache, and general weakness. During the last year she had been much worse. The patient was a short woman, and weighed only 6 st. 8 lb. She was very thin. The stomach was distinctly dilated, and waves of peristalsis could be seen crossing it from left to right. There was no tenderness in the epigastrium, and no lump could be felt in the neighbourhood of the pylorus. Both kidneys were movable, the right to a marked degree. The urine contained albumen. Right-sided nephropexy was

Fig. 4.—Rotated kidney.

performed. She did very well, and is now much better than she has been for years.

Great care is necessary in this group to exclude gross lesions of the stomach and intestine and mistakes are easily made. In some doubtful cases an exploratory laparotomy may be advisable before performing nephropexy. When, however, other causes have been excluded there remain a number of chronic cases not relieved by general treatment in whom great benefit follows fixation of the kidneys. I have operated on 20 cases similar to the above, and have every reason to be satisfied with the results.

Group 3.

Cases suffering from spinal and cerebral neurasthenia. This is a large group. The leading symptoms are severe and persistent headache, backache, constant "tiredness," periodical fits of black depression, and absolute lack of the joy of living. The greater the necessity for work the more pronounced the symptoms. Married women cannot do their housework, teachers complain that the strain of standing and teaching causes complete mental and physical prostration, and business men state that they cannot concentrate their minds upon their work, lose their grip of detail and find that everything, even the writing of a simple letter, requires great effort. These people are irritable, restless, and miserable, a nuisance to themselves and all around. They are painfully conscious of their inefficiency in comparison with other people, are most anxious to do what they can, and generally go on working until a complete breakdown occurs. They eagerly grasp at anything which holds out a prospect of relief, and have

usually tried all kinds of remedies and been under the care of many different medical men. Some of them complain of occasional insane impulses, usually of a suicidal nature. These form a link between this group and the next, in which I have placed those cases that were undoubtedly insane.

I cannot do better than refer to one or two cases to illustrate the simple neurasthenia and neurasthenia with insane impulses to which I refer.

In October, 1907, a married woman, aged 28, was sent to me by Dr. Duncan, of Hockley. She was suffering from severe neurasthenia, dragging pains in the abdomen when standing, and amenorrhoea. She was unable to do her housework or to walk outside without assistance. Latterly she had been compelled to stay in bed. Medicines and general treatment were useless. The right kidney, which was badly dropped, was sutured in place. Since then she has been very much better, and, though not a strong woman, is about and doing her housework.

In March, 1908, a lady, aged 57, was sent to me by Dr. Suckling. She had not been well for twenty-two years. She complained of great weakness and aching of the back, which was so bad that she could neither walk nor sit with comfort. When visiting her friends or going to the theatre she took with her a board, against which to lean. She said that she could get no pleasure out of life, and as she could not get about, life was not worth living. Belts had been tried without much benefit. Both kidneys were down, but the left much more so than the right. As her heart was weak and there was albumen in the urine I decided to fix the left kidney only. She did very well and six weeks after the operation climbed to the top of the Herefordshire Beacon. She has cycled a great deal since and has led a far more active life than most women of her age and has done more and felt better than she has done for years.

In August, 1908, I operated upon a woman, aged 46½. For many years she had suffered from depression, "funny feelings" in her head, constant tiredness, and flatulence. During the last year she had been worse, and had been compelled to give up her housework. A prolonged holiday in the country brought no relief. Lately she had developed symptoms of insanity, attempting suicide on three occasions, and threatening to murder her child. She was a flabby woman, talkative, excitable, and at times very depressed. Both kidneys were badly down. She began to improve at once after the operation, and a few days ago her husband informed me that she was a different woman altogether.

These cases are selected from amongst nearly 80 upon whom I have operated for very similar symptoms. The results have been surprisingly good, and in some cases difficult to credit. There have been failures, but I can honestly say that no case has been made worse by operation.

To Dr. Suckling belongs the credit of directing attention to the close connexion there is between certain types of neurasthenia and movable kidney. From my own experience I can thoroughly endorse his assertion that such patients are greatly benefited, and in some cases entirely cured, by nephropexy. My results amply justify me in saying that comparatively young and healthy people suffering from progressive neurasthenia who do not improve under medicinal and general treatment, or, having improved, rapidly relapse on returning to the ordinary conditions of life, should be examined for renal mobility. If the kidneys are mobile, and there are no conditions present which would render the operation dangerous the patient should be told that nephropexy would probably be followed by marked improvement. In such cases it is unfair to regard the condition as incurable until the kidneys have been fixed. Time must be allowed for improvement. I make it a rule never to estimate the results of the operation until six months afterwards. Some cases improve slowly, and the full benefits of the operation are not evident for many months. Further, rapid improvement may be deceptive and relapse occur later. If, however, judgement is withheld until six months have elapsed and the patient has returned to the ordinary conditions of life, results can be much more safely estimated. Relapse is exceptional, and one of my oldest cases, operated upon nearly three years ago, whom I saw a few days ago, assures me that she has been better in health than at any time in her life, in spite of the fact that she has passed through some exceptionally trying experiences since the operation.

Group 4.

In this group are placed cases of undoubted lunacy. I have operated on twelve people who were quite insane at the time of operation, and who would have been sent to an asylum immediately had not operation been advised. One of these cases died on the fourth day. Three have

been operated on so recently as to be of little value. One of these had been in an asylum eighteen months and discharged partially cured. She relapsed at once on returning home. A second suffered from profound melancholia, and would neither eat nor speak for twenty-four hours at a time. A third, a man, had been compelled to give up his business, had threatened to commit suicide and murder his wife, and on two occasions had given himself up to the police on imaginary charges. These three cases are improving, but insufficient time has elapsed to make it safe to say what the result will be.

The fifth case was a woman of 45, who suffered from active melancholia. She shouted for hours together, wept copiously, did not know her husband or friends, and was obsessed with the idea that her doctor was responsible for her trouble. She was wasted to a skeleton. Double nephropexy was performed, and for five weeks there was no improvement. The operation was performed on October 6th of last year, and she is still under observation in a home. She is very much better, sews and knits, helps to cook, and takes great interest in all that goes on. Further time is needed before any conclusion can be arrived at.*

A sixth case, a lady aged 38, a patient of Dr. Stanley, of Coventry Road, was operated on in March, 1908. For six months she had been quite insane and had been sent away from home in charge of two nurses. She was suffering from profound melancholia and fixed delusions, and would take no notice of her husband, her children, or the people around her. Both kidneys, which were badly down, were fixed. For some weeks she made little or no progress, but on leaving the nursing home she began to improve. All symptoms of melancholia disappeared, and, except that she was excitable, she appeared well. Within the last week, as the result of the illness of one of her children, lack of sufficient rest, and excitement, she has become very excited and needs supervision. The probability is that with rest and care she will come all right, but she cannot yet be classed with those who are well.†

The remaining six cases were all well when last heard of. Two had suffered from mania, two from melancholia with suicidal impulses, one from mania complicated by delusions and homicidal impulses, and one from delusional insanity. I can only refer to three.

In May, 1908, I was asked to meet Dr. Berlyn in consultation upon a young lady, about 30 years of age. She had always been of a highly-strung nervous temperament, but remained in fair health until August, 1907. Then, after a mental shock, she became very excited and almost maniacal. Recovering from this she became very depressed. This ended in December in an attack of acute mania. In this attack she was seen by Dr. Stanley Barnes. She was sent to a nursing home, where she improved sufficiently to be sent to Torquay. While away she was practically well, but immediately on her return to Birmingham relapsed, and became maniacal again. In this attack I saw her. Both kidneys were moderately dropped. Learning from Dr. Barnes that no other treatment was likely to benefit her, I performed double nephropexy. After a time she began to improve, and now the friends say that except for absent-mindedness, and a rather dreamy disposition, she is well.

In June, 1907, I saw, in consultation with Dr. Lewis, of Perry Barr, a girl 28 years of age. She was full of silly fancies of all kinds, had escaped from her friends, and raced through the streets without her hat. To do this she had climbed over the wall into the next garden, and from there into the street. Amongst other delusions she had that of being the wife of a prominent statesman. She was so noisy and troublesome that a trained nurse declined to look after her. The right kidney was moderately prolapsed. I had a septic finger at the time and was unable to operate. At my request, Mr. Barling very kindly operated for me. For a while she was very bad, getting out of bed and at times being very violent. In six months she was quite well, and has remained so since.

In April, 1908, at Dr. Suckling's request, I operated upon a lady 33 years of age. She had been certified as a lunatic, and was on her way to an asylum when seen by Dr. Suckling. She was suffering from melancholia with marked suicidal tendencies, having attempted suicide on three separate occasions. Both kidneys were very movable, and at the time of operation were found embedded in dense perirenal adhesions. The capsules were thick and studded over with thick opaque patches. The wounds healed by primary union.

During the first few weeks she made little progress, being very quiet, introspective, and miserable, and was never left alone. For several months she was kept in a nursing institution. A few days ago I heard that she was quite well mentally and had improved greatly in general health.

I advance no theory; I merely state facts. I have operated on twelve lunatics, not one of whom is now in an asylum. Six are well, and of the remaining five still living I have every hope that time will complete the improvement that has already commenced. I do not assert that movable kidney is the sole cause of the insanity in these cases, but I do say that in a person of unstable mental equilibrium it

* This patient is now quite well and performing the usual duties of a housewife.

† Since this paper was written this patient has been sent to an asylum.

is sufficient to turn the balance. Removal of other so-called causes of insanity, for example, alcohol, business strain, etc., is followed by cure in a certain percentage of cases. I contend that removal of the baneful influence exercised by a loose kidney will also be followed by a definite percentage of cures. This, however, cannot be effected by general treatment, or the special treatment carried out in asylums, but by operation alone. My results surely justify the contention that where the kidneys are found to be movable in an insane person, in justice to the patient and the friends, nephropexy should be advised before the case is sent to an asylum.

GENERAL SUMMARY.

1. Nephropexy is a safe and satisfactory surgical procedure.
2. Renal mobility alone is not an indication for operation.
3. Local pain of sufficient severity to diminish working efficiency is an indication for operation.
4. Chronic functional disturbance of the digestive system may be caused by movable kidney. Such cases often resist all kinds of general and medicinal treatment, and are greatly benefited by nephropexy.
5. Nephropexy is indicated in progressive spinal and cerebral neurasthenia occurring in association with movable kidney, when other measures have failed to cure, or improvement is followed by rapid relapse.
6. Nephropexy is indicated when movable kidney is associated with insanity.

LIPOMA IN THE SITE OF A FEMORAL HERNIA.

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IN a young male subject, aged 25, I observed a tumour in the thigh occupying the position of a femoral hernia. To the touch it seemed pliable and to a certain extent reducible, though from the first I had my doubts as to whether it was a hollow knuckle of tube which I was manipulating.

View of the tumour from the front after removal of the cribriform fascia and the anterior wall of the femoral sheath. The lobulated character of the lipoma and two ascending processes are apparent. The long saphenous vein is seen displaced outward.

I made this digital examination before the subject was injected with preservative fluid, and being undecided as to what the tumour was, I proceeded to inject the subject with formalin with a view of hardening the viscera for special purposes.

I was glad that I adopted this reagent, as it also proved most useful in hardening and fixing the shape of the tumour, which on further examination proved to be a lipoma. On dissecting down on it, I found that the saphenous opening had been much encroached upon, and it was only with the greatest difficulty that I could detect the remains of the much stretched

and thinned-out cribriform fascia which gave a partial covering to the anterior surface of the tumour. That a considerable upward prolongation of the fatty mass

occupied the crural canal, and, moreover, blended with a well marked septum crurale, and that the long saphenous vein was pushed aside in an outward direction, were points which were made out with little difficulty. When the front of the mass was well cleaned and defined it was seen to be elongated in shape; its longest measurement being about 5 in., its broadest measurement 2 in. This surface was much lobulated, and two tongue-like processes could be seen projecting upward and inward. The inner of these burrowed between the adductor longus and adductor brevis; the outer between the adductor brevis and pectineus. On endeavouring to shell out the mass I found it to be anchored by several other processes which had burrowed their way through muscular strata. Thus a portion of the tumour passed outward under cover of the femoral vessels (and apparently outside—that is, behind—the femoral sheath) and vastus externus; another part proceeded upward and outward in the interval between the psoas and pectineus. These last two processes could not be seen until the tumour was partially dislodged, as they took origin from the deep aspect. On removing the tumour from its bed I found that its deep surface was much broader and flatter than its superficial surface, and was not studded with small lobules. The floor of the space occupied by the tumour was formed by part of the anterior surface of the adductor magnus. The fascial covering, which formed a very delicate lipoma-capsule, seems to have been derived from the fascial envelopes of the various muscles in the neighbourhood. The cavity in which the tumour lay was 2 in. deep, and presented the following boundaries in a fairly definite manner:—Inside, adductor longus and adductor brevis; outside, pectineus and femoral vessels; floor, adductor magnus; roof, integument, superficial and cribriform fascia, and higher up the anterior wall of the crural canal; upper limit, Poupart's and Gimbernat's ligaments.

The circumscribed position which this mass of fat occupied renders this case interesting, though at the same time difficult to explain. Fat was not unduly collected together in other regions; in fact the subject was on the whole rather spare. The corresponding region of the other (right) thigh bore no evidence of fat deposit other than the ordinary layer of superficial fascia. The muscles of the body generally had not shown signs of having undergone fatty degeneration. There is just one suggestion which I would offer, namely, that this aggregation of fat at the site of a femoral hernia may possibly have represented a hypertrophic condition of the septum crurale, which is mainly composed of extraperitoneal fatty tissue. Indeed the presence of a firm plug of fat, which quite filled up and even distended the crural canal, and which, on the one hand, was in direct continuity with the rest of the tumour, and, on the other hand, with the enlarged, fat-laden septum crurale, would seem to point to such an origin.

BILATERAL NEPHRO-LITHOTOMY,

IN WHICH THE KIDNEY WAS KEPT OUTSIDE THE WOUND FOR SEVEN DAYS BEFORE RETURNING IT TO THE LOIN.

By JOHN CLAY, F.R.C.S.,

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WHEN both kidneys contain stones, the mortality of the operation for the removal of the stones is very high, and any modification of the usual procedure which promises to diminish the risk is worth consideration. In the case given below both kidneys contained a large number of stones, the urine contained thick pus, and the patient was in a weak and exhausted condition. After removing the stones from the right kidney it was not, as is usual, returned to the abdominal cavity, but was kept outside the wound for seven days. By doing this, the possibility of losing our patient from haemorrhage was reduced to a minimum, as bleeding points could easily be seen and dealt with. It also seemed that the place for an organ, dripping with decomposing urine and pus, was outside the abdominal wall, and not in its loose soft bed in the loin.

The following are the notes of the case:

Eliza S., aged 34 years, married, was sent by Dr. Spencer, of Wallsend, on April 13th, 1908, to the Royal Infirmary under my care.