THE THERAPEUTIC VALUE OF NEPHROPEXY.*

BY

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TWENTY years ago this session I read a paper before this society entitled "The indications for nephropexy," a paper which was subsequently published in the *British Medical Journal*. At that time the subject was a very live one in Birmingham; the meeting was largely attended, and very strong views were expressed both for and against the operation. The question cannot even now be regarded as settled, and the object of this paper is to present as fairly as possible the results of my personal experience of nephroptosis and its surgical treatment, in the hope that it may assist in arriving at a true solution.

Time does not allow of my dealing with many points of great interest and importance in connexion with the causes, pathology, and symptoms of nephroptosis; nor can I enter into the methods I have employed in the selection of cases likely to benefit by operation. I intend to consider results only, and from them endeavour to show what therapeutic value has attached to nephropexy.

The results of nephropexy have to be considered from two aspects: (1) the surgical success of the operation in permanently replacing the kidneys in their normal position without unsatisfactory sequelae, such as pain in the loin or back, hernia of the wound, and persistent sinus; and (2) its therapeutic value in curing or ameliorating the symptoms for which it is performed.

SURGICAL RESULTS.

At first these were very unsatisfactory. In a large percentage of cases the operation failed to cure the abnormal mobility of the kidneys, and they were found loose again almost as soon as active life was resumed. Many operations fixed the kidney to the muscles of the back and at too low a level, with the result that pain in the back was common, and sometimes hydronephrosis developed. The use of silk and other non-absorbable suture materials was followed by persistent sinuses, and extensive damage to the muscles of the loin led to a feeling of weakness and hernia.

A further and very common cause of failure is the incomplete character of the operation. One kidney only is replaced, while the other kidney, which may also be mobile, and a possibly diseased appendix are left untreated. Satisfactory therapeutic results cannot be expected unless the operation, as such, is successful. Only when the surgeon is satisfied that both kidneys are in a normal position, and that possible associated or secondary abdominal lesions have been excluded or treated, can success be claimed.

The operation which I have performed upon upwards of 1,500 patients has been carried out in this spirit. My object has been to replace both kidneys, if both are loose, and to make sure that no intra-abdominal lesion is left undetected and untreated.

The surgical results have been very satisfactory. In no single instance have I found a kidney loose again, although on a number of occasions I have reopened the loin, thinking that it had become so. The usual cause of error is a Reidl's lobe of the liver, and on the left side a prolapsed spleen, conditions which may simulate a movable kidney very closely. In my earlier cases, before I opened the peritoneum as a routine, an enlarged gall-bladder on several occasions was mistaken for a kidney which was thought to have broken loose after replacement. In no case has there been a persistent sinus, and no second operation on this account has been needed. In some twenty cases I have had to excise a length of the last dorsal nerve subsequently on account of pain caused by its implication in scar tissue, and a few cases have been operated upon for hernia of the scar. Very occasionally, where at the time of operation a moderate hydronephrosis existed this has increased and necessitated excision of the kidney. My experience has been that where the pelvis of

the kidney is sufficiently dilated to hold more than about two ounces of urine replacement fails to prevent its destruction by hydronephrosis, while if the pelvis is dilated to a less extent the operation succeeds in doing so.

The results in my large series of cases extending over twenty-five years have been such as to justify the claim that movable kidney can be treated successfully by operation, and that the operation is safe and comparatively easy. It is essentially a plastic operation, and if therapeutic results justify it there are no surgical reasons why it should not be done.

THERAPEUTIC RESULTS.

Very widely differing views are held as to the importance of movable kidney as a cause of chronic ill health, and of the value of nephropexy as a therapeutic measure. In the early years of the present century extravagant claims were made that nephroptosis was responsible for a vast amount of functional disturbance of mind and body, and it was asserted that the kidneys should be fixed in such cases whenever any undue mobility was detected. The results of this were unfortunate, as they always are whenever the usual care in selection of cases is abandoned and a new treatment is applied indiscriminately. The claims that Koch's tuberculin is a cure for phthisis; that hunger pain in association with hyperchlorhydria indicates duodenal ulcer and calls for gastro-enterostomy; that the teeth are responsible for most cases of rheumatism and should be sacrificed wholesale; and that movable kidneys are the cause of much functional nerve disturbance and should be treated whenever found in association with it, have all led to disappointment when extensively acted upon. Medicine is much less simple than this, and a claim that a panacea has been discovered for any common disease or clinical syndrome generally brings disappointment when blindly accepted.

The wide and indiscriminate operating for movable kidney was attended by unsatisfactory results and caused the pendulum to swing in the opposite direction, with the result that it is often asserted that nephroptosis is rarely of importance and still more rarely calls for treatment. The truth lies somewhere between these two extremes. Unquestionably, anyone who has carefully studied the problem, and has brought to bear upon it the same care and judgement in the selection of cases suitable for operation, has paid the same attention to technique, and has followed up the operation by necessary after-treatment as for other surgical conditions, cannot fail to be convinced that nephroptosis may be a cause of lowered efficiency and chronic ill health, and that treatment of it by nephropexy may be called for.

Great care must be exercised in deciding the suitability or not of a particular case for nephropexy. The necessity for a satisfactory technique and a complete operation has been emphasized. It is, also, all-important to remember that time and suitable after-treatment are needed to complete the cure. So many operations are followed by immediate and dramatic benefit that disappointment is often caused to surgeon and patient when an interval of six months or a year must elapse between the operation and its beneficial result. No patient can emerge from a state of severe and long-standing neurasthenia in a short time, even though the cause has been removed. This is the reason why so many patients operated on for movable kidney recover slowly from the symptoms from which they were suffering at the time of operation. I never assess results until a full year has elapsed from the operation, and even this length of time is often insufficient, and only after two or three years is full health obtained. Two facts stand out in connexion with my results: (1) that the failures have never improved to any extent after operation; and (2) whatever benefit is obtained is retained; relapse is almost unknown. Also, the further back the investigation into results is carried the better they are. If only it became sufficiently realized that in a large proportion of cases the effect of nephropexy is to convert an incurable condition into a curable one, and not of itself to establish a cure, the percentage of failures would diminish and the true value of the operation be better understood.

I would most emphatically state that no moral value whatever attaches to the operation. In my opinion the

* Valedictory presidential address to the Midland Medical Society.

moral effect on the patient is wholly bad, and there is not one redeeming feature. From the moment operation is mentioned until it has been completely recovered from and forgotten the effect is to put a further strain upon a mind and body already over-stimulated and exhausted. The whole question of operation is fraught with greater responsibility than usual, and unless it is felt that the benefit likely to result justifies it, nephropexy should not be done. It is advisable to draw particular attention to this point because I have often heard it asserted that the benefit that follows nephropexy is due to the moral effect of the operation upon the patient, and I have frequently been requested to perform it for that purpose. On one occasion I saw a man who had had an incision made into the loin to impress him that his kidney, which he had been told was loose, had been put right. Such procedures are entirely wrong. It is questionable whether the mental and physical injury caused by an operation ever confers any benefit except in so far as it remedies a physical trouble, and the harmful effects of operations, as such, are considerably greater in neurasthenic patients. It is therefore reasonable to assume that any benefit following nephropexy is due, not to the fact that an operation was done, but to the replacement of the kidneys that it effected.

RESULTS OF NEPHROPEXY IN MY OWN SERIES OF CASES.

My personal experience of nephropexy extends, as I have said, over twenty-five years, and during that time I have operated upon more than 1,500 patients and replaced more than 2,000 kidneys, the double operation having been performed in the majority of cases. All my patients have been referred to me by practitioners, and it is their encouragement and support which has made me feel that the operation has justified itself. After all, in my opinion, it is the patient's own doctor rather than the surgeon who ultimately determines the value of any form of treatment. He has an intimate knowledge of his patient that no specialist can acquire; it is a knowledge based upon prolonged observation of the patient himself and his reactions to and upon those who come in contact with him. Where neurosis and functional disturbance are predominant features improvement is often more evident to the family doctor and the patient's relatives and friends than to the patient himself, and the doctor's verdict is perhaps the best test of value that can be obtained. On this verdict, rather than upon such tests as I have been able personally to apply, I have been content to rely. No more graphic description of the effect of the operation could be given than that volunteered by the husband of one of my patients—that "before the operation my home was a hell, and now it is a heaven."

It is very difficult to obtain accurate statistical evidence of the therapeutic benefit conferred by nephropexy. Some years ago I made two different investigations. For the purpose of the first I wrote to 100 consecutive patients in my series, one full year having elapsed in every case between the operation and the inquiry. I was successful in obtaining information about 87 of these patients, and from that I ascertained that about 60 per cent. were well in the sense that they were leading ordinary lives and did not need medical attendance; 20 per cent. were considerably better, 10 per cent. were better, and 10 per cent. were no better.

The second inquiry took the form of a questionnaire addressed to eleven practitioners, 70* of whose patients I had operated upon. The questions submitted to them were: In the case of (1) Has the operation been a surgical success—that is, has it efficiently and permanently anchored the kidneys, and has it been free from unpleasant sequelae? (2) Has the general resulting benefit justified the operation?

Great care was exercised by the doctors to make the answers reliable, and each patient was either written to or personally interviewed. The actual replies were printed and circulated among the members at a meeting of the Surgical Section of the Royal Society of Medicine on January 13th, 1914. They indicated in all the 70 cases that the operation was a surgical success; in one case only, that of a lady, who complained of pain in her right side, was there any mention of after-trouble. Of the general

benefit that resulted, only 5 were reported as failures, while many were described as having been changed from chronic invalids into absolutely normal people.

These satisfactory results do not appear to have been obtained by the majority of other surgeons, and the tendency is for fewer and fewer cases of nephropexy to be operated upon. This led me to make a still further and more drastic investigation into my results. All the patients upon whom I had operated during the five years 1922-26 were written to and invited to answer the following questions:

1. Have the operation wounds troubled you? If so, in what way?
2. Have the symptoms for which the operation was performed been cured?
3. What is your present state of health?

Of the 213 patients written to replies were received from 163. It soon became evident from the replies that the answers to the first two questions were of little value, and that the answers to the third supplied the true test.

All these patients suffered from symptoms sufficiently severe to call for medical attendance, and had proved incurable by ordinary methods of treatment. The symptoms complained of were very variable, but in every case the renal mobility was held to be the principal cause. In every case the operation was a complete one—that is, both kidneys were fixed when both were loose, and an abdominal exploration from the loin was carried out. In nearly all the appendix was removed.

In order to obtain an independent and absolutely unbiased report the replies were submitted without comment to Professor Kauffmann, whose wide experience of both private and hospital patients peculiarly fits him to estimate their meaning. I am very much indebted to Professor Kauffmann for the great interest he has taken in this investigation, and I am convinced that his report will receive the consideration it deserves. It estimates, as impartially as is possible, the true results of the operative treatment of nephropexy.

Professor Kauffmann's Report.

"The replies from 163 patients have been carefully considered with a view to my forming a conclusion as to the results of the operation for nephropexy. I have, of course, only the patients' replies from which to judge, and a certain difficulty is introduced by the second question, inasmuch as many of them scarcely know or remember the groups of symptoms for which they sought advice. Guided by the kind of reply, and to some extent by the tone of the reply, I have divided these 163 cases into five groups—namely:

1. Complete success, where the statement warrants the name	29
2. Success	42
3. Partial success, where the benefit outweighs any remaining troubles	41
4. Partial failure, where the remaining troubles outweigh such benefit as the patient has derived	22
5. Failure	29

"I have not felt able to make allowances for such things as gravidity or possibly some new trouble coming on, as it must do in some proportion of the cases in an interval of several years. It is more than likely that some cases which would have been in one of the successful groups have been spoilt by new disease thus intervening.

"It seems, therefore, that, taking complete success and success together, these groups account for 43.6 per cent.; partial success accounts for 25 per cent.; failure for 17.7 per cent.; and partial failure for 13.5 per cent. These figures are, I conclude, very satisfactory.

"By far the greater number which constitute groups 1 and 2 together have had appendicectomy as well as kidney fixation, generally double. But success is also found in those who only had a kidney fixation, single or double, done.

"I have considered the question whether the addition of appendicectomy, or other operation, has affected the results, but can get no satisfactory answer, since, in the successful group, nephropexies without other operation only formed 12.6 per cent., and in the partial failure and failure groups 13.7 per cent."

Commenting upon Professor Kauffmann's report, I would draw attention to the severity of the test applied. Results are mainly determined by the answer to the question "What is your present state of health?" Only those cases in which the answer indicates that the general health is satisfactory in every way have been placed in the

successful group. Patients who state that although relieved of the symptoms for which the operation was done they do not enjoy normal health owing to other troubles are labelled partial successes or failures according to whether their general health and working efficiency appear to have been improved or not. The disappearance of one set of symptoms and the substitution of another set in their place with the result that comfort and working efficiency have not been materially improved is regarded as evidence of failure. Further, as Dr. Kauffmann points out, no allowance has been made for the entirely new troubles which may reasonably be expected to develop in a certain number of cases over an interval of several years. The report, therefore, may be taken as indicating in a conservative way the proportionate effect of the operation in raising to a normal standard of health patients who were in a state of chronic invalidism.

The following may be said to summarize the results of Professor Kauffmann's investigation of 163 cases, operated upon at intervals of from six and a half to one and a half years prior to the inquiry (13 of these patients were men and 150 were women).

Successful	...	...	...	...	71=43.6 per cent.
Partially successful	...	...	...	...	41=25.0 "
Failures	...	...	...	...	51=31.4 "

A BEDSTEAD FOR USE IN TREATING CARDIAC PATIENTS SUFFERING FROM CONGESTIVE FAILURE.

BY

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For many years the need of a bedstead specially constructed to suit cardiac patients suffering from congestive failure has been felt. Such patients are usually orthopnoeic and require propping up with bed-rests or a pile of pillows;

from these they are apt to slip down at night, an accident usually occasioning distress and loss of sleep, and sometimes avoided by the rather clumsy device of tying a bolster across the bed below the buttocks. Some of the patients are oedematous, and drainage into the legs from the trunk, or from the legs by tubes or incisions, is required sooner or later. Drainage necessitates the sitting posture, and the patient must be moved into and nursed in a chair. Many of the patients are restless unless frequent changes of posture are allowed them; many prefer to sleep in a chair rather than in a bed at night.

To nurse patients suffering from congestive failure often means very heavy work, and, unless special devices are used, these patients are apt to exert themselves much more than is good for them. It is sound to insist that patients of the class considered should make no muscular effort that

These results, taking into consideration the kind of patients operated upon, though by no means justifying a claim that nephropexy is a panacea for neurasthenia and functional disturbance when complicated by renal mobility, are satisfactory. The patients had all undergone prolonged treatment, and were referred to me because of their failure to benefit by it. They were the neurotic flotsam and jetsam who are the despair of their friends and medical attendants. Nearly all were in early adult life with many years of activity in front of them. Most of them were under the necessity of earning a livelihood or managing a household, and the change from chronic invalidism and inefficiency to normal health and efficiency that has been effected in nearly half of them would seem to justify the performance of an operation which is almost free from risk and which is essentially plastic in character.

Looking back over the long series of cases of nephropexy that have come under my observation, in only about one-third of which I have operated, I cannot help feeling that the results would have been better had the condition been effectively treated at an earlier stage. In no branch of surgery can the best results be expected in the later stages of disease and in the medical failures, and nephropexy is no exception to the general rule.

can reasonably be avoided; they should be supported constantly, and should never support themselves. They should never move themselves, or put forward effort in assisting a nurse to move them. Experience shows that under such a regime improvement is more likely or is more rapid than under a less rigid system of treatment.

Very many of the difficulties of nursing otherwise encountered are overcome by using a bedstead that has been built for me by Messrs. Whitfield's Bedsteads, Ltd., of 10, Dane Street, High Holborn, W.C.1. This bedstead can be used completely flat or can be converted within a minute or two into a chair, as shown in the illustration. The back-rest *a* is raised into the position shown, or to any other desired angle, by a detachable crank handle moving a quick-thread screw at the head of the bed. A second

and independent screw, also at the head of the bed, raises the thigh-rest *b* to any desired position; this second rest prevents the patient from slipping downwards. Both these movements are executed quite smoothly, and the corresponding rests are at once stable at any angle to which they have been raised. The third movement, the lowering of the leg-rest *c*, is accomplished by hand, the leg-rest being adjusted at any desired angle on two strongly toothed racks, which drop upon a stiff steel bar. The foot-rest *d* is adjustable on the leg-rest to suit legs of different lengths.

The bed has four legs on the main rigid frame, and two additional legs *e*, carried on the end of the leg-rest and falling under the bed when the leg-rest is dropped. The additional legs were not included in the original design, but have since been added to support, not the patient, but the occasional visitor or student who throws his weight on to the end of the bed. The mattress is made in three

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