no short title (unless "stasis" be used), but which present symptoms suggesting trouble now in one region, now in another—it should not be the practice to approach and expose simply the part where the trouble is thought most likely to be, but by a wide incision to investigate the whole of the abdominal contents and to recognize and, as far as possible, remedy the various abnormalities.

The end results, as far as can be judged from these few cases, show that, while great improvement may be expected, a perfect condition of health is not necessarily attained.

AN OPERATION FOR MOVABLE KIDNEY.

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In this operation the essential desiderata are (1) a guarantee against recurrence of the undue mobility, and (2) an assurance that the fixation shall be satisfactory, by restoring and maintaining the normal position of the organ.

None of the ordinary operations—extracapsular, capsular, suture- and tendon-fixation, etc.—can be said to fulfil these essentials. All the usual methods are faulty owing to their uncertainty, whilst their very number suggests that no one is adequate and sure, which is, indeed, true. Hence we may say that so far no good operation has been generally practised for nephroptosis.

The procedure to be described gives a virtually normal fixation of the organ, and if properly carried out can be relied on almost certainly to ensure a satisfactory and permanent cure. By this method the kidney retains with certainty the position in which it is fixed, and it cannot become displaced again; and, owing to this very fact, care must be taken to see that the correct or proximate position is obtained before anchoring in place. Moreover, although the pathological mobility is corrected by this operation, the normal slight respiratory excursions of the organ are not hindered. One advantage more is that the patient can be got up very much earlier than in the ordinary way—in fact, soon after the wound is healed—namely, by the third week, in contrast with the inevitably prolonged, but not always successful, detention in bed with the other methods.

The principle of this operation is the insertion of the kidney into, and its suspension by, a sling, and the fixation of the latter to the posterior abdominal wall.

The sling consists of a net made from chromicized catgut, or preferably floss silk, the material at present varying according to the predilection of the surgeon, as time alone can show which is to be preferred. These slings are made in various sizes, so that there shall be no difficulty in adapting one to the requirements of the particular case. A gap is left at the hilum 2 in. long by 1 in. broad, so that the border of the net here falls well short of the vessels and duct, and thus no pressure can be exercised on these important structures. The convex border is left open to facilitate the insertion of the kidney into the sling, and at the ends of this opening two free ligatures are left open for the purpose of lacing up the gap, and then using to sling the net to the abdominal wall. The complete sling is thus reniform with a permanent gap at the hilum and a temporary slit along the outer border, the size of the mesh being about $\frac{1}{2}$ cm.

The kidney, having been exposed in the usual way, is inserted through the gap and by the help of the slit into the sling; it is then laced in, but loosely, and when this is completed the ligatures are knotted and thus fixed, the lower ligature ending above opposite the costal groove on the kidney. The lacing should not be tight so that the sling fits the kidney somewhat loosely, in order to allow of the expansion of the organ which is known to occur. It must not be loose enough, however, to permit the net to rotate and impinge by its free inner border on the structures of the hilum, thereby compressing them; and in order to obviate this it is as well to insert one or two fixation sutures so as to include the net and kidney and maintain the proper relative positions of both. The kidney having been invested, the next step is to fix it in position by the free ligatures along the outer border. One is passed external to the normal position of the kidney over the twelfth, or if necessary the eleventh rib,

the other through the muscles near the lower end of the viscus, and the two ends tied loosely under the skin; loosely, again, in order that the kidney may be free to move with respiration and adapt itself spontaneously to the exact position, after the patient has been placed in bed with the foot blocked up, should such not have been quite correctly obtained at the time of operation—not always an easy matter to be certain of with the patient in the lateral position. The remaining steps of the operation are as usual.

The netting by its presence will provoke a celluloplastic exudation which will surround and infiltrate the meshwork, and in time form by organization a firm adventitious tissue capsule, in addition to the extraneous capsule already present. Probably the former would be sufficient to permanently fix the organ if a slowly absorbable material, as chromic catgut, be used. This seems very likely, but to obviate any possible doubt on this point perhaps it would be better, as suggested, to use floss silk. I say floss silk, and not the ordinary twisted surgical silk, as I think the former smooth material less liable to determine haematogenous bacterial deposit than the rough irritating surface of the latter. In both cases a fibrous tissue capsule will form; with catgut this alone will be permanent, but with silk both will remain. I do not think it likely that floss silk, by its permanent presence, would provoke an excessive formation of fibrous tissue, and thus produce an unyielding covering not altogether desirable in an expansile organ like the kidney; but this might occur with the roughened variety. The only disadvantage of silk in contrast to catgut is the slight tendency of the latter to become the seat of remote haematogenous infection, and give rise to abscess, assuming, of course, the wound heals, as it should, by primary union, and there is no immediate soiling from ungloved hand contamination, as is the rule when such occurs, and not through any imaginary difficulty in sterilizing silk. But the use of floss silk will also tend to obviate this contingency.

When I first developed the above method, in 1909, I used for the posterior base of the sling a reniform plate of thin sheet celluloid, riddled with punch-holes, the remainder of the sling being as above and the netting attached to the border of the plate. When placed in the body this plate soon becomes fixed to the neighbouring parts by infiltration. But I think the elimination of the plate an improvement in technique, and have not mentioned it nor used it latterly.

The first patient operated on, in 1909, is still quite well and free from all her previous troublesome symptoms, whilst the organ still remains quite fixed. The wound healed by primary union, and the patient left the hospital at the end of three weeks.

I think it can be claimed that this operation is an advance on any other, and is sure, quick, rational, simple, as well as satisfactory from the patient's point of view. I consider its merits should cause it to supplant the other faulty and bad procedures which are in vogue at present. A good operation for nephroptosis has long been required, and in the belief that this one meets the case and fulfils all necessary requirements it is submitted with confidence.

L.S.L., Lacing and suspending ligatures; Sl., kidney sling containing kidney (dotted); O.S., outer slit; H.G., hilum gap; H.S., structures of hilum—vessels and duct; K., kidney fixed over twelfth or eleventh rib, triple anchorage by ligatures and pedicle.