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LUMBAR NEPHROPEXY WITHOUT SUTURING

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LUMBAR NEPHROPEXY WITHOUT SUTURING.

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Nephrorrhaphy for the fixation of movable kidney has had an extensive trial at the hands of the surgical profession ever since the operation was suggested and first practiced by E. Hahn of Berlin. There can be but little doubt that the operation has been performed many times unnecessarily in cases in which the symptoms were not produced by the displaced organ, and consequently failed to procure the expected relief. Nephropexy is a legitimate and established surgical procedure in all cases in which it can be established that the kidney is not only displaced, but is at the same time the direct cause of the manifold symptoms which such a condition may and often will produce. The many modifications which the operation has undergone is perhaps the best proof that the results heretofore obtained by the different methods devised have

not proved satisfactory. In nearly all of the operations the kidney is sutured to the muscular structures of the lumbar incision and the lower border of the last rib, the sutures, usually four in number, including the capsule of the kidney and more or less of the parenchyma of the organ. All operators expose the posterior surface of the kidney by incising the adipose capsule and by displacing or excising a portion of this structure. It has been claimed that the fibrous structure of the kidney is incapable of producing new tissue, out of which adhesions are formed to anchor the organ permanently in its new location, which induced Tuffier to advise that the capsule should be freely incised and extensively stripped from the underlying parenchyma before suturing the organ in place. This practice, which fortunately was never extensively

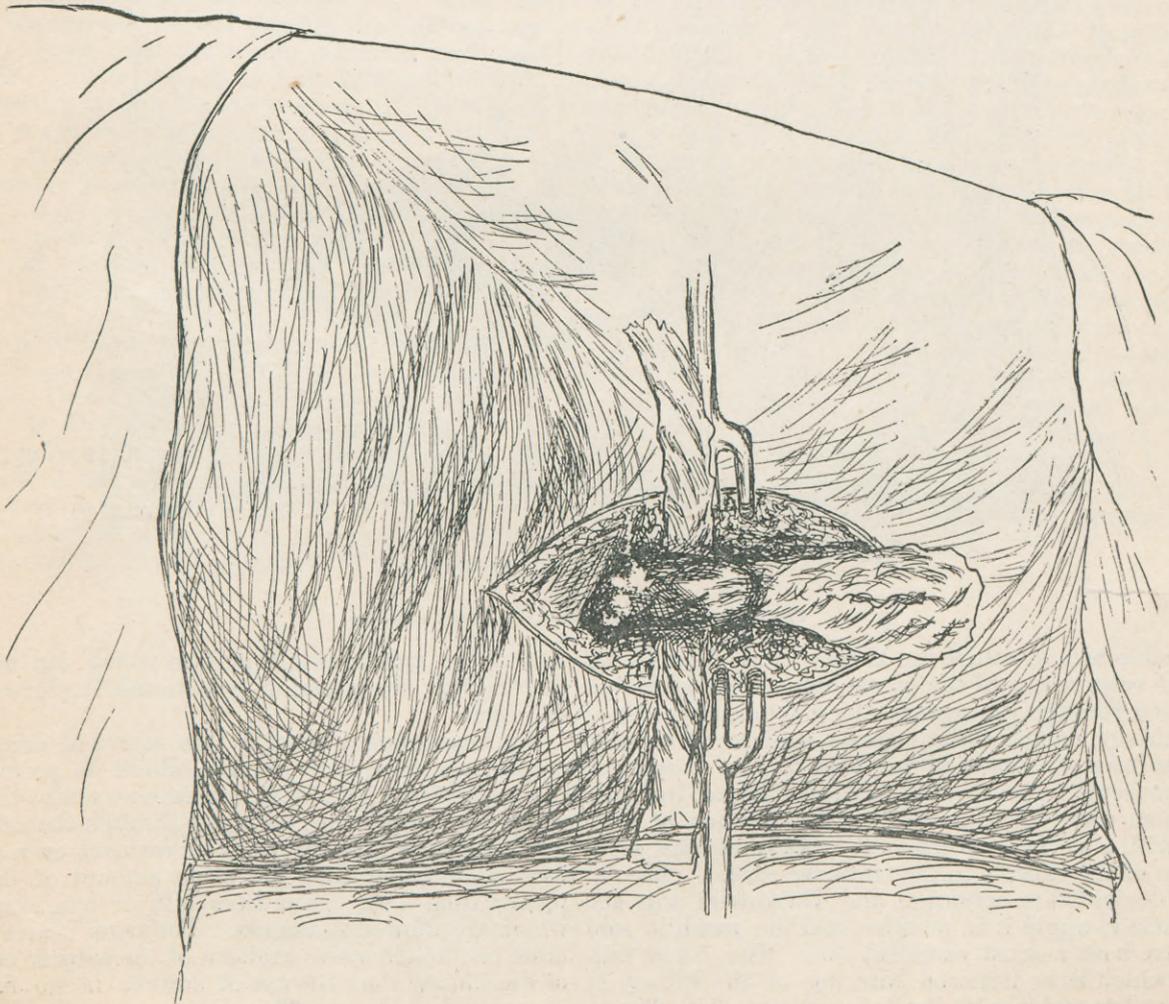


FIG. 1.—Kidney exposed by Simon's incision, adipose capsule excised and lower pole of organ brought into lower angle of incision with strip of gauze underneath it. Lower angle of wound packed with gauze.

adopted, has undoubtedly resulted in serious and permanent damage to the organ operated upon. Experiments on the lower animals, as well as inspection of the capsule of the kidney operated upon at different intervals after the operation on the human subject, have demonstrated the fact that the capsule of the kidney, like fibrous tissue in any other part of the body, possesses a maximum intrinsic power of tissue proliferation when subjected to mechanical irritation under aseptic conditions. No modern surgeon would entertain for a moment the propriety of depriving the kidney of its normal fibrous investment as a preliminary step in performing nephrorrhaphy.

Nicoladoni has recently modified Tuffier's procedure by incising the fibrous capsule only to the extent

is extremely friable and even if the sutures include a quarter of an inch of the cortex of the organ they are liable to cut their way through the tissues long before the kidney has become fixed in its new location by firm adhesions. All sutures, regardless of size and material they are composed of, fail to maintain the kidney in the desired location a sufficient length of time for the para-renal adhesions to become sufficiently firm to effect permanent fixation. Serious objections have recently been made and for good reasons against sutures which are made to include, as is usually done, a considerable portion of the kidney substance. Delagénère, Zatti and Albarran have shown that in the vicinity of the sutures sclerotic connective tissue forms with corresponding destruc-

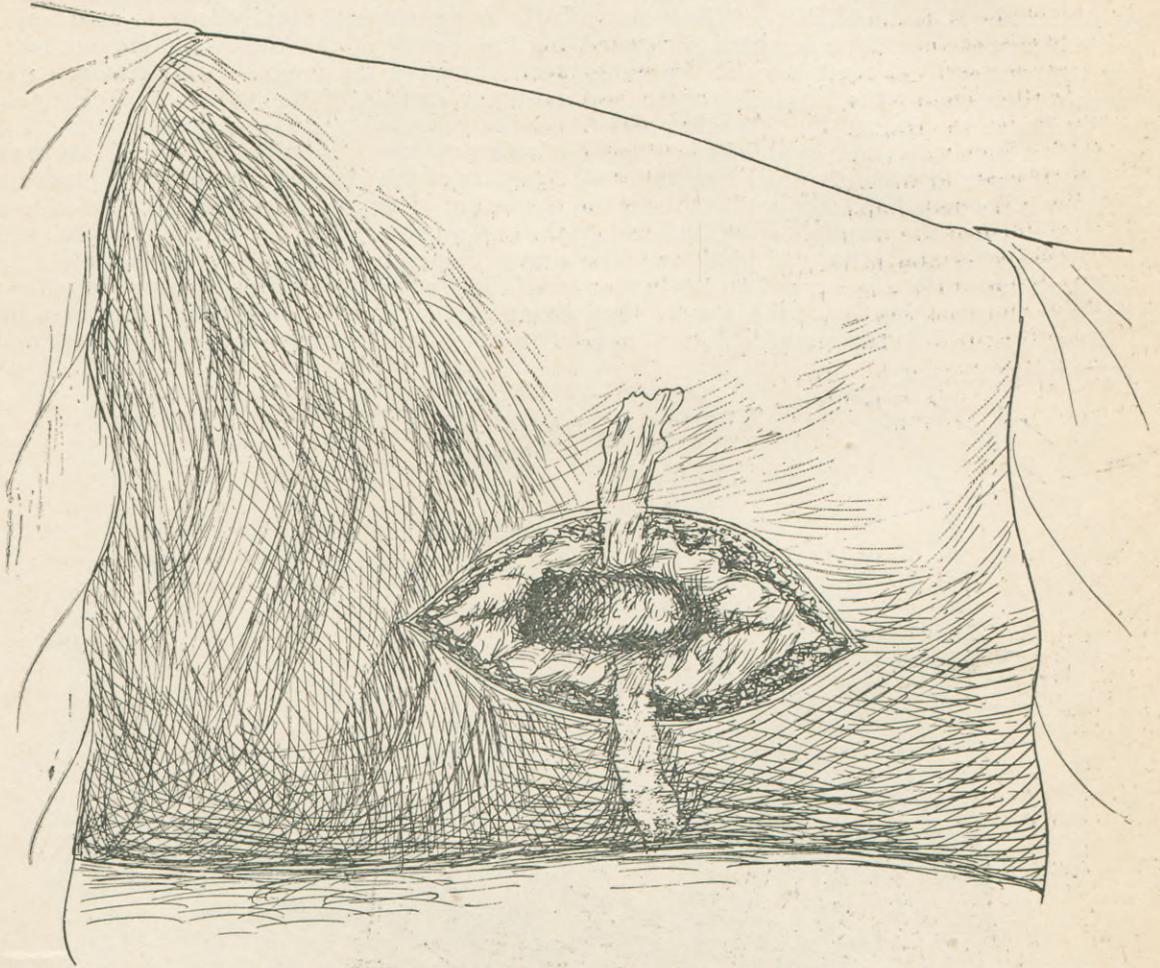


FIG. 2.—Gauze packing around the kidney complete.

to enable him to suture the kidney without including in the sutures any of the parenchyma. He makes an incision through the capsule along the outer border of the kidney, detaches the capsule sufficiently on side and sutures the detached portions to the margins of the muscular part of the vertical lumbar incision. In some cases he joins the vertical incision at each end with a short transverse cut to facilitate the separation of the capsule to the requisite extent. Nicoladoni devised this operation and Rutkowski was the first one to apply it in practice, and the result is said to have been a most excellent one. The many failures which have followed suturing of the kidney in the lumbar region with limited exposure of its fibrous capsule is a strong argument against this method of performing nephrorrhaphy. The kidney substance

of the parenchyma condition which can not fail in bringing about serious functional impairment of the organ.

Jonnesco aims to obviate this source of danger by employing silver wire sutures, which he removes at the expiration of ten days. I have no doubt that the silver wire sutures cut their way through the soft kidney substance long before their removal even at this early period, and that the same amount of damage results from their use as from silk or catgut sutures which are allowed to remain. For years I have relied more on the extensive excision of the adipose capsule of the kidney than the use of sutures in the fixation of movable kidney. The permanency of the result depends largely on the extent of the excision of the adipose capsule. In the last four cases I have dis-

pensed altogether with the use of sutures and have relied exclusively on the extensive excision of the pararenal fat, scarification of the fibrous capsule, direct temporary support of the kidney with a strip of iodoform gauze, iodoform gauze tamponade, prolonged dorsal recumbent position and localized compression of the abdomen over the kidney. Every surgeon knows that a movable kidney, unless fixed by adhesions in its abnormal location, will return to its normal position as soon as the patient lies flat upon the back and that it is not easy to bring it within reach unless the patient resumes the sitting or standing posture. If the adipose capsule is excised over the entire posterior surface of the kidney a gutter is created in which the kidney is safely lodged and from which it is difficult to dislodge it as long as the patient remains in the dorsal recumbent position. Brian and Jabouly rely largely on the iodoform gauze tampon brought in direct contact with the fibrous capsule of the kidney in forming permanent anchorage by pararenal adhesions. For years I have placed more reliance on the tampon than sutures in the fixation of a movable kidney. My present method of nephropexy consists in exposing the kidney by Simon's vertical lumbar incision. As soon as the adipose capsule is reached the kidney is placed in proper position and is pushed forward into the wound by an assistant. About half of the kidney should project below the lower margin of the last rib. With dissecting forceps and curved scissors the adipose capsule is excised over the whole posterior surface of the kidney. The kidney is now brought well forward into the wound, the cut margins of the adipose capsule are pushed away from the kidney until the borders are freely exposed, when the fibrous capsule is thoroughly scarified with a long needle.

At this stage of the operation the lower pole of the kidney is grasped by its capsule with a French vulsellum forceps and brought well forward into the wound. With dissecting forceps, finger and blunt dissector the lower third of the kidney is laid bare and a strip of iodoform gauze about an inch in width and composed of four layers of gauze, is placed underneath the lower end of the kidney and each end brought out over the respective wound margin. By making traction on the forceps and gauze strip the lower end of the kidney is brought sufficiently forward to rest in the lower angle of the external incision. During the operation the margins of the external incision must be well retracted. With a long strip

of iodoform gauze the floor of the wound is then carefully packed in such a way as to force the pararenal fat away from the borders of the kidney, leaving the posterior scarified surface of the kidney well exposed, when, with the same strip of gauze, this is covered and the whole wound well tamponed with another piece of gauze. The strip of gauze holding the kidney is then tied over the iodoform gauze tampon, which forms a wedge, and will effectually prevent displacement of the organ until firm adhesion has rendered any direct mechanical support superfluous. The two pieces of gauze are tied together and the wound dressed in the usual manner. No part of the lumbar incision is sutured. The patient is then placed upon the back and a firm compress the size of an adult's fist is placed over the kidney below the costal arch and held in place by a wide strip of adhesive plaster encircling the entire body. The patient is placed in bed with the pelvis slightly elevated, and is directed to remain in the dorsal recumbent position or side operated upon for at least four weeks, the time required for the formation of pararenal adhesions sufficiently firm to hold the organ permanently and securely in its new location. At the end of five or six days the tampon is removed. At this time the whole wound, including the capsule of the kidney will be found paved with vigorous granulations. The granulating surfaces are now brought together and held in contact with strips of adhesive plaster over a small absorbent aseptic dressing. Over this an additional dressing is applied, which with the abdominal compress is held in place with an additional strip of adhesive plaster and gauze roller. At the end of three or four weeks the whole wound will be found healed by primary intention and the kidney firmly fixed in its new location. The retention of the kidney in its normal location by this method affords not only a firm support by permanently fixing the lower end in the lower angle of the external incision and by securing broad surface adhesions, but the oblique angle in which it is anchored adds another mechanical condition calculated to maintain the organ in position, while this position will also tend to correct flexion of the ureter if such exists at the time the operation is performed. The immediate and remote results obtained by this method of operating in the last four cases have proved so satisfactory that I am not disposed to return to suturing again and strongly recommend this method of performing nephropexy for further trial by the profession.

