

enough to bear unjust suspicion, distrust, and blame even from sources where we have a right to expect something different.

MOVABLE KIDNEYS.¹

BY D. H. HAYDEN, M. D.

ABNORMAL mobility of one or both kidneys is now generally admitted to be a not rare occurrence. The first article upon the subject that can be said to have produced any effect upon the medical profession was that by Rayer in his work on Diseases of the Kidneys, 1841. Oppolzer gave a very clear account of this anomaly in the *Wiener Medicinische Wochenschrift*, No. 43, 1856. Dr. Charles J. Hare followed with a much more exhaustive article on the subject, which appeared in the *London Medical Times and Gazette* of January 2, 1858. Numerous other authors have contributed papers and clinical lectures upon this affection (notably Rollet, Hensch, Trousseau, Ebstein), and a large number of cases have been reported in various journals and in the records of medical societies. Many prominent members of the medical profession in England, however, had continued to be skeptical as to the existence of such an affection; and as recently as 1876 the Pathological Society of London, in view of the numerous clinical facts and autopsies that were collecting in the various medical journals, appointed a committee "to inquire into the subject of movable and displaced kidneys." The committee consisted of Drs. Hare, Bristowe, Wilks, John Williams, and J. Wickham Legg. In their report they stated that the evidence showed mobility of the kidneys to be by no means infrequently met with. From the numerous post-mortem observations collected one of two conditions was shown to prevail: either the kidney lies loose from attachment to the peritonæum so as to admit of being moved a certain extent in any direction, or else it is completely invested by peritonæum which passes over it to form a meso-nephron of greater or less length. According to Oppolzer the affection is usually congenital, as shown by the lengthened condition of the vessels; and rapid emaciation occurring in persons usually fat, concussion of the body, as in rough traveling, constipation, etc., probably contribute to its production. In nearly all cases where there has been an autopsy the kidney has been found healthy, but with a deficiency in the cushion of fat and a lengthening of the renal vessels, thus verifying the statements of Oppolzer in this regard. The united experience of all observers shows also that (1) this affection is much more common among females, and that (2) the right kidney is much oftener affected than the left. According to Professor Bartels, of Kiel, movable kidneys among the working women classes are often due to their habit of wearing tight waist strings to hold up their heavy skirts. He has also met with cases amongst persons in the military service and amongst workmen, due to a similar constriction of the waist, among the former by tight sword belts, and by the too tight straps worn by the latter to hold up the pantaloons. Ebstein² and Hertzka³ attribute the most frequent cause to repeated pregnancies. The following objections have been offered to this latter theory:—

¹ Read before the Boston Society for Medical Observation, May 2, 1881.

² Ziemssen's Cyclopædia, Diseases of the Kidneys.

³ Wiener Med. Presse, 1880, No. 48, Dislocated Kidneys.

(1.) Why a so minimum number of women who have borne children suffer with this affection.

(2.) Why, on the other hand, it is so often found in women who have never borne children.

(3.) Why the left kidney so generally as a rule escapes.

(4.) Why other heavier abdominal organs, whose attachments would more easily allow mobility, should not become dislocated rather than the kidneys.

In a large proportion of cases movable kidneys cause no symptoms, and the tumor is accidentally discovered, often by the patient. According to Oppolzer, in addition to sensitiveness caused by firm pressure upon the kidney in any direction, the patients complain spontaneously of a sense of pressure and a dragging, especially when standing, performing active movements, during defecation, etc. In all the cases seen by him the urine has been normal. When pains are present they are almost always relieved, and not infrequently removed, by the recumbent position.

The tumor is generally felt in the right abdomen deep under the liver, having a more or less ovoid form, is smooth and of the consistency of a kidney. It is extremely rare that the hilus can be made out and only in the thinnest subjects. The tumor can be moved within certain limits, sometimes as far as the navel, and even into the iliac fossa; and can be made to disappear upwards and backwards into the renal region. A flattening or depression can sometimes be made out in the posterior lumbar region when the kidney is displaced downwards. Rayer mentions one or two such cases. Trousseau states that by skillful palpation it is discoverable that the renal region on that side does not contain a kidney; and percussion is sometimes found to be more resonant than on the opposite side, giving place to the normal dullness when the kidney is replaced.

The degree of mobility of the kidney varies very much, amounting at times to but a slight departure from the usual tolerably fixed condition. For the examination of these cases Dr. Hare recommends the following method:—

The patient to be placed on the back, inclining slightly towards the side in which the tumor lies (generally the right), with head and shoulders raised, and legs slightly elevated, the observer standing or sitting upon that side of the patient, but somewhat facing the patient. The fingers of the left hand should be placed on the posterior lumbar region, immediately under the last rib, at the same time gently pressing or pushing forward that part. The ends of the fingers of the right hand should then be placed in front just below the costal cartilages and there also slight pressure should be exerted. The lower end of kidney will then be probably felt between the hands. The patient should then be told to take a long inspiration, and then to expire slowly. The observer should in the meanwhile keep his hands in the same position as before, but just at the commencement of expiration should pass the fingers of right hand rather sharply down towards the renal region and he will probably detect a much larger portion of the kidney between the hands than previously. It has been detruded downwards by action of the diaphragm.

The diagnosis of movable kidney, when accessible to palpation, is, as a rule, not difficult. In very stout people it would be often impossible, but in such persons it is said almost never to occur. Errors in diag-

nosis, however, have not been uncommon, and patients have been subjected to active and unavailing treatment from ignorance of the true nature of the affection. Trousseau reports cases where the abdomen has been found covered with leech bites, or the cicatrices resulting from the application of tartar emetic ointment, on the supposition that there existed peritonitis. In one case the patient had been taking for a long time iodide of potassium with the object, "fortunately unsuccessful," of producing absorption of the tumor. Dr. Rayer in his work, says: "The pains which sometimes accompany mobility of the kidney have been mistaken for nervous colic, for the phenomena of hypochondriasis, and sometimes for lumbar and sciatic neuralgia." Cruveilhier writes: "I have seen the tumor formed by displaced right kidney treated for obstruction of the liver or a morbid growth." Errors in diagnosis have been known to lead to dangerous mistakes. One case is reported in the *Lancet*, March 18, 1865, which was mistaken for an ovarian tumor, and the operation begun for its removal.

The tumors most likely to be confounded with a movable kidney are cancerous or tubercular masses of the omentum and mesentery or floating tumors in the peritoneal cavity. It would be extremely rare for these masses to have the size, shape, and smoothness of a kidney. Cachexia, too, would be present without other cause to explain it, and if the tumor had lasted any length of time any change which had taken place in its size would be a valuable diagnostic point. A movable spleen lies immediately against the parietes, and gives rise to dullness, whereas the kidney, if of normal size, would be covered by intestine unless detrued downwards and brought to the front. The spleen if found in this situation would be much larger than the kidney and less movable. The liver is never movable, and if a movable kidney were associated with an enlarged liver the margin of latter could generally be made out and the kidney found to slip beneath. An enlarged gall-bladder is sometimes very movable, but lies generally in a more oblique direction towards the left iliac fossa, its lower end is more globular and less hard on pressure, and sometimes fluctuation can be detected. It is only the distal end of the gall-bladder that is movable, the other end being attached to the liver. A tumor of the intestines would be accompanied by characteristic symptoms. A collection of feces would have a different feel and shape, and would not slip into the hypochondriac region like a movable kidney. An ovarian tumor to extend high up into the abdomen would always have a considerable transverse diameter. A mistaken diagnosis has been mostly due to the physician not bearing in mind the possibility of the existence of a movable kidney.

In an article by Dr. Mueller-Warneke,¹ assistant physician to the medical clinic of Kiel, the author states that so relatively large a number of women came for treatment to the hospital with well-marked symptoms of dilatation of the stomach, where examination showed an abnormal mobility of the right kidney, that one was forced to regard the complication as not accidental, and to admit the dependence of the one affection on the other. Professor Bartels was the first to show a causal connection between the pressure of tight waist strings upon the kidney and its mobility on the

one hand, and between the mobility of the kidney and dilatation of the stomach on the other. In confirmation of this theory the writer claims to be able to demonstrate both by cases and experiments on the dead body that the pressure exerted by these waist strings is sufficient to cause this result, all other causes having been excluded, and in two or three cases the symptoms being found to gradually develop. From a study of the topographical anatomy of this region he shows how the right kidney and the descending part of the duodenum are wedged in on all sides between solid parts save in front and below. By numerous experiments on the cadaver the furrow resulting from the constriction by tight waist strings was found to fall on the middle of the right kidney, or somewhat below the middle, whilst the thorax is in position of expiration or at rest. The effect of inspiration and of the consequent pressure upon the intra-abdominal organs under these favoring conditions is to displace the kidney, which has become or is already movable, forwards and inwards. Where the respiration is often subjected to long-continued increased action, as in many kinds of heavy work, a loosening of the kidney in its normal site is first produced, and later a dislocation takes place in the above mentioned direction. When the kidney has once become movable the pressure alone suffices to cause a compression of the duodenum against the vertebral column, which, from the absence of any mesentery, is not able to escape out of the way. The left kidney is not subjected to the same causes owing to its different anatomical relations, and thus escapes. The writer explains the fact of the greater frequency of movable kidneys among the working classes and the comparative exemption of the upper classes by the different action of the tight waist strings worn by the former from that exercised by corsets worn exclusively by the latter, the pressure of the corsets being more uniform over a large surface. The normal situation of the right kidney is not a constant one, and the furrow caused by these strings would not therefore always act upon it in the same way. Predisposing causes are also at work in certain persons, and movable kidney is often congenital. The author advances these as the reasons why some are affected and others not of those subjected to this cause, and a combination of circumstances is generally necessary. If the author's views are correct a prophylactic treatment is of great importance, and suggests itself.

Edema of the lower extremities has been said to have been caused by a movable kidney, and Rayer, in his work, reports one case where obliteration of the vena cava was due to it. In all the six cases reported by Dr. Hare there was noted an unusually strong abdominal pulsation.

Now and then severe inflammatory attacks, ushered in by chilliness and accompanied by intense pain, lasting a week or so, have been observed to occur in connection with movable kidney, palpation revealing a smooth and very sensitive tumor, which rapidly becomes too tender to admit of any pressure, the abdomen becoming tense and hard with often an increased area of dullness, due to the considerable exudation which has taken place. Dietl has described these paroxysms as "evidences of incarceration." The most probable cause is an irritation of the surrounding connective tissue and peritonæum consequent upon some sudden change of position of the kidney. The explanation by Gilewsky that acute hydronephrosis and pye-

¹ Unnatural Mobility of the Right Kidney and its Connection with Dilatation of the Stomach, *Berliner Klinische Wochenschrift*, No. 30, 1877.

litis have been produced in these cases by a twisting of the kidney on its own axis and a consequent compression of the ureter is not correct, as some autopsies have shown no such state of things. Pyelitis, too, is not always found where the signs of incarceration have been present, and often exists where these signs are absent.

With regard to the proper treatment of movable kidney but little requires to be said. Confinement of the bowels and the consequent straining at stools are to be avoided. Pain will generally be relieved by the horizontal posture. Elastic abdominal bands are recommended by some, though according to Oppolzer they do no good. A correct diagnosis is of chief importance, "which," as Ebstein truly remarks, "often acts as a complete remedy."

The following cases were met with in the out-patient department of the Massachusetts General Hospital. The patients were all women. They had all discovered the tumor themselves. In all but one of the cases tumor was in the right side. The notes, which were taken at the time, are very imperfect, and the patients were seen but once.

CASE I. December 29, 1876. L. F., aged thirty-seven, married, born in Maine, resides in Cambridge. Eight months' duration. There is a solid body, size of a kidney, felt, when patient sits up, to the right of umbilicus, movable in different directions, particularly upwards. Micturition frequent and painful.

CASE II. June 8, 1876. M. L., aged forty, born in Ireland, resides in Gloucester. There is a solid and movable body, below border of left ribs, apparently unconnected with the spleen, about the size of a fist. Patient has been aware of its existence five months. At times it is painful and sore on pressure.

CASE III. December, 1876. A. P., aged forty-three, born in Ireland, resident of Lawrence. Four years' duration. Patient is subject to renal colic. In right abdomen, below the border of the ribs, there is a movable body suggestive of a kidney. Patient is obliged to pass her water every half hour day and night. There is constant uneasiness in hypogastrium and back. When patient lies on her left side the tumor presents, and can be grasped through the parietes. Percussion is found to be resonant over renal region of this side when compared with opposite side. If the patient is then held in the horizontal position the tumor disappears and can no longer be felt, and percussion in the right renal region becomes completely dull. This change in percussion with change of position was unvarying as often as the experiment was repeated, and was easily demonstrable to others who saw the case.

CASE IV. July 21, 1875. E. McC., aged thirty-two, married, born in Ireland, resident of Hopkinton, Massachusetts. On deep inspiration a solid body about the size of a kidney is made to appear, and can be grasped in right abdomen. The tumor can be moved in a downward direction, and then easily pushed upwards and made to disappear behind. Patient has had this tumor as long as she can remember, and there has never been any pain, soreness, or other symptoms connected with it.

CASE V. March 24, 1875. A. B., aged forty-four, married, born in Maine, resides in Gloucester. There is a tumor felt to the right of umbilicus, movable, which can be pushed upwards and made to disappear posteriorly. Tumor disappears and can no longer be

felt when patient lies on her back. Patient describes symptoms as of something "dragging" in right renal region, and complains of an occasional pain to right of navel.

CASE VI. April 18, 1881. The following case has come under observation since the above paper was written. H. A., aged thirty-seven, married, and has had three children, last confinement being three years ago. Five years ago patient had an attack of what she describes as not being a real pain, but the sensations being like a "burning sore" and "pressing" in right hypochondrium, with some swelling, requiring medical relief. Two years ago she had a similar attack, and between then and the following August (1879), perhaps as often as ten times, similar attacks. She has had none since then, and has been perfectly well, save that three months ago she had a miscarriage. Five months ago she discovered the presence of a tumor, which frightened her greatly, and on account of which she consulted a physician, "who," she says, "told her that it was a lump which had fallen down from the liver." A second physician consulted thought the tumor to be a growth from the walls of the stomach, and prescribed a course of internal treatment and the application externally of some form of iodine, as the character of the stains upon the skin showed.

Examination, April 18, 1881. Patient's general condition appears good. Is moderately stout. Abdominal walls considerably relaxed and flaccid. While lying on her back, inclined towards the right, on deep inspiration a movable, smooth, solid body of ovoid shape, size of a kidney, can be felt to the right of and a little above the level of the navel. It can be grasped and pushed upwards and backwards out of reach, its rounded end slipping through the fingers like a "greased egg," as Mr. Taylor, one of my assistants, aptly described it. There is quite a depression formed when the plessimeter is applied to the renal region of this side, and the percussion sound here is fuller and more resonant than on opposite side. When patient lies on her back, inclined towards the left, the tumor can no longer be felt in front as before, the resonance disappears posteriorly, and percussion gives an equally dull sound with that of the opposite side. There is some sensitiveness on firm pressure. With the exception of a pain in the back, which she has had for the past two weeks, now about gone, patient has had no symptoms of any kind. This case illustrates very well the importance of a correct diagnosis, both from thus being able to relieve the patient's anxiety and mental suffering, as well as to prevent useless and unnecessary treatment.

A CASE OF PROLONGED INTESTINAL OBSTRUCTION.¹

BY F. W. DRAPER, M. D.

THE patient was a man, aged thirty-three years. His occupation as a teacher led him into sedentary and rather indolent habits of life. For many years constipation had been the rule with him. In 1875 he had an attack which confined him to his bed for several weeks, and which he describes as "inflammation of the bowels." After this illness he was the subject of recurrent attacks of more or less prolonged

¹ Read before the Boston Society for Medical Observation, May 2, 1881.