

They lie close to the spine, immediately under the vertebra, almost in the central axis, around which all movements of the trunk and limbs take place. They are buried in two deep and narrow recesses, protected by the lower ribs, and rest upon a horizontal sheet of fascia, which in turn rests on the peritoneal viscera. The slight degree of backward and forward movement which is necessitated by the action of the diaphragm takes place without the least risk; but with the assumption of the erect attitude a great portion of this security is lost. The backward and forward movement is altered to movement upward or downward in the direction of the line of gravity. The peritoneal viscera and the supporting fascia lie in front and not below. The lumbar recesses, instead of being deep and narrow, become broad. The convexity forward of the lumbar spine helps to make them still more shallow. The pelvis, especially in the female sex, becomes wider, so that the lower end of the recess becomes more open, and then the development of right-handedness causes the transverse processes of the lumbar vertebrae, which lie under the floor of the lumbar recess, to rotate. From a position of the greatest safety the kidneys are placed in one from which all security is gone; and it is no wonder that comparatively trivial causes—an increase in the weight of the organ without a corresponding increase in the bulk, a sudden, violent jerk, or a great lowering of the intra-abdominal pressure—can increase their normal range of mobility. The wonder is not that movable kidney occurs, but that it does not occur more often.

This accounts completely for the peculiar clinical distribution of movable kidney. It is certainly hereditary and common. It is present in women much more often than it is in men, and in women who have borne children more often than in those who have not, and it is much more common on the right side than on the left. None of the other reasons which have been assigned for this, such as the weight of the liver or the length of the renal vessels, deserve consideration.

In regard to treatment Moulin says: The choice lies between wearing an abdominal belt and nephrorrhaphy. In the author's experience it is only in the milder cases that the former succeeds, and then it must be combined with massage and exercises calculated to strengthen the abdominal muscles. A belt braces the viscera together and so steadies the displaced organ, but it cannot press the kidney back into its place or retain it there after it has been reduced if the patient stands upright and takes a deep breath. Pads are useless. For all cases in which there is manifest deformity of the lumbar region, associated with movable kidney, or in which there is real distress, even though the mobility attains no higher degree than the anti-version of Potain, he never hesitates to recommend nephrorrhaphy. In the former case it is advisable in order to save the kidney from hydronephrosis and other troubles. It is the most certain method of giving relief. He has never known it to fail, when properly carried out, if the symptoms have not already lasted so long as to produce an indelible impression upon the patient's nervous system.

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**The Open or Operative Treatment of Fresh Fractures.**—SCUDDER (*Boston Medical and Surgical Journal*, March 22, 1900) has made a careful study of the recent and remote results obtained in the treatment of fractures of

the lower extremity. In discussing these results he says: "The treatment of closed fractures has always been thought to be easy and simple. The tables are to-day being reversed; it is the simple fracture which to-day is found to be the most difficult to treat if the problem of treatment is fairly faced. Is there anything more difficult to treat satisfactorily than the simple oblique fracture of both bones of the leg above the ankle; than fracture of the surgical neck of the humerus, with or without displacement of the head of the bone; than fracture of the clavicle, with considerable displacement? Is the separation of the upper epiphysis of the humerus an easy lesion to treat satisfactorily? Instances may be multiplied until it is evident that each bone is frequently fractured in a way most difficult for easy and satisfactory treatment by existing methods.

"The Röntgen ray provides through the developed plate and fluoroscope accurate anatomical knowledge of the relative position of broken bones. The interpretation of the fracture seen through the fluoroscope and upon the plate must be made by one skilled in the art. The casual observer makes many errors in judgment, and misinterprets the conditions present. The exact conditions of exposure and position under which the skiagraph is taken must be known before even the trained interpreter can correctly make the diagnosis. The X-ray provides the means for an accurate diagnosis.

"The open treatment of fractures should be undertaken only after careful consideration of the health of the patient and under most rigid antiseptic and aseptic conditions possible. The open treatment of the fracture should be carried out only by a skilled and competent surgeon. It should not be done in the aged. It is an operation for young adults, particularly for the laboring man. Early massage and passive and active motion after four weeks are desirable in the treatment of the fracture after operation.

"It is impossible to determine which method of those in use to-day will prove effective until the fracture is exposed to view. That method in any given case is the best which preserves the alignment of the shafts of the bones.

"The difficulties of reducing fractures will become more and more apparent as the open treatment is more commonly used. It will be found that no one factor is the cause of the difficulty, but more often it is due to a shortening of all the soft parts of the limb about the fracture, occasioned by the hemorrhage into the tissues, by retraction of tissues which have been normally stretched after the fractures have no resistance offered to their reaction. This difficulty in reduction I have found to be more common than is generally supposed. A recognition of it as a cause will lead undoubtedly to the supplementing of splints by internal fixation in the treatment of many fractures.

"The ideal result to be aimed at after a fracture is union of the fracture without deformity and without impairment of the function of the limb, either immediately or remotely. The generally accepted methods of treating fractures do not give satisfactory results in many cases. There is need for a radical departure in the treatment of closed fractures. Anæsthesia and the X-ray afford the means of accurate diagnosis. Sepsis is practically abolished. From analogy in excisions and osteotomy, closed fractures of bone

may safely be treated by open incision. The cases reported in the literature, expressing the opinions of many surgeons, demonstrate that the open method of treatment is satisfactory and a great advance upon generally accepted methods."

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**Fracture of the Metatarsal Bones by Indirect Violence.**—LOISON (*Revue de Orthopédie*, September 1, 1900), after reviewing the symptomatology, diagnosis, and treatment of thirty-two cases, notes the following conclusions: (1) Complete or incomplete fractures of one or several of the metatarsal bones are much less rare than is generally believed. (2) The X-rays are of the greatest assistance in the diagnosis of incomplete fractures, in establishing the form and exact situation of the fragments, and also the extent of the injury in the complete and comminuted fractures. (3) Fractures of the metatarsal bones as the result of indirect violence are due to either one of two mechanical causes: exaggerated flexion in a vertical direction or in a transverse direction. In some cases these two causes may be combined, the causative traumatic force following an oblique direction.

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**A Study of the X-ray Plates of One Hundred and Forty Cases of Fracture of the Lower End of the Radius.**—CODMAN (*Boston Medical and Surgical Journal*, September 27, 1900) states that Colles' fracture may be separated into ten distinct types, according to the lines of cleavage and the directions of the displacement. Class I. Fracture through the base of the styloid process of the radius. The fragment is displaced but little—generally upward and backward by the supinator longus. Four cases are included in this series. Class II. Fracture of the inner angle of the lower end of the radius. The fragment either remains in place or may be dislocated backward. This type includes three cases. Class III. Transverse fracture at or a little above the epiphyseal line (in adults) without displacement. This class includes sixteen cases. Class IV. The distal fragment is comminuted, either as a simple T-fracture or into several smaller pieces. The fragments are generally displaced posteriorly and radially, but part of them may go anteriorly. In the thirteen reported cases all were complicated by fracture of the styloid process of the ulna. Class V. Separation of the epiphysis of the lower end of the radius. The cases, seventeen in number, presented themselves with the fragments completely reduced, or else they had the typical silver-fork deformity. Class VI. Separation of the epiphysis of the lower end of the radius with a chip off the posterior surface of the diaphysis. This class includes ten cases. Class VII. Impaction of lower fragment into the shaft. Rare; only two of the 140 cases being found in this class. Class VIII. Typical Colles' fracture, which may be divided into two forms: That with marked radial displacement of the fragment and that in which the posterior deformity is more decided. These two deformities are usually combined to a greater or less extent. Of the 140 cases 64 are included in this class. Class IX. Stellate fracture of the lower end of the radius, with longitudinal fissures extending into the shaft. There is but slight deformity. This class includes six cases. Class X. Reversed Colles' fracture—that is,