A CASE OF TRAUMATIC RUPTURE OF A HYDRONEPHROTIC KIDNEY.

BY

Major R. E. WATERSTON,
Royal Army Medical Corps.

[Received September 19, 1945.]

The following case, which was treated in a field hospital, would appear to be of sufficient interest to warrant its publication.

A Polish soldier, aged 20, was admitted to hospital in a shocked state, complaining of right-sided abdominal pain. He gave the history of having fallen on his right side in the dark and, as he fell, being struck in the loin by the end of a blunt stake which was projecting from the ground.

His pulse-rate was 110 per minute, and it increased to 120 in the following six hours. There was gross hematuria with clots of blood in the urine. He vomited on two or three occasions, and the abdomen was extremely rigid and tender on the right side. This tenderness extended into the right flank where there was evident fullness due to the deep swelling. On the left side of the abdomen there was voluntary guarding, but no deep tenderness. There was no evidence clinically of free gas and free fluid in the peritoneal cavity.

A diagnosis of ruptured kidney was made, and, in view of the increasing pulse-rate and the continuance of blood in the urine in the second and third specimens passed, it was decided to explore the right kidney.

FIG. 1.—Outer aspect of the kidney showing the lobulation due to the underlying hydronephrotic cavities and the laceration at the lower pole.
After resuscitation the right perinephric space was opened through an oblique lumbar incision and was found to contain a large quantity of blood and blood clot. The kidney was found to be enlarged and a laceration was seen on the medial side of the inferior pole extending into the hilar region.

Nephrectomy was performed. There was no evidence of damage to the peritoneum which had been pushed forwards by the hæmatoma. The wound was closed round a tube drain.

The excised kidney was found to be grossly hydrenephrotic. There were eight communicating cavities in the kidney, the thin walls of which contained only a narrow layer of kidney tissue. There was hæmorrhage in the hilar region, round the lower pole, and into some of the cavities. The hydrenephrosis was of the intrarenal type, and there was but little dilatation of the pelvis; the ureter appeared normal. There was no obvious abnormal vessel, though this would probably have been obscured by clot if it had been present. There was no evidence of calculus either in the kidney or in the pelvis.

The patient’s progress after operation was watched with some anxiety, as the state of his other kidney was not known. However, he passed satisfactory amounts of urine of normal specific gravity, and he showed no signs of uræmia. On being questioned further he gave no history of any previous pain or other symptoms referable to the urinary system, and a week after operation, when intravenous pyelography was done, a normal left renal pelvis with good kidney function resulted.

He made a good recovery, and it seems that his hydrenephrosis, though gross in degree, was of the unilateral idiopathic variety and, in this instance, was symptomless. The prognosis is therefore excellent.