

A CAT WITH ONE KIDNEY

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The cat which figures in this account was one dissected by a student in comparative anatomy at Yankton College. It is upon the excretory system of this cat that we turn the spot light of our attention. At first glance, it appeared that this individual had but one kidney, that one large and situated well back in the abdominal cavity. More careful study showed there were two kidneys present, fused together so as to form one structure.

Inasmuch as these two kidneys form one structure, they will, for convenience, be referred to as though they were a single organ. As hinted before, it was located posteriorly to the usual position of the kidneys. The exact position is not wholly certain at the present time due to the handling received during dissection. It is evident that it was located in the mid-dorsal line of the abdominal cavity with its two hili, to be mentioned later, directed dorsally. The posterior end of the kidney was about 13 millimeters in front of the symphysis pubis. Viewed laterally it measures 51 millimeters in length, 22 millimeters in width and 20 millimeters in thickness. From the ventral view, one notes that the kidney, beginning about midway, narrows down to 7 millimeters at the posterior end. A typical kidney, used for comparison, measures 34 millimeters in length, 19 millimeters in width, and 16 millimeters in thickness. In bulk, however, the double kidney appears to the eye to be about double that of the ordinary one.

As stated two hili are present. The anterior hilus is 13 millimeters from the anterior end, the posterior one 10 millimeters further back. Externally the posterior portion of the kidney appears the larger of the two. This apparent discrepancy disappears when a longitudinal section of the kidney, parallel with lateral surface, is examined. The cortex is plainly seen dividing the kidney into two nearly equal parts. The posterior portion is the left kidney. The ureter can be traced from the posterior hilus to its entrance on the left side of the bladder. The renal artery of this hilus comes from the left side of the dorsal aorta, and the renal vein opens into the left common iliac vein. It should be stated that the common iliac veins, as sometimes happens, unite further anteriorly than usual to form the inferior vena cava.

This accounts for the statement regarding the renal vein. Similarly the renal artery of the anterior hilus comes from the right side of the dorsal aorta, and the renal vein opens into the right common iliac vein. Most of the ureter was removed in the original dissection. Stubs of this ureter at the anterior hilus and on the right side of the bladder clearly indicate the original connection.

It would be interesting if one could know the cause or causes which led to this peculiar happening. The writer will attempt no surmises. There is no reason to believe that fusion of the two kidneys should or did interfere with the normal development of this cat. She was evidently a normal cat in other respects and apparently had produced young. Whether these young inherited this abnormality is another point of equal interest. The chances of answering this last question are slight as it is not known where the cat with the fused kidneys was obtained.