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Pararenal Pseudocysts in a Cat

by R. A. Mitten, B.V.S., D.V.R.*

Case History

A twelve-year-old castrated male domestic cat was presented with a history of gradual abdominal enlargement over a period of 4 months. The cat's appetite was good but the owners had noticed an increase in water intake and frequency of urination in the last few months.

Clinical and Radiological Examination

The cat was in fair physical condition. The abdomen was markedly enlarged and upon palpation, large masses were felt dorsally. They did not appear to be painful. Clinical pathology data indicated a mild elevation of BUN (39 mg/dL).

Ventrudorsal and lateral abdominal radiographs revealed large smooth soft-tissue masses in the dorsocranial abdomen, in the area normally occupied by the kidneys. The left mass was larger than the right and measured 5 times the length of the 2nd lumbar vertebra. Intestinal shadows were displaced ventrally, but otherwise appeared normal (Fig. 1).

An intravenous pyelogram (IVP) was performed, injecting sodium diatrizoate intravenously at the rate of 1 cc/lb. The contrast agent was excreted by the kidneys as demonstrated in Figure 2. This shows the...
kidneys to be of normal size but to have an irregular indented cortical outline. Both functioned well and the bladder was seen to fill with contrast. The kidneys were both displaced toward the midline and were surrounded dorsally and laterally by smooth soft-tissue densities. These densities did not opacify with contrast.

**Treatment**

Exploratory laparotomy was performed. The two cystic masses were located retroperitoneally around the kidneys. The cysts had thin walls and were fluid-filled. The clear yellow fluid was removed by suction and the cysts were left open to drain into the peritoneal cavity. At surgery both kidneys were observed to have irregular slightly shrunken outlines. The cat made an uneventful recovery.

**Discussion**

The fluid-filled cystic cavities are best described as pararenal pseudocysts. They are known to occur in man\(^1\) and have been reported once previously in a cat\(^2\). In man, they generally have no epithelial lining and are thus called pseudocysts. They are generally thought to be of traumatic origin resulting from rupture of kidney, renal pelvis or ureter. The injury heals, leaving a variable amount of urine-like fluid accumulated in the pseudocysts. In man, it is reported that the condition may not become apparent for weeks or even years after the original trauma. Gradual abdominal enlargement is the typical presenting sign.

The irregular appearance of the kidneys in this case may have resulted from chronic renal disease and infarction or from renal trauma. The slightly elevated BUN correlates
FIGURE 2. Ventrodorsal view of abdomen 10 minutes after intravenous injection of sodium diatrizoate. Kidney shadows are of normal size but are irregular in outline and are displaced medially by the large non-opacified surrounding masses. Both kidneys appear to be excreting contrast normally.

with this and suggests marginal renal function. It can be hypothesized that some degree of renal deformity may have been secondary to pressure exerted by the pseudocysts. The decreased renal function was reflected clinically by the mild polydypsia and polyuria reported by the owner.

REFERENCES
