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What's your Radiographic Diagnosis?

by J. D. Hoskins,* D.V.M.

Clinical History

The patient was a nine year old mixed breed bitch. She has had a previous history of pseudocystitis following each estrus. The owner had noticed intermittent episodes of vomiting and bloody diarrhea for the last three or four weeks. The last two

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weeks the dog has shown clinical signs of vomiting with increasing frequency, anorexia, listlessness, normal urination and normal water intake.

Blood was submitted to the clinical pathology laboratory for a CBC, BUN, SGPT. Right recumbent lateral and ventrodorsal radiographs were taken of the abdomen (Figs. 1 and 2). What is your radiographic diagnosis?

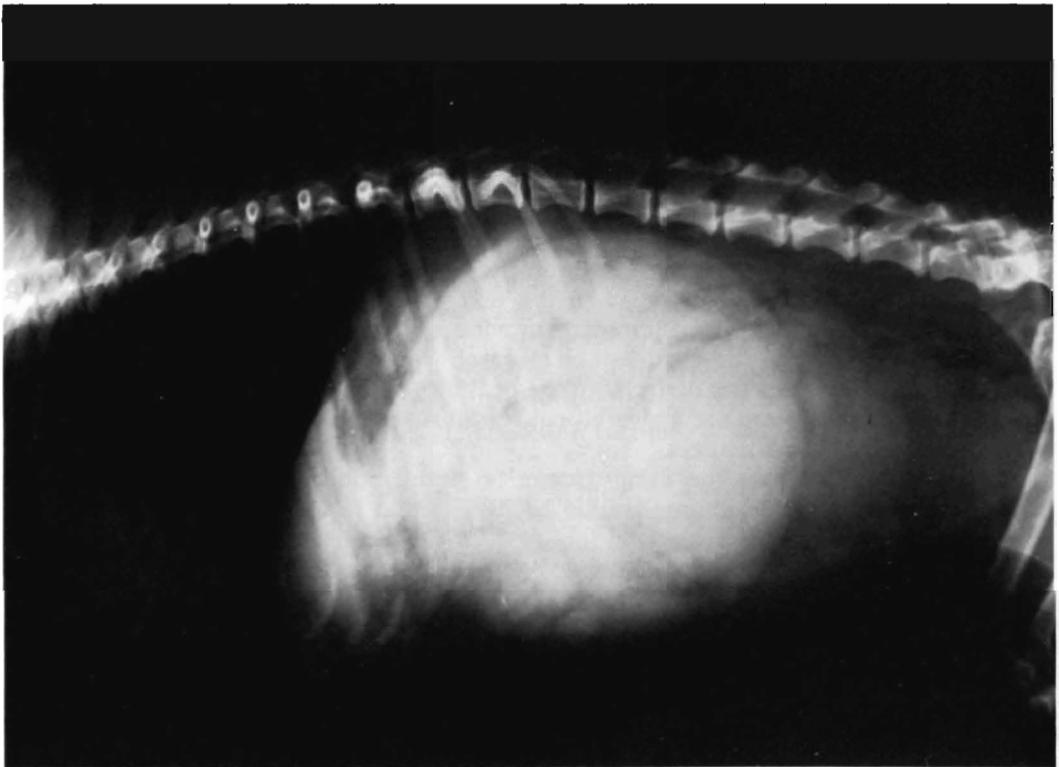


Figure 1. Lateral view of the Abdomen

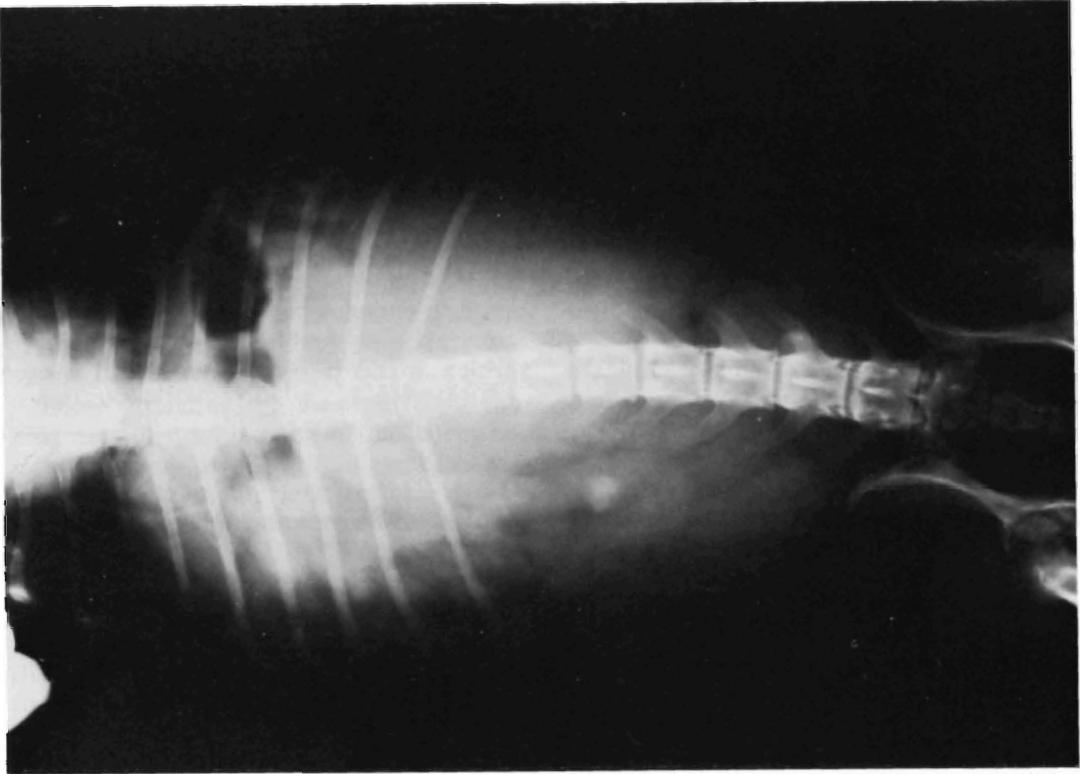


Figure 2. Ventral-dorsal view of the Abdomen

Diagnosis

Hydronephrosis of the left kidney. The lateral radiograph shows a 10 cm. round mass in the anterior quadrant of the abdomen, which is close to the normal site for the left kidney. The urinary bladder is encroaching on the posterior surface of the mass. The ventrodorsal view shows the mass to be in the upper left quadrant of the abdomen. The tail of the spleen is located anterior and to the right of the mass.

Treatment

Because the CBC, BUN, and SGPT were normal, an exploratory celiotomy was pre-

formed. The left hydronephrotic kidney was excised after the right kidney was observed to be normal in shape and size. At the end of the surgical procedure, the dog succumbed due to shock.

Discussion

Hydronephrosis is characterized by dilation of the renal pelvis, with associated atrophy and cystic enlargement of the kidney. The cause of hydronephrosis may be either congenital or acquired. The congenital form may occur as a result of torsion or kinking of the ureter due to displacement of the kidney, stenosis or atresia of the urethra, or aberrant renal vessels

that constrict the ureter. The acquired form may occur as a result of urinary calculi at any location, neoplasia of the urinary tract, *Diocotophyma renale*, accidental ligation of the ureter, inflammation and stricture of the ureter or urethra due to any cause, or abdominal masses, either neoplastic or inflammatory. The cause in this case was determined to be associated with *Pseudomonas aeruginosa* infection which was cultured from the hydronephrotic kidney.

Hydronephrosis may remain clinically silent for long periods of time, especially if it is unilateral and the unaffected kid-

ney is capable of adequate renal function. Kidneys which are large and distended with fluid may be palpated per abdomen. Clinical signs of uremia are usually the reason the owner brings the patient to the veterinarian.

In addition to plain radiographs, positive contrast agents such as organic iodinated compounds or diiodinated compounds may be used. These agents are used in excretory urography, drip infusion urography or double contrast cystography which would be recommended in a case of this type.

STUDENT NEWS



Class of '72

Joel Leininger engaged to Linda Kinsinger, ISU '72.

Steve Healy married to Lugenia Smith, ISU '71.

Mr. and Mrs. Keith Miller are the proud parents of a baby girl, Marcy Lynn, born December 23, 1971.

Mr. and Mrs. Allen Lande are the proud parents of a baby girl, Elisa Christine, born December 21, 1971.

Class of '73

Mr. and Mrs. Dave Wilgenbusch are the proud parents of a baby girl, Jessica Lynn, born December 25, 1971.

Class of '74

Michael Riegger married to Rosemary Strong January 15, 1972.

Scott Faulkner engaged to Pam Reinhard, Med-Tech, Moraga, Calif.