

Renal Rupture by Renal Cystadenocarcinoma in a Yorkshire terrier

Jinkyong Kim*, Jihye Choi, Jaeyoung Jang, Hyunwook Kim, Hyunjung Ban,
Hyejin Kim, Heeyeon Choi, Jimin Seo, Minjung Lee

Heamru Animal Referral Hospital

Renal cystadenocarcinoma (RC) is a naturally occurring canine kidney cancer syndrome that was originally described in German Shepherds. The disease is characterized by bilateral, multifocal tumors in kidneys and nodular dermatofibrosis. The prognosis is usually poor and renal failure or metastasis was the main reason for euthanasia and death.

At 3 months ago, a 13-year old, spayed female Yorkshire terrier showed abdominal distention. In local animal hospital, cyst-like mass in right cranial abdomen was found in ultrasound and tentatively diagnosed as pancreatic cyst. However, at that time, there was no abnormal change in serum chemistry and clinical condition. At presentation to Haemaru Referral Animal Hospital with vomiting and diarrhea, by ultrasound, a large amount of echogenic fluid was distributed overall peritoneal cavity and mesentery of right cranial abdomen became swelling and hyperechoically changed. In right cranial abdomen, the only silhouette suspected of right kidney with intact renal pelvis about 3mm in diameter was observed. By serum chemistry, BUN, creatinine and phosphorus were over six times of normal range. Ascites was revealed as urine and bacterial infection was ruled out by bacterial culture. Through intravenous pyelonephrogram (IVP), the amount of leaked contrast medium in right cranial abdomen was increased over time, but the origin of leakage was not determined. The right kidney was not detected and nephrogram of left kidney was appeared as nearly normal timing and mildly decreased density. As a result, the rupture of right kidney, cyst-like structure, was diagnosed.

On surgery, a large amount of bloody ascites, damaged right kidney with ruptured cyst and adhesion to adjacent structures such as cauda vena cava, surrounding mesentery and peritoneum were discovered. Right kidney was removed and committed to Antech diagnostics, Inc. (Memphis, USA) for histopathologic examination. RC and rupture of cyst with chronic hemorrhage were diagnosed. This patient recovered with conservative therapies and maintained healthy condition for two months.

There was no case report about RC in small breed dog except White and others (1998) report in a Boxer diagnosed at necropsy and there was no case with ruptured cyst and RC usually leads to renal failure. In this case, the RC was diagnosed in small breed dog and the ruptured renal cyst was become the cause of azotemia. Therefore, RC should be included in differential diagnosis list in middle or old small breed dogs which have renal cyst or clinical signs of renal failure with hyperechoic renal cortex due to multiple small cysts.

Key words: renal rupture, renal cystadenocarcinoma, renal failure

* Corresponding author : Jinkyong Kim (Tel 031-781-2992, e-mail jinkung2@hanmail.net)