Renal cystadenocarcinoma arising from ovarian adenocarcinoma in a three year old Doberman bitch
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Primary ovarian tumors are uncommon in domestic animals, while cystadenocarcinoma is the commonest ovarian epithelial tumor in dogs. Renal cystadenocarcinomas have been reported in German Shepherd Dogs and Golden Retrievers, however, a renal cystadenocarcinoma associated with an ovarian cystadenocarcinoma has not been previously described in the literature. A three-year-old Doberman was presented with complaint of lethargy and weight loss. Physical examination revealed a mass in the right abdomen. Laboratory abnormalities included anemia, azotemia and metabolic acidosis. The mass was not opacified on excretory urography but the right renal pelvis and ureter were distended. The right calyces, pelvis and proximal ureter were dilated while the distal part of the right ureter was not observed. Transcutaneous abdominal ultrasound of the dog revealed an oval shaped mass located proximal to the bladder and distal to the caudal pole of the right kidney. The mass consisted of a central anechoic area surrounded by hypoechoic tissue. Following laparotomy, the mass was located in the right half of the abdominal cavity between the kidney and ovary. The mass was well-vascularized and attached firmly to the abdominal wall dorsally, while the right ovary was attached to the mass through a thin connective tissue band. Nephroureterectomy and ovariohysterectomy were performed and the resected tissues were submitted for histopathology. Histologically, the renal mass showed the papillary and tubular patterns of renal cystadenocarcinoma. The papillary projections and tubules were lined by pleomorphic, cuboidal to columnar epithelial cells. The cells were small, with somewhat basophilic, non-vacuolated cytoplasm. Their nuclei were round to oval and contained prominent single or double nucleoli. The mitotic rate was high. The tumor was highly vascularized and there was necrosis of tissue far from blood vessels. In addition, the ovary was normal in size and showed papillary pattern of mucinous cystadenocarcinoma. The bitch was euthanized owing to poor improvement. At necropsy of the left kidney revealed an end-stage kidney. It was concluded that the renal cystadenocarcinoma must have arisen secondary to a primary ovarian cystadenocarcinoma through stromal invasion.

Keywords: Renal cystadenocarcinoma, ovarian cystadenocarcinoma, Doberman, inbred, dog