

BACKGROUND

Uterine torsion is rarely reported in rabbits, mainly described in cases of pregnancy, hydrometra, or metritis; it may be promoted by the existence of uterine masses, fetuses retention, congenital deformities, abdominal trauma, among other factors. It is a potentially life-threatening medical emergency characterized by rotation of the uterus or uterine horns more than 45° around long axis of the uterus. Herein, we report a case of uterine horn torsion associated with uterine adenocarcinoma, one of the most common tumors in female rabbits.

RESULTS

The necropsy revealed poor body condition, ascites, an extensive mass, in the right uterine horn that showed torsion (Fig. 2). The intraluminal mass was located at 1.5 cm of the salpinges, was pale, homogeneous, measuring 6x1.5x1.5 cm, occupying the uterine lumen; the uterine wall and the mass presented necrotic areas (Fig. 3). There was also extensive pulmonary metastasis with pleural carcinomatosis, and thoracic effusion (Fig. 4). Extensive lymph node metastasis, liver metastasis and bilateral renal metastasis were also observed.

Microscopic Analysis

The neoplastic uterus mass consisted of cuboid to columnar epithelial cells with moderate to high cytological atypia, forming sheets, solid or tubular arrangement (Fig. 5 and 6), sometimes presenting small cysts with proteinaceous content, and glomeruloid areas, extensive necrosis and microcalcifications. The stroma was hypoplastic, sometimes with hyalin change, positive to Congo Red stain (Fig. 7 and 8). The metastases showed similar characteristics to those of the primary uterine mass (Fig. 9 and 10). The remaining organs showed no significant histological changes.

DISCUSSION

Disorders related to the reproductive tract are common in pet rabbits, including uterine adenocarcinoma, pyometra, hydrometra, endometrial venous aneurysm, and abortion. The most common underlying cause for uterine torsion is pregnancy; otherwise, uterine torsion is rare in most species, and may also be promoted by the existence of uterine masses, retention of fetuses, congenital deformities, abdominal trauma, among other predisposing factors. It causes infarction of the affected structure and if it is not reversed, it usually has a fatal outcome. According to the consulted literature, there are just 4 cases previously published.

Uterine tumours are suggested to be one of the most frequent form of neoplasia in female rabbits; uterine adenocarcinoma is a slow growing malignant tumor that affects 50-80% of pet rabbits over 4 years old.

References:

- Sebesteny A (1972) A case of torsion of the uterus in a rabbit. *Lab Anim* 6:357-8.
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Baum B (2021) Not just uterine adenocarcinoma—neoplastic and non-neoplastic masses in domestic pet rabbits (*Oryctolagus cuniculus*): A Review. *Vet Path* 58(5) 890-900.
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MATERIAL AND METHODS

A 7-year-old female rabbit pet was consulted at the Exotic Animals Service of the HVUTAD due to apathy and prostration. Clinical examination revealed poor body condition, dehydration, and hypotension. An X-ray showed a mass in the uterine region (Fig. 1) and multiple pulmonary metastatic nodules, and a presumptive diagnosis of metastatic uterine adenocarcinoma was made. After stabilization, the animal went home on palliative care, where it remained stable until it was found dead two weeks later.

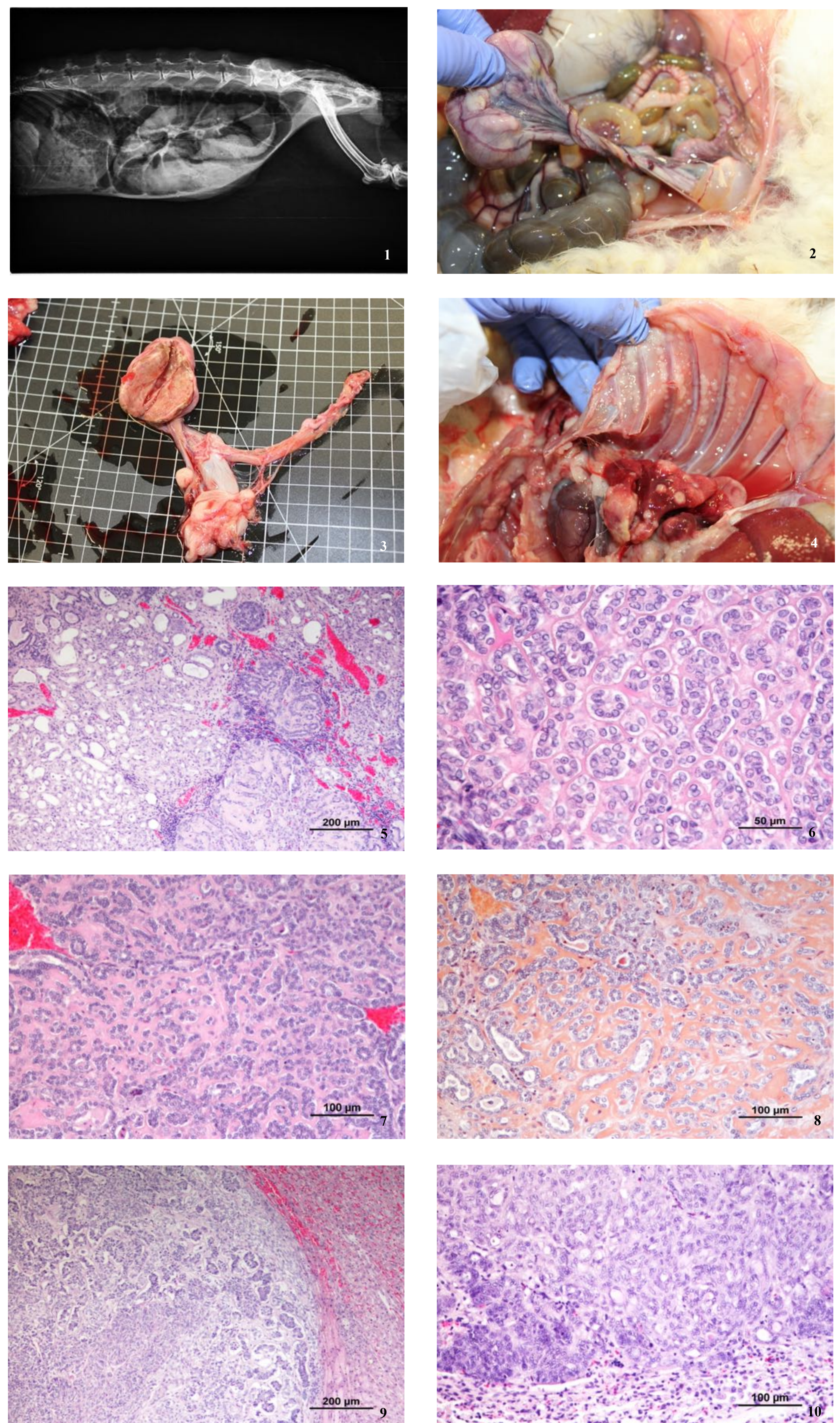


Figure Legends

- Fig. 1: Lateral X-ray of the abdomen, showing gastric and cecal dilation, and the presence of an organ shadow in the distal abdomen compatible with a hypertrophic uterus.
Fig. 2: Extensive uterine mass in the right uterine horn that shows torsion and necrosis.
Fig. 3: Longitudinal section of uterus adenocarcinoma.
Fig. 4: Multiple lung metastasis and pleural carcinomatosis.
Fig. 5-7: Adenocarcinoma with tubular and cordonal growth patterns, and hyalin change of the tumor stroma (H&E).
Fig. 8: Positivity of the stroma to Congo Red stain (Congo Red).
Fig. 9: Liver metastasis.
Fig. 10: Lung metastasis.