

IT'S YOUR CASE

Species: Rabbit

Breed: Domestic

Sex: Male Entire

Age: 8 years

Clinical History:

Not able to move, seems to be dragging the back legs.
Decreased appetite for a few days, not really eating at this time.

Details of study and technical comments:

The following images are available for interpretation:

- Thorax and Abdomen: right lateral and ventrodorsal projections

The image quality for the exam is diagnostic.

Diagnostic interpretation:

Thorax

The cardiac silhouette and pulmonary vasculature are unremarkable. The lungs are unremarkable for the age of the patient. No abnormalities of the pleural space are seen. The T5 to T7 vertebrae are wedge shaped, narrowed ventrally, which is resulting in marked focal kyphosis and scoliosis (Figure 1).



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t. +44 (0)1223 422251 www.vet-ct.com e. info@vet-ct.com

Co Number 6955449 Registered Office St John's Innovation Centre Cowley Road Cambridge CB4 0WS UK
ABN 24601862220 Registered Office in Australia Suite 11, 185-187 High Street Fremantle WA 6160 Australia

This report is based on the available history and radiographic interpretation only and not on a physical examination of the patient. It has been prepared specifically for interpretation by the currently licensed and registered veterinary surgeon responsible for the care of this patient.

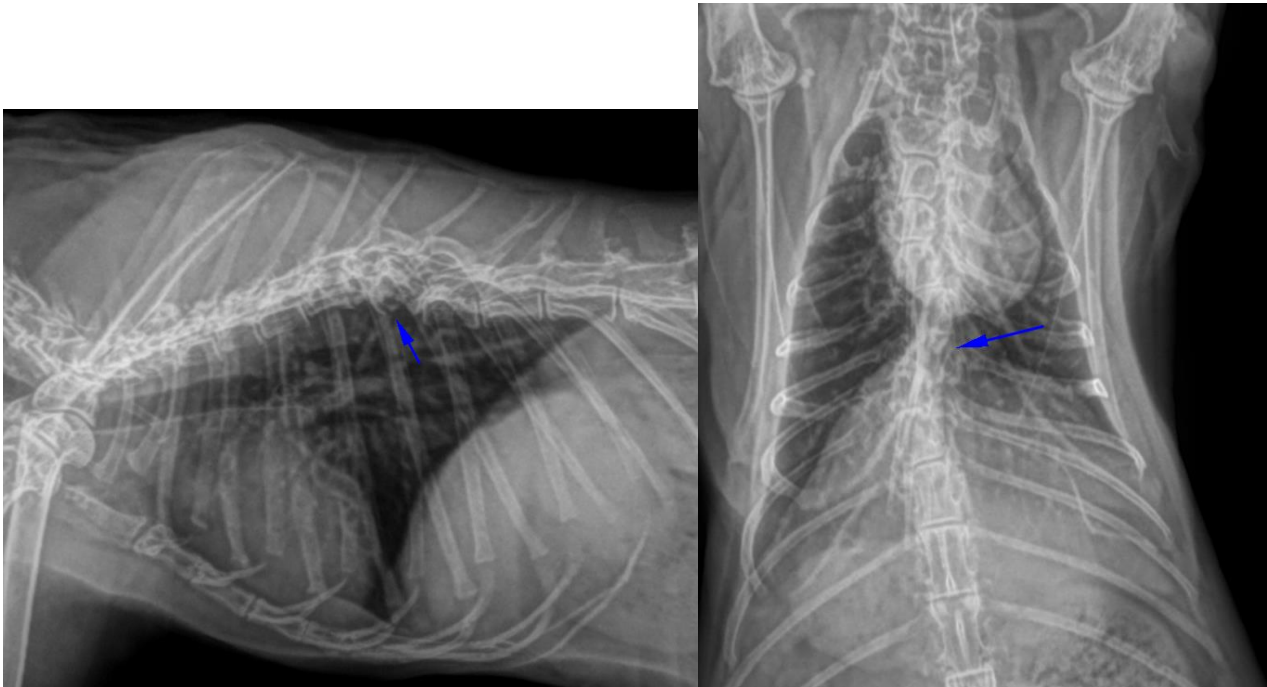


Figure 1. Lateral and ventrodorsal projections demonstrating the wedge-shaped mid-thoracic vertebral bodies and regional kyphosis and scoliosis (blue arrows).

Abdomen

The liver is unremarkable. The stomach contains a moderate amount of heterogeneous soft tissue and gas opaque material, similar material is noted within the cecum. There is no evidence of small or large intestinal dilation. Within the left cranial abdomen, there is predominantly fat opaque material, resulting in a regional mass effect. Subjectively, the kidneys are bilaterally enlarged measuring 2.4 times the L2 vertebral body length. The urinary bladder contains uniform mineral opaque material, and this material is seen extending into the inguinal region creating a bilobed appearance to the urinary bladder. There is a soft tissue opaque mass effect within the inguinal region, which has heterogeneous soft tissue and gas opaque material. Well-defined ovoid mineral bodies are seen associated with the left L3 and L4, as well as bilateral L6 transverse process apices. (Figure 2). A broad-based fat opaque mass effect is present within the mid-ventral abdominal subcutaneous tissues, at the level of L2.



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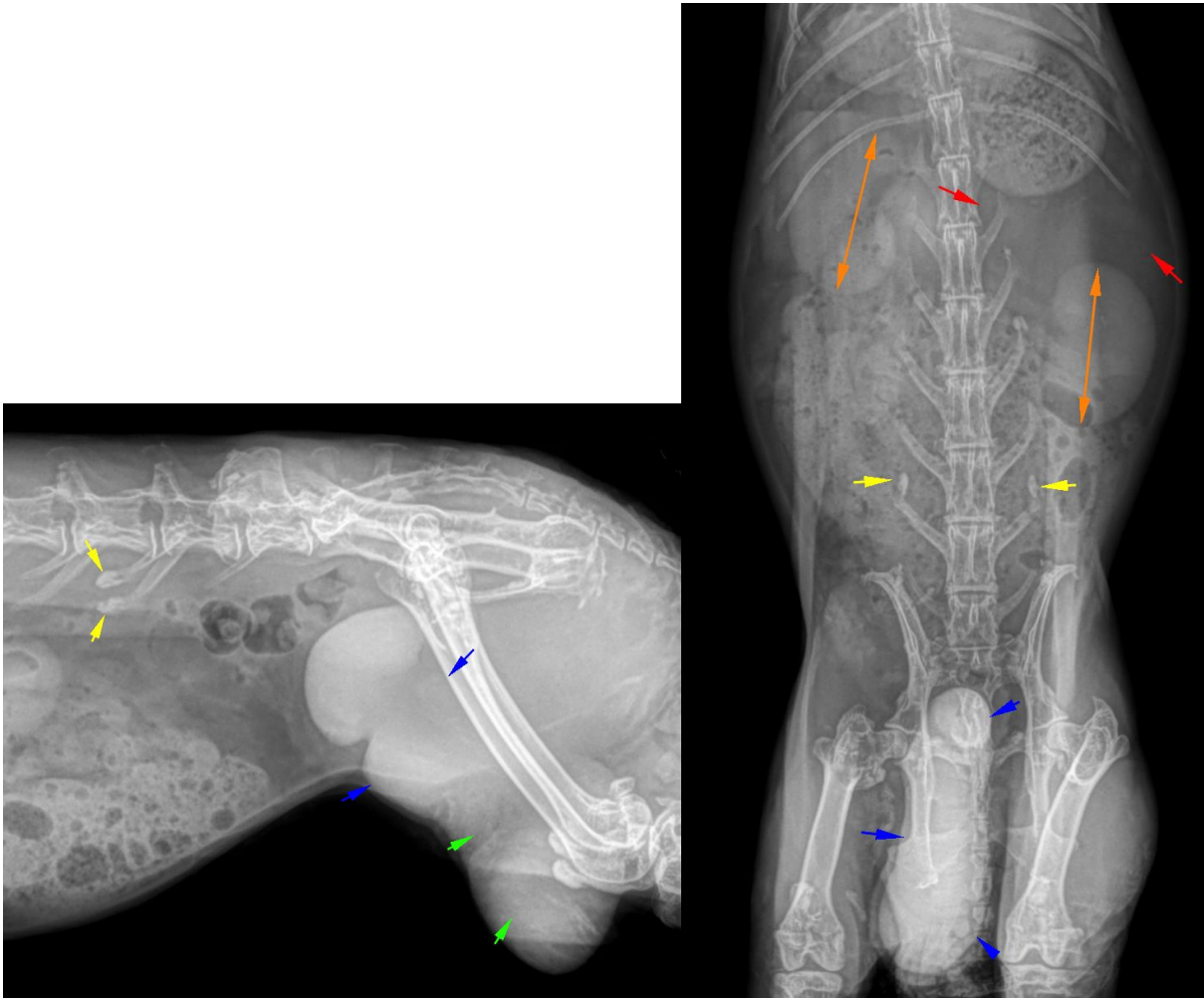


Figure 2. Lateral and ventrodorsal projections documenting the bilateral subjective renomegaly (orange double arrows). Note the bilobed appearance to the mineral opaque contents the urinary bladder (blue arrows). This extends into the inguinal region and there is concurrent heterogeneous soft tissue and gas opaque material within this inguinal mass effect (green arrows). A poorly defined fat opaque mass effect is present within the left cranial abdomen (red arrows). Ovoid mineral bodies are seen associated with the L6 transverse processes (yellow arrows).

Conclusions:

1. Suspect inguinal hernia with urinary bladder and possibly cecal (or other intestine) involvement. There is concurrent evidence of mineralized crystalluria.
2. Possible bilateral renomegaly. This could be secondary to an obstructive uropathy or acute renal failure; however, normal anatomic variation cannot be excluded.
3. Mid-thoracic vertebral anomalies, which may represent acquired (acute or chronic fracture) or congenital etiologies with secondary kyphosis and scoliosis.
4. Left cranial abdominal fortuitous fat deposition or intra-abdominal lipoma.
5. Multifocal dystrophic mineralization associated with the lumbar transverse processes, which is likely incidental.
6. Incidental umbilical hernia or ventral abdominal wall lipoma.



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Additional comments:

There is no mention of an inguinal mass effect in the history; however, based on this exam, an inguinal hernia is suspected. The history of pelvic paresis raises the concern that the mid-thoracic lesion is an acute rather than chronic lesion. Clinical correlation is required.

Clinical note for inguinal herniation of bladder:

Male rabbits are predisposed to inguinal and scrotal hernias because their inguinal rings remain open throughout life. Inguinal hernias can occur in female rabbits too. In both sexes, the urinary bladder and intestines are often what is herniated. Inguinal and scrotal hernias are often associated with a history of trauma. Diagnosis is confirmed by radiographs and/or ultrasound evaluation. Treatment is surgical repair via herniorrhaphy with a prescrotal incision over the inguinal ring on the side with the herniation. The herniated structures are identified and replaced followed by closure of the inguinal rings and abdominal wall.

Specific to this case, this rabbit's inability to walk history of dragging back legs is not a typical presentation of uncomplicated inguinal hernias in rabbits. The changes in the thoracic vertebrae may indicate possible spinal cord damage and a neurological evaluation for paralysis should ideally occur prior to surgery for hernia repair. The changes in the thoracic vertebrae combined with the presence of an inguinal hernia suggest a history of trauma.

- Grunkemeyer VL, Sura PA, Baron ML, Souza MJ. Surgical repair of an inguinal herniation of the urinary bladder in an intact female domestic rabbit (*Oryctolagus cuniculus*). *Journal of Exotic Pet Medicine*. 2010 Jul 1;19(3):249-254.
- Petritz OA, Guzman DS, Gandolfi RC, Steffey MA. Inguinal-scrotal urinary bladder hernia in an intact male domestic rabbit (*Oryctolagus cuniculus*). *Journal of Exotic Pet Medicine*. 2012 Jul 1;21(3):248-254.
- Thas I, Harcourt-Brown F. Six cases of inguinal urinary bladder herniation in entire male domestic rabbits. *Journal of Small Animal Practice*. 2013 Dec;54(12):662-6.



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