COMPUTED TOMOGRAPHIC (CT) FEATURES OF THE CISTERNA CHYLI (CC) IN CATS

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EVDI ONLINE CONGRESS 23-24 SEPTEMBER 2021

Introduction

Anatomy of the feline CC (1):

- Retroperitoneal structure. Dorsal to the abdominal aorta and renal veins, between L2 to L4
- Oval-shaped sac (2.5 cm length)
- Drains
  - Intestinal lymph trunks → abdominal viscera
  - Lumbar lymph trunks → pelvic limbs
  - Cranial extension: thoracic duct

Diagnostic imaging of the CC:

- CT appearance of the CC is described in dogs (2), not in cats
- Ultrasound, lymphangiography and CT lymphangiography described in dogs and cats with idiopathic chylothorax (3,4)

OBJECTIVE: to describe the CT findings of the CC in a group of cats without lymphatic system pathology

Methodology

- **Retrospective study.**
- Abdominal or vertebral column CT. Transverse plane
- **Exclusion criteria**:
  - Diagnosis of lymphatic system pathology
  - Diseases associated to development of chylothorax or chyloabdomen
- **CC:**
  - Retroperitoneal structure
  - Fluid attenuation
  - Adjacent to abdominal aorta
  - Caudal to thoracic duct
- **Evaluation:**
  - Presence, location, shape, width, Aorta:CC ratio, mean attenuation (survey and post- intravenous contrast study)

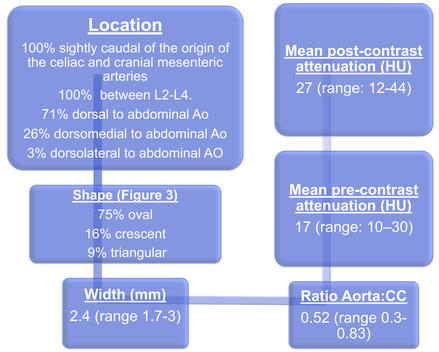

Figure 1. CT features of CC in cats

Results

- 31 feline CT
- Breed: DSH (28/31); 16 ♂ and 15♀, mean age 5.1 years (range: 1-15); mean body weight 3.9 kg (range 3.3-4.8)
- Mean features CC: **Figure 1**
- CC visible in survey exams of 29 cats
- CC visible in all the post-contrast studies (**Figure 2**)

Conclusions

- CC consistently visualized in survey CT in 90% of all studies; and visible in all post-contrast studies
- CC anatomical location like that reported in post-mortem studies (1)
  - Aorta and cranial mesenteric artery helpful landmarks (2,3,4)
- Variation in size and shape
  - May be normal anatomic variation
  - Also reported in dogs (2)
- Mean attenuation CC in survey/post-contrast studies: like in dogs (2)
- Limitations:
  - Lack of histopathological confirmation of normal CC
  - Small number of cases
  - Retrospective study
- **Pre-and post-contrast CT is a potential non-invasive method to assess the abdominal lymphatic ducts in cats**

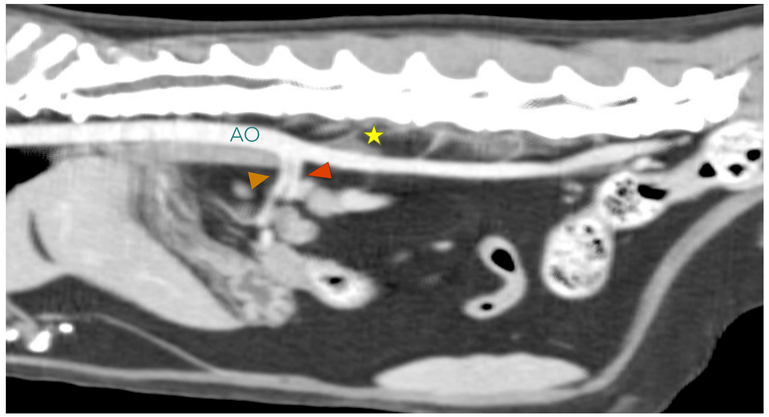

Figure 2. Sagittal image of CC (yellow star) and anatomic landmarks : coeliac artery (orange arrowhead), cranial mesenteric artery (red arrowhead) and AO (aorta).

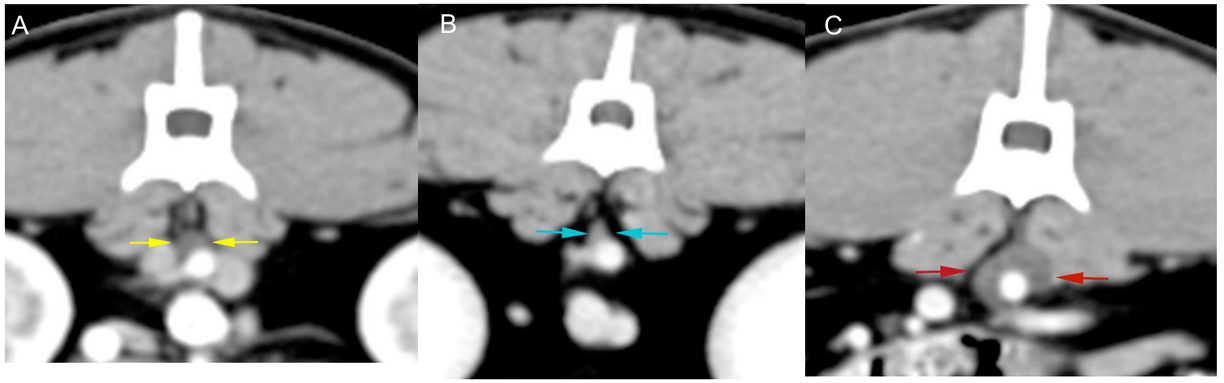

Figure 3. Transverse images showing different shapes of CC: oval (A), triangular (B) or crescent (C). Oval shape: CC covers between 90º and 180º of the Ao; Crescent shape CC covers 180º or more of the Ao.

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