

Patient Information

Patient:		Patient ID:		Report Number:	27271
Patient Birth Date:		Age:		Gender:	F
Study Description:		Accession:		Study Date:	20201104
Species:		Breed:		Modalities:	CT
Sedation Used:	No	Anesthesia Used:	No	Submitted By:	
Facility:		Submitted:	2020-11-09 15:42:56 UTC	Finalized:	2020-11-14 00:12:12 UTC

Annotated Images Requested: No

STAT Request: 0

Anatomical Region:

History

yo female . Non-releasable animal that stranded as a pup with ocular problems (available information limited). R eye has corneal scarring and is missing lens with significant posterior synechiae, most consistent with trauma +/- underlying congenital issue. L eye has significant corneal pigmentation and also appears non-visual. Animal displays bilateral nystagmus that is considered to be related to juvenile blindness rather than true neuropathology.

Findings

Helical CT volume data of the head thorax and cranial abdomen (96 cm) was obtained without use of iodinated contrast medium, and transverse plane images are available in soft and sharp reconstruction algorithms. Additional volume data of the thorax, abdomen, and pelvis (127 cm) was obtained following intravenous administration of iodinated contrast medium, and transverse plane images are available in soft and sharp reconstruction algorithms. The patient was intubated and positioned in sternal recumbency for image acquisition. No prior CT is available for comparison.

Number of images (in two DICOM series): 5682 + 4771

Anatomy evaluated: head, thorax, abdomen

Physical length of scan: 96 + 127 cm

- Head and neck (pre-contrast; soft and sharp reconstruction algorithms): The hyper-attenuating right ocular lens is small, irregularly margined, and caudally displaced, and the sclera and choroid are subjectively thickened; the ocular globe is otherwise inflated and smoothly margined. The left ocular globe is small relative to contralateral and exhibits a slightly irregular margin, with a similar impression of scleral/choroid thickening. Throughout the left ocular posterior chamber there are wispy mineral and soft tissue attenuating striations. The adnexal soft tissues are unremarkable, bilaterally. The oral cavity and dentition; sinonasal structures; temporomandibular joints; inner middle and external ears; brain and calvarium are within expected variation of appearance.
- Thorax (pre- and post-contrast; soft and sharp reconstruction algorithms): Severe photon starvation inhibits optimal evaluation. Respiratory motion artifact gives the impression of thoracic vertebral malalignment, and results in cyclic uniform pulmonary hyper- and hypo-attenuating throughout volume acquisition. During peak inspiration there is patchy increased soft tissue opacity which occasionally gives the impression of a reticulointerstitial pattern with rare ground-glass nodules. On post-contrast series there is significant venous pooling of contrast medium in the major cranial vena cava tributary vessels. Along the floor of the cranial mediastinum there is greater than expected pre-caval tortuosity and congestion. The thoracic limbs are unremarkable.
- Abdomen and pelvis (post-contrast; soft and sharp reconstruction algorithms): Within the right-sided subcutaneous fat along the dorsolateral margin of the pelvis there are multiple gas bubbles. The coxofemoral

and stifle joints and long bones of the pelvic limbs are unremarkable. On late-phase post-contrast images the kidneys exhibit expected nephrogram-phase contrast enhancement consistent with reniculate morphology. Scant contrast medium is also seen pooling in the hepatic sinus during late phase series. Associated with the left and right ovaries there are well defined, ovoid, centrally fluid attenuating and non-contrast enhancing structures measuring 2.5 cm 1.6 cm in maximum respective transverse dimension. Scant small intestinal gas is present. No hepatobiliary, gastrointestinal, urinary bladder, or peritoneal abnormality is identified.

Impressions

1. OS: Phthisis bulbi with suspected chronic scleritis, and posterior chamber mineralization (e.g. chronic posterior lens luxation with dystrophic mineralization; remodelling hematoma; mineralized granuloma). OD: posterior lens luxation and atrophy, and suspected chronic scleritis. Prior trauma is the leading consideration, however, concurrent/alternative congenital abnormalities are not excluded. Further evidence of head trauma is not seen on the current study.
2. Alternating hyperattenuating pulmonary changes consistent with respiratory cycle (captured within CT volume data), within physiologic variation for the species. The reticulointerstitial pattern and rare ground-glass nodules seen in well-inflated lung are potentially within normal variation of appearance, however, the possibility of infectious pneumonia should also be considered.
3. Greater than expected (relative to scans of similar species) pre-caval venous congestion on multiple post-contrast series. This may be a consequence of reduced cardiac output under general anesthesia, insufficient post-contrast saline flush, or potentially an incompletely characterized anomaly of regional vasculature (e.g. congenital versus secondary to prior trauma).
4. Bilateral ovarian cysts or cystic follicular changes measuring up to 2.5 cm (L) and 1.6 cm (R).
5. Localized subcutaneous emphysema overlying the right dorsolateral aspect of pelvic region - likely iatrogenic from recent subcutaneous medication administration.

Figures:

- Figure 1 - Dorsal MIP of head demonstrating caudal displacement and atrophy of the right ocular lens (long arrow) as well mineralization of the contralateral posterior chamber (short arrow). Note asymmetry of the left ocular globe consistent with phthisis bulbi.
- Figure 2 A - Dorsal minIP of thorax demonstrating hyperattenuating pulmonary change during expiration (between orange arrows) seen over several respiratory cycles captured within the CT volume acquisition, within physiologic variation of appearance for species.
- Figure 2 B - Sagittal MIP of cervical and thoracic spine demonstrating abnormal appearance of several vertebrae secondary to respiratory motion artifact.
- Figure 2 C - Transverse lung algorithm image of well-inflated lung demonstrating a poorly defined ground-glass nodule with an otherwise reticulointerstitial appearance of the lungs.
- Figure 3 A - Dorsal volume rendered MIP demonstrating venous pooling of contrast medium (short arrows) ventral to the aortic arch (*).
- Figure 3 B - Oblique sagittal volume rendered MIP demonstrating venous pooling of contrast medium (short arrows) ventral to aortic arch (*).

Recommendations

Report on 2020-11-14 00:12:12 UTC signed by:

Philip Hamel

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Fig 1 Dorsal MIP head.png



Fig 2 A Dorsal minIP.png

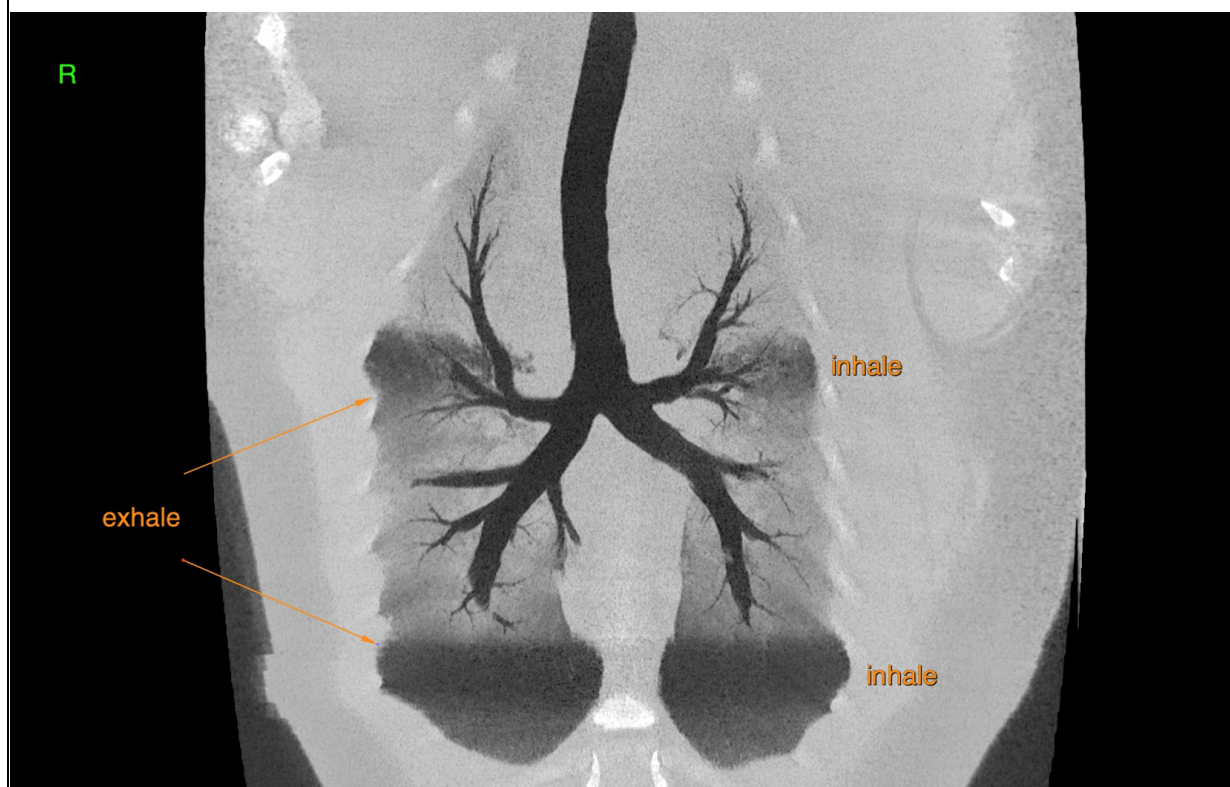


Fig 2 B Sagittal MIP.png

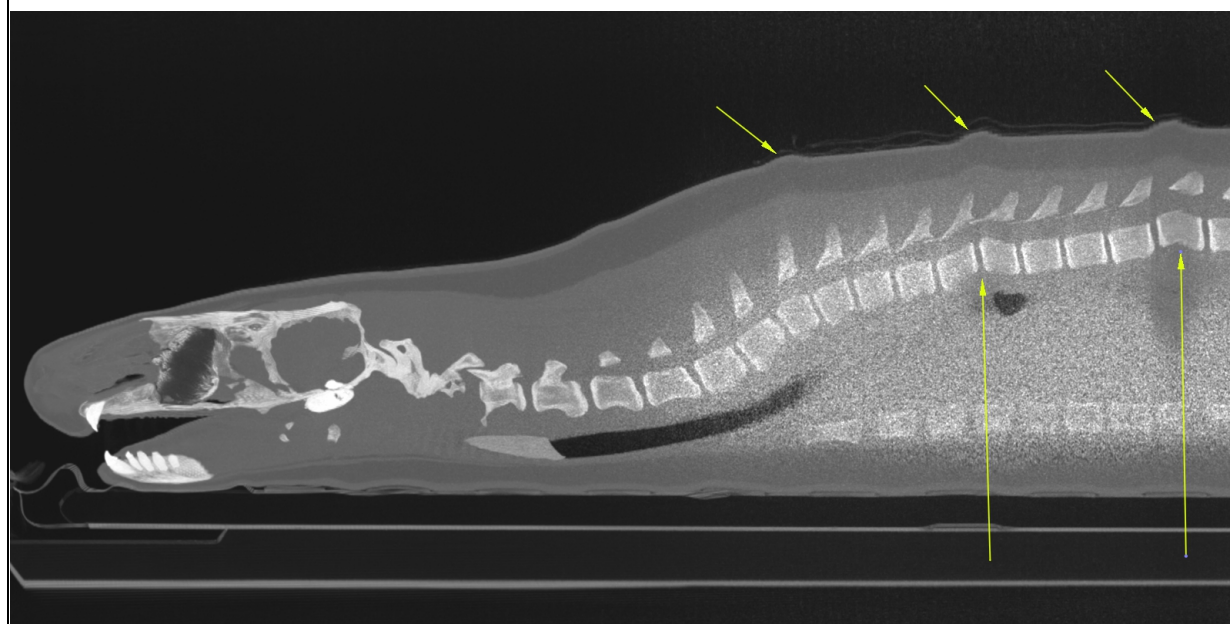


Fig 2 C Transverse lung algorithm.png

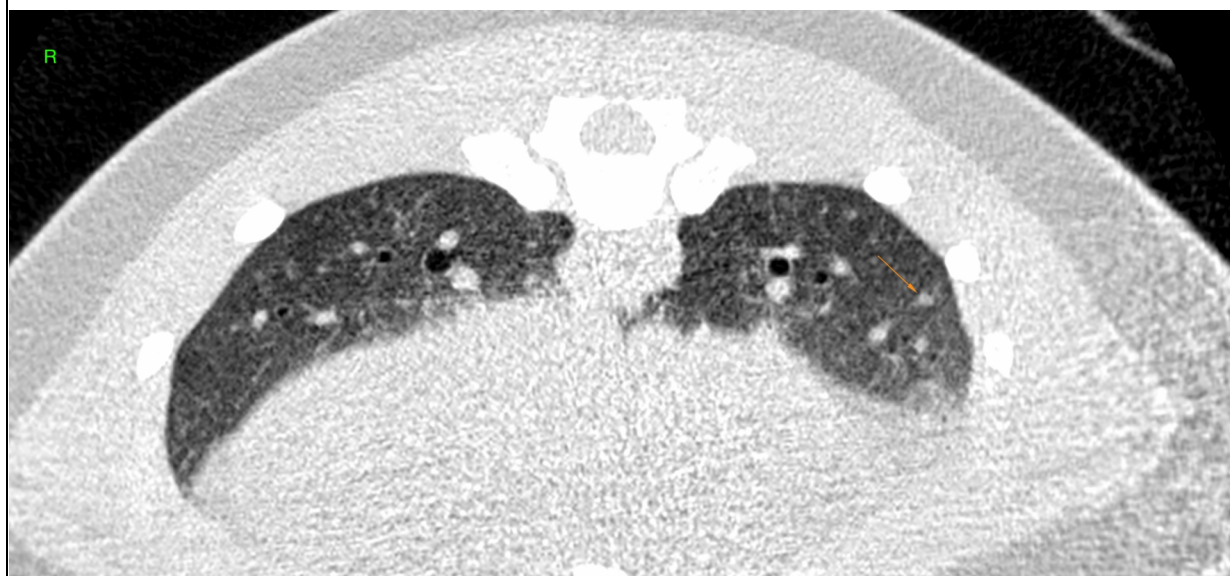


Fig 3 A Dorsal VR-MIP.png

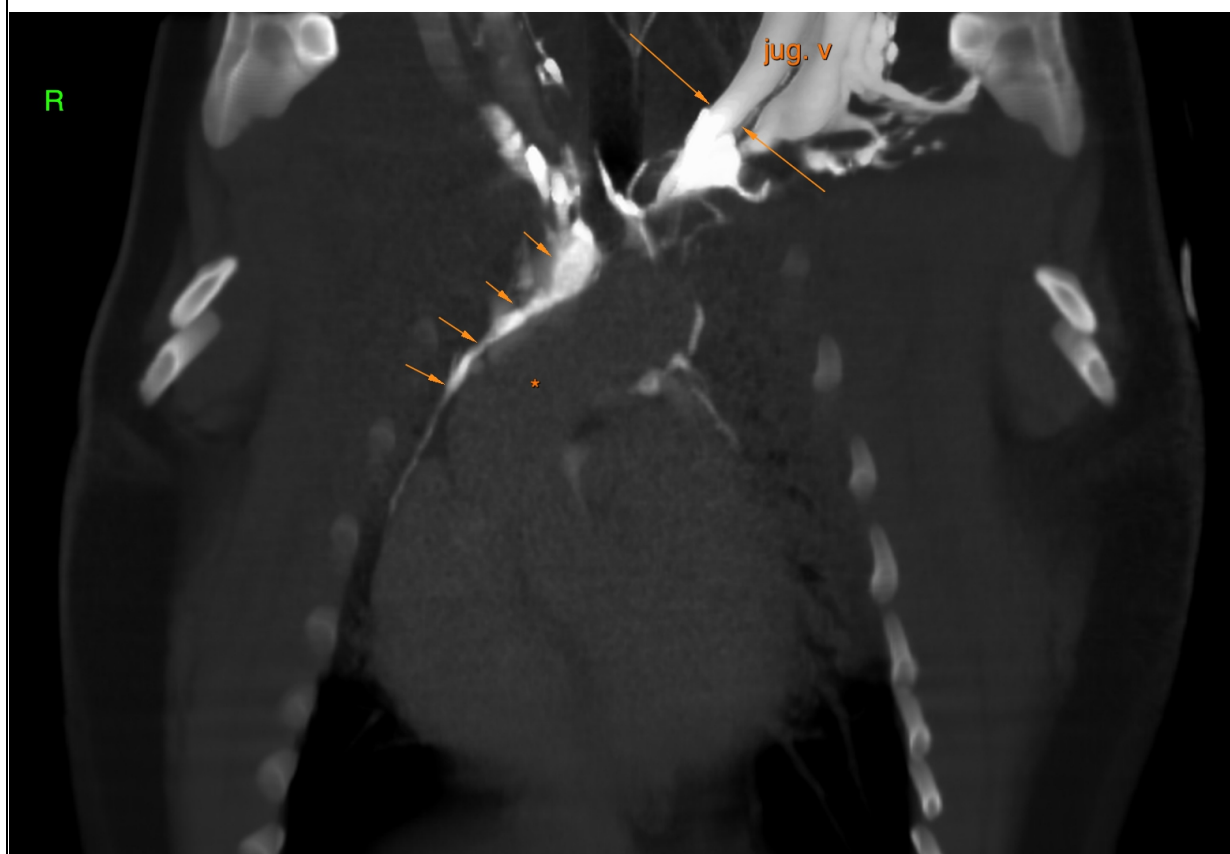


Fig 3 B Oblique sagittal VR-MIP.png

