

Volume Rendering CT Imaging of an Aberrant Right Subclavian Artery with Normal Left Aortic Arch in a Kitten

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Signalment: Five-month-old, entire male, Domestic Short Hair was presented with persistent regurgitation following the ingestion of solid food. The regurgitation was observed soon after weaning. Episodes of respiratory distress and cyanosis were also present. Physical examination, survey radiographs and contrast study were performed to evaluate the cause of regurgitation. CT angiogram was carried out to achieve more accurate information.

Results: There was mild dehydration and depression in the physical examination. On the survey and contrast study radiographs, it was considered that the segmental esophageal dilation cranial to the heart base has been possibly related with a vascular ring anomaly. A tentative diagnosis of a vascular ring anomaly was made and contrast-enhanced CT revealed an abnormal branch of the right subclavian artery and normal left aortic arch.

Clinical relevance: Among the cases of vascular ring anomaly that has been reported in cats, persistent right aortic arch with left ligamentum arteriosum occurs dominantly, and persistent left aortic arch with right ligamentum arteriosum and double aortic arch happened rarely. We encountered a rare case of vascular ring anomaly in a cat having a left aortic arch with right ligamentum arteriosum leading to esophageal constriction associated with regurgitation and aberrant right subclavian artery confirmed by 3D-CT image in a kitten. 3D-CT appears to be an excellent diagnostic method to confirm the vascular anomaly in a suspected vascular ring anomaly patients as well as communicating with the patient owner and surgeons.

Key words : vascular ring anomaly, 3D-CT, aberrant right subclavian artery, regurgitation, cat

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