Computed tomographic features of arterial pseudoaneurysm in three dogs.

COMPUTED TOMOGRAPHIC FEATURES OF ARTERIAL PSEUDOANEURYSM IN THREE DOGS

Ramalho G[1], Dennison-Gibby S[2], Blacklock K[1], Dancer S[1], Cherbinsky O[3], Schechter A[3], Schwarz T[1]

1 - Royal (Dick) School of Veterinary Studies & Roslin Institute, The University of Edinburgh, EH25 9RG, UK.

2- TeleVet Imaging Solutions, PLLC, Post Office Box 3344, Oakton VA 22124, United States of America.

3- Atascadero Pet Hospital and Emergency Center, 9575 El Camino Real, Atascadero, CA 93422

Computed tomography (CT) is a valuable diagnostic technique in the clinical work-up of dogs with suspected vascular lesions. Pseudoaneurysms are an accumulation of blood extra-luminally contained by the adventitia layer or nearby tissues. These lesions are caused by damage to the vessel wall due to trauma, degenerative or erosive disease processes. Purpose of this retrospective, multi-centre, observational, case series study was to describe the CT features of pseudoaneurysms and their potential causes in dogs. We hypothesized that (1) pseudoaneurysm can be identified on CT as a small area of marked vascular contrast enhancement in the vicinity of a vessel contained by soft tissue structures and (2) that there is evidence of vascular trauma associated with the pseudoaneurysm. Medical records archives were searched for canine patients with bleeding, imaging archives were searched for CT studies with visible extravasation of contrast-enhanced blood. Three dogs met the inclusion criteria. CT findings included a well-defined, confined area of vascular contrast enhancement adjacent to the carotid or maxillary artery. 4DCT demonstrated contrast medium leaking from the vessel and becoming restricted between the adjacent structures. All dogs had signs of trauma, either a bone fracture or penetrating lesion. Vascular pseudoaneurysm should be considered a differential diagnosis in dogs with CT features of a well-defined, perivascular, strongly contrast-enhancing lesion, particularly in cases of suspected local bleeding. 4DCT is helpful to confirm active extravasation.