RUPTURED AORTIC SINUS OF VALSALVA ANEURYSM ASSOCIATED WITH AORTIC CYSTIC MEDIAL DEGENERATION AND AORTO-CARDIAC FISTULA IN A HORSE

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Introduction: Ruptured aortic sinus of Valsalva aneurysm associated with a formation of aorto-cardiac fistula is a rare condition in horses. Rupture of the aortic root or aneurysm of the right aortic sinus can lead to an aorto-cardiac fistula, permitting communication between the aorta and cardiac chambers.

Materials and Methods: An 18-year-old Paint mare underwent clinical examination with electrocardiographic and echocardiographic examination due to depression, exercise intolerance, anorexia, tachycardia, fever and tachypnea. Because of an inadequate response to cardiological treatment, euthanasia was elected two months after the initial presentation. Heart gross post-mortem and histopathological examination (including H&E and PAS staining) was performed.

Results: Trans-thoracic echocardiography revealed an aneurysm of the right sinus of Valsalva protruding into the right atrium. Ruptured aneurysm and associated blood flow through and aorto-cardiac fistula was confirmed using color flow Doppler.

Post-mortem examination confirmed the communication between the right sinus of Valsalva and right atrium. The histopathological examination revealed fragmentation and hypoplasia of the elastic fibers in the aorta separated by PAS-positive interstitial homogenous material.

Conclusions: Although rarely noted, aorto-cardiac fistulas should be considered as a possible cause of heart failure symptoms in elderly horses.