

Saluki Heart Hemangiosarcomas

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An investigation on Saluki heart pathology found a high site incidence (32.5%) of cardiac hemangiosarcoma (CHSA). This study was undertaken because of the frequent clinical diagnoses of "heart disease" and some sudden deaths among Saluki dogs. Samples (38) were received from 1991 to 1999 from Saluki owners aware of the concerns for cardiovascular health in the breed and this allowed us to accumulate a "Select Saluki Group" (SSG) of hearts. Veterinarians have judged Saluki hearts to be enlarged on sonograms but few histologic lesions in this study were consistent with hypertrophic or dilative cardiomyopathy. In the last ten years, the Animal Health Diagnostic Laboratory received specimens from 73 Salukis, including the SSG hearts. During that same period 77,883 biopsy/necropsy samples were examined from dogs of all breeds resulting in over 99,000 individual diagnoses. Fatal hemangiosarcomas occurred in 659 of those canine cases (0.86%), 108 of 17,556 feline cases (0.62%), and 13 of 7,400 equine cases (0.18%). We also looked for trends in HSA occurrence when compared to lymphomas. Dog lymphomas have remained fairly constant at about 1.5% of diagnoses, while canine HSA have increased from less than 1% to approximately 1.5%. The location of canine HSA was found to be in the skin of 32.8% of all HSA cases, in the spleen of 28.8% and in the heart of only 7.1%. The tumors were diagnosed with a 41% to 56% female to male ratio. The breeds of highest incidence were the Saluki (32/73), Golden Retriever (119/5196), German Shepherd (37/2796), Labrador Retriever (47/5159), and Boxer (16/2033), respectively. The average age of all HSA cases was 9 years, while it was roughly 11 years for the Saluki.

The extraordinarily high incidence of CHSA in the SSG hearts is consistent with a 1999 review of cardiac tumors at Iowa State / Purdue from 1992-1995*. In that study, the Saluki breed was also found to have the highest incidence of CHSA of any breed (0.75%). For all breeds, the frequency of CHSA at Michigan State University (0.073%) is not substantially different from the frequency found in that study (0.087%).

The Saluki hearts from SSG were evaluated utilizing standardized pathology procedures, including gross, macro- and microscopic examinations; of the 32.5% of the SSG hearts with CHSA of the right atrium, the majority of the CHSA were primary; however, in two cases, noncardiac hemangiosarcomas appeared to be primary in the spleen. A heart tumor of an unrelated type, a carotid body tumor, was also diagnosed in a Saluki. By actively soliciting for submissions of hearts from Saluki owners, it is apparent that we have uncovered a problem in the Saluki which must be explored to insure the future health of the breed.

The vast majority of SSG hearts had an array other lesions because the average age at death was 9.7 years. Most of the lesions were acquired, most frequently myxomatous degeneration of the endocardial surface of the mitral valve. This verrucous valvular disease occurred in 42% of the SSG hearts with severe changes occurring in 12%. Among other heart lesions were congenital insufficiency of the tricuspid valve (5%), and congenital insufficiency of the mitral valve (2%). There were vascular changes including mineralization of the aorta (5%), arteriosclerosis, and a single case of atherosclerosis. Other lesions included myocardial degeneration, pericarditis and conduction system abnormalities.

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