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Study of 6 cases of valvular vegetative endocarditis in Holstein Cows

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Introduction: Most cases of endocarditis and valvular disease in farm animals caused by bacteria infection. In cattle, endocarditis occurs most commonly on the right atrioventricular valve. But bilateral involvement of the valves is not uncommon. Endocarditis may arise from implantation of bacteria on to the endocardium from the bloodstream or by bacterial embolism of the valve capillaries. Chronic bacteremia predisposes to endocarditis. There may be a history of an on- going septic process such as mastitis, metritis, abscess, arthritis and traumatic reticuloperitonitis in endocarditis (2,3,4). Materials & methods: The study included 6 Iranian Holstein cows during 10 years (1986 - 1996) among dairy herds around Tehran. The following subjects for each affected cow were studied: history taking, clinical findings, haematological findings, necropsy findings and bacteriological findings. Results: All 6 cases culled after clinical and hematological examination. The important clinical findings included progressive emaciation, anemia, inappetence, milk decrease, weakness, tachycardia, cardiac murmur due to stenotic valves. Some cases showed a precordial thrill by palpation of cardiac areas on the both side of the chest, especially right chest. Only one case had moderate jaundice of the mucosae. Necropsy findings showed valvular lesions, often vegetative and cauliflower-like, especially on the tricuspid valves. In addition one heifer had ventricular septal defect just subaortal over the septum accompanied vegetative lesions on tricuspid surface. The bacterial isolate from valvular lesions included Actinomyces pyogenes (4 cases), Alpha-hemolytic streptococci (1 case) and Pasteurella multocida (1 case). Hematological findings indicated leukocytosis, neutrophilia, anemia and an elevation of plasma fibrinogen in some cases. Discussion & Conclusion: Murmur must be differentiated from pericardial and pleural friction sounds and other condition in which heart murmur occur. Pericarditis may produce sound but this sound is different to a murmur and there is usually also muffling of the heart sounds. If there is involvement of tricuspid valve, pericardial thrill in both side of the chest by palpation is evident. Lymphosarcoma of the right atrium can differentiated from valvular disease with other signs as enlargement of the superficial lymph nodes and serological test (2,3,4). Congenital valvular defects can be differentiating from acquired lesions with history and age of the animal. Also can be confirmed by echocardiography (1,3,4).

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