Normal left ventricular systolic time intervals in Baluchi sheep assessed by M-mode echocardiography

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Objective - Baluchi sheep is the most abundant race of sheep in Iran. No information has been published about normal echocardiographic parameters of this sheep. With regard to racial frequency, economic importance and being native of this breed in the province of Khorasan, the present study was designed to determine the normal left ventricular systolic time intervals by M-mode echocardiography.

Design - Cross-sectional study

Animals - Twenty-two adult Baluchi sheep (11 ewes and 11 rams), aged 1-4 years (mean ± SD: 2.32 ± 1.08 year), and weighting 30-62 kg (mean ± SD: 46.04 ± 10.9 kg) that were clinically and hematologically healthy were included in this study.

Procedures - The left ventricular systolic time intervals, pre-ejection period (PEP) and left ventricular ejection time (LVET) were measured, and the values of the left ventricular total electromechanical systole (LVTES) and the PEP-to-LVET ratio were calculated. Short-axis views of the left ventricle at the level of the aortic valve view in the 4th right intercostal window were used to measure these indices by M-mode echocardiography.

Results - In this study, PEP (mean ± SD: 0.043±0.007), LVET (mean ± SD: 0.186±0.025), LVTES (mean ± SD: 0.229±0.026), PEP-to-LVET ratio (mean ± SD: 0.233±0.046) were reported. No significant regurgitation jets were seen around the valves by color flow Doppler evaluation

Conclusion and Clinical Relevance - This measurement can be used as standard and reference values for evaluation of cardiovascular disorders of Baluchi sheep.

Key words - Echocardiography, M-mode, Baluchi sheep, systolic time intervals, normal

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