

Measurement of Echocardiographic Ejection Fraction Reference Values and Evaluation between Body Weight and Ejection Fraction in Domestic Rabbits (*Oryctolagus cuniculus*)

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Abstract : Domestic rabbits (*Oryctolagus cuniculus*) are an excellent model for cardiovascular research because the size of these animals is more suitable for study and experimentation than smaller animals. One of the most important diagnostic imaging methods is echocardiography, which is used today to evaluate the anatomical and functional cardiovascular system and is one of the most accurate and sensitive non-invasive methods for examining heart disease. Ventricular function indices can be assessed with cardiac imaging techniques. One of these important cardiac parameters is the ejection fraction (EF), which has a valuable place along with other involved parameters. EF is a measure of the percentage of blood that comes out of the heart with each contraction. For this study, 100 adult and young standard domestic rabbits, six months to one year old and of both sexes (50 female and 50 male rabbits) without anesthesia and sedation were used. In this study, the mean EF in domestic rabbits studied in males was 58.753 ± 6.889 and in females, 61.397 ± 6.530 , which are comparable to the items mentioned in the valid books and the average size of EF measured in this study; there is no significant difference between this research and other research. There was no significant difference in the percentage of EF between most weight groups, but there was a significant difference ($p < 0.05$) in weight groups (2161-2320 g and 2481-2640 g). Echocardiographic EF reference values for domestic rabbits (*Oryctolagus cuniculus*) non-anesthetized are presented, providing reference values for future studies.

Keywords : echocardiography, ejection fraction, rabbit, heart

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