



University of Zabol
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The Thesis Submitted for the Degree of DVM

**Evaluation of electrocardiogram parameters of Sistani cows during
different ages using base-apex lead**

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September 2021

Abstract:

Due to the importance of the cardiovascular system, electrocardiography is used as a common method in the diagnosis of cardiac arrhythmias. An electrocardiogram should be taken at a complete cardiovascular examination, as this is the most accurate method for examining disorders of the cardiovascular system and determining cardiac dysrhythmias. Obtaining a base-apex lead electrocardiogram is the best method for examining dysrhythmias and various parameters of bovine electrocardiogram. The aim of this study was to obtain ECG via base-apex lead from Sistani cow and to evaluate its electrocardiogram parameters at different ages. In this study, the electrocardiogram parameters of 161 healthy Sistani cows in four age groups of under two years, two to four years, four to six years and over six years were examined. The mean heart rate decreased significantly with age ($P < 0.05$), the difference in the mean amplitude of P, R and S waves between the first and fourth age groups was significant ($P < 0.05$). S wave was decreasing and the P-wave amplitude trend was increasing. The difference between the mean amplitude of positive and negative T waves in different age groups was not significant ($P > 0.05$). The period of all P waves, QRS complex, T wave, P-R interval, Q-T interval and S-T fragment increased with increasing age among different age groups, which was a significant increase ($P < 0.05$). The most common pattern of ECG in Sistani cows was P-positive, QRS complex was rS and T-positive. The most common dysrhythmia in Sistani cattle was sinus dysrhythmia with 76 cases and then sinus tachycardia with 23 cases.

Keywords: Sistani cow ,ECG ,base-apex lead