THE VALUES OF ECG PARAMETERS IN NEW BORN CALVES

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SUMMARY

In this study we wanted to obtain data about values of the ECG parameters in new born calves; regarding the duration of some electrocardiographic components: waves; segments and intervals.

For this purpose; using the INOMED HEART MIRROR ECG machine; we recorded electrocardiograms in 52 new born calves; aged between 3 and 7 days old; using limb leads: 3 bipolar leads (D I; D II; D III) and 3 unipolar leads (aVR; aVL; aVF). We recorded ECG in new born calves in standing position; with their necks stretched; without moving during recording.

After recording electrocardiograms we calculated the duration of segments and intervals. Also; using RR interval; we calculated the heart rate.

The results obtained by us were the following: length of P wave was 0.045 ± 0.001 seconds (average and the average standard error); duration of ventricular complex was 0.042 ± 0.001 seconds; and length of T wave was 0.069 ± 0.002 seconds.

Regarding the duration of segments and intervals we obtained the following values: PR interval duration (which represents atrial sistola and diastola) was 0.125 ± 0.003 seconds; QT interval duration (which represent ventricular sistola and diastola) was 0.238 ± 0.004 seconds; RR interval duration (which represents the interval between two heart revolution was 0.533 ± 0.013 seconds); PT interval duration (which represents the duration of a revolution heart) was 0.361 ± 0.006 seconds; TP segment duration (which represents the duration general diastole) was 0.169 ± 0.009 seconds and the ST segment length was 0.111 ± 0.004 seconds.

The heart rate calculated on the basis of RR interval was 114.7 ± 2.760.

We consider that the recording ECG in cattle is useful in practical activity because there are many heart diseases in new born cattle (miocardic dystrophy; heart enlargements; pericardium effusion; etc.).

According to the previous reasons; we consider that understanding and accurate interpretation of ECG in cattle have a particular practical importance.