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STUDY OF ACETAZOLAMIDE INDUCED ELECTROCARDIOGRAPHIC, BLOOD PRESSURE AND SERUM BIOCHEMICAL PROFILE CHANGES IN DOG

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ABSTRACT

This research is about checking effects of acetazolamide on dog so we start to search about that. C stops the anhidrazecarbonic enzyme and increases the urinary also it does incise the breathing number. We show the acetazolamide affects on animals and measure the effect of acetazolamide with electrocardiograph and ecocardiograph, also we measure the blood pressure. We chose 14 dog with 1.5 until 2 years old randomly. then check them for making sure about healthy of them then we measure the blood pressure from left arm an also check the biochemical of serum of blood and also catch the electro cardiogram. After all of this we treat them with Mebendasol 20 mg/kg and Ivermectin 0.004 mg/kg. All the dogs divided in to two group first one is test group second one reach normal dose and the third one reach high dose(two time more than normal), each group have seven dog. After that we check the entire dog again and catch electrocardiogram also we check the blood pressure in 5 times with time range of 5 minutes. Dogs of group two treat whit 10 mg/kg of acetazolamide for 7 days and dogs of group 3 treat whit 20mg/kg of acetazolamide for 7 days after this we cheeks all the parameters and catch the electrocardiograph I, II, III, avf, long II then we write the heart rate and electrical change from electro cardiogram. There isn't any meaning full difference in heart rate between control croup and main group that treat whit acetazolamide but it changes the biochemical effects and improves breathing performance without changes of heart rate.

Keywords: Acetazolamide, electrocardiographic, Dog

INTRODUCTION

One of the most important duties of veterinarians is protecting of animals and research about think that help to protect of them [1]. One of the important health parameters is heart and heart work and one of the important rolls of heart is transfers the oxygen and nutrition [2]. Heart is working as a circulatory pomp in body. One of the common ways of testing heart is caching electrocardiography and echocardiography. Ultrasonography is the one of important methods of choking heart that we used in veterinary and medicine [3]. In this research we want to show the acetazolamide affects on animals and measure the effect of acetazolamide with electrocardiograph and ecocardiograph, also we measure the blood pressure. There is a place for acetazolamide in human medicine but there isn't any research for checking effects of acetazolamide on dog so we start to search about that. C stops the anhidrazecarbonic enzyme and increases the urinary also it does incise the breathing number. Clebisoy in 2007 and ptacek LI used Acetazolamide in treatment of high blood pressure but in present time they mostly used in treatment of glaucoma and alkalify the urinary and protect [3]. And also help to mount climber that climb to high level fast, this drug also can used to reduce pressure of aye before surgery show that Acetazolamide used in treatment of epileptic persons espeshialy in women at catamenia time [4]. Acetazolamide used for intestine problem like less movement with low and high rang of potassium. Konig in 2008 show that this drug used for alkalified urinary at protect of gravel [5 and 6].

MATERIALS AND METHODS:

In this research we chose 14 dogs with 1.5 until 2 years old randomly. then check them for making sure about healthy of them then we measure the blood pressure from left arm an also check the biochemical of serum of blood and also catch the electro cardiogram. After all of this we treat them whit mebendasol 20 mg/kg and Ivermectin 0.004 mg/kg.

All the dogs divided in to two group first one is test group second one reach normal dose and the third one reach high dose(two time more than normal), each group have seven dog.

After that we check the entire dog again and catch electrocardiogram also we check the blood pressure in 5 times with time range of 5 minutes.

Dogs of group two treat whit 10 mg/kg of acetazolamide for 7 days and dogs of group 3 treat with 20mg/kg of acetazolamide for 7 days after this we cheeks all the parameters and catch the electrocardiograph I, II, III, avf, long II then we write the heart rate and electrical change from electro cardiogram.

RESULTS

Results of research for each electrocardiography, biochemichal parameters of serum and blood pressure parameters show in chart. All the group show like mean±SD whit SPSS 17 edition. Result show in 1 to 10 charts.

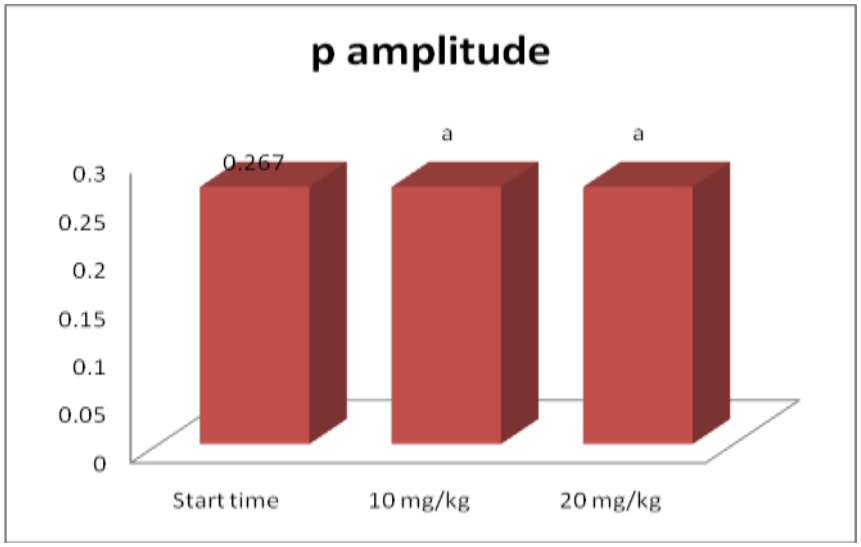

Chart 1: Amplitude P wave

There isn't any meaning full difference between control croup and main group

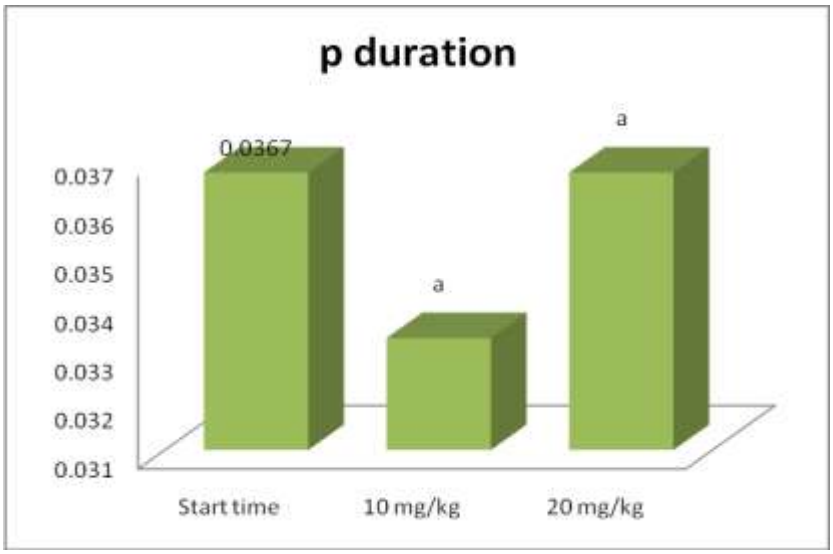

Chart 2: P wave duration.

There isn't any meaning full difference between control croup and main group that treat with acetazolamide.

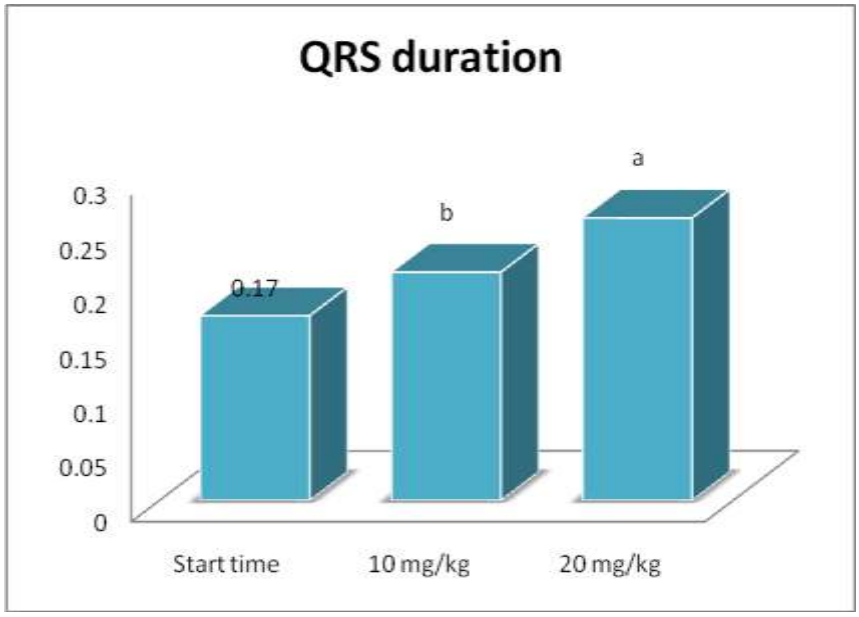

Chart 3: QRS duration

There isn't any meaning full difference between control croup and main group that treat whit acetazolamide

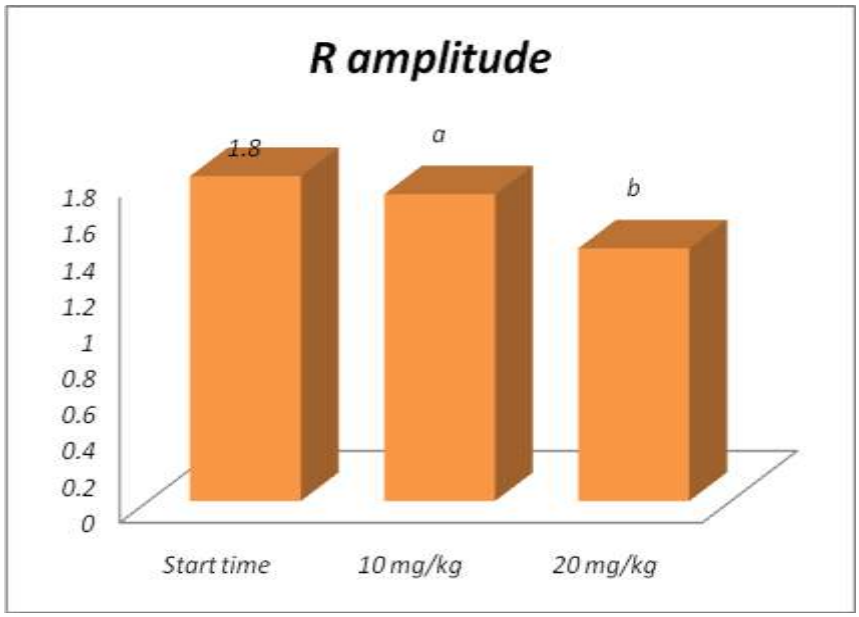

Chart 4: Amplitude of R wave.

There isn't any meaning full difference between control croup and main group that treat whit acetazolamide.

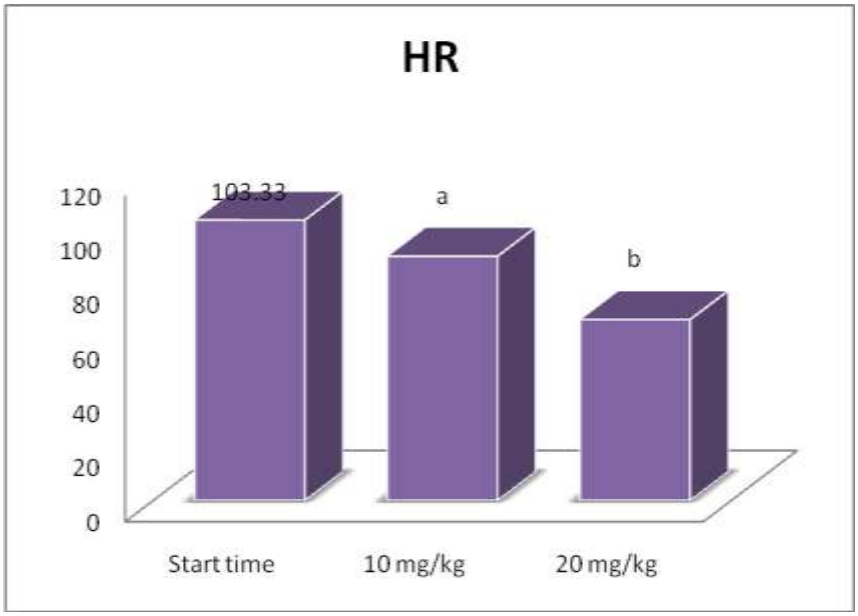

Chart 5: Heart rate

There isn't any meaning full difference between control croup and main group that treat with acetazolamide.

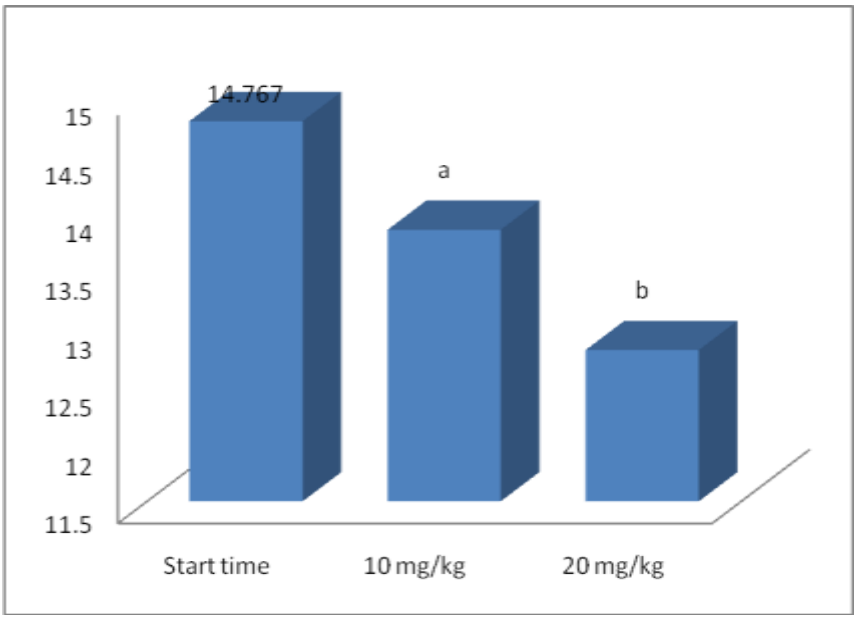

Chart 6: Blood pressure.

There is meaning full difference between control croup and main group that treat whit acetazolamide, there is different between control group whit group that catch 2 more time of acetazolamide.

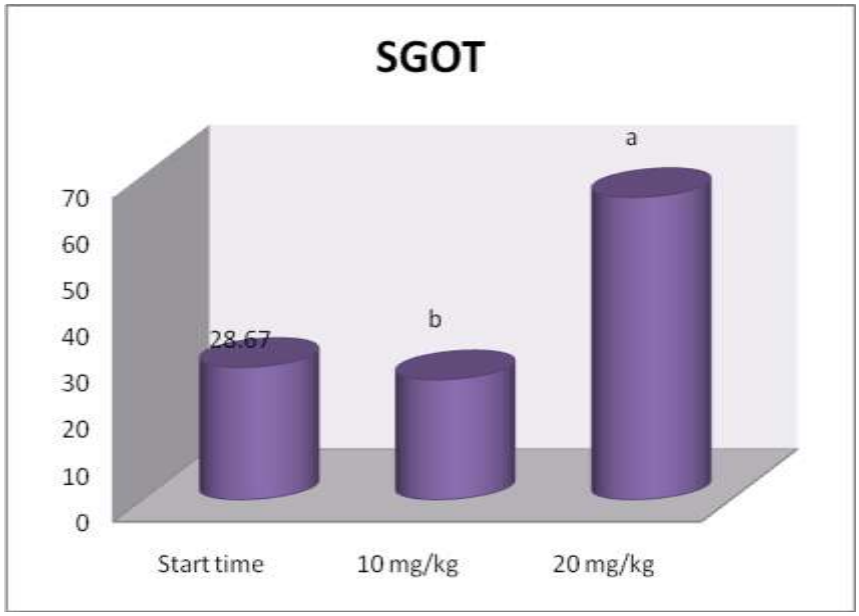

Chart 7: SOGT

There is meaning full difference between control croup and main group that treat with acetazolamide, there is different between control group whit group that catch 2 more time of acetazolamide.

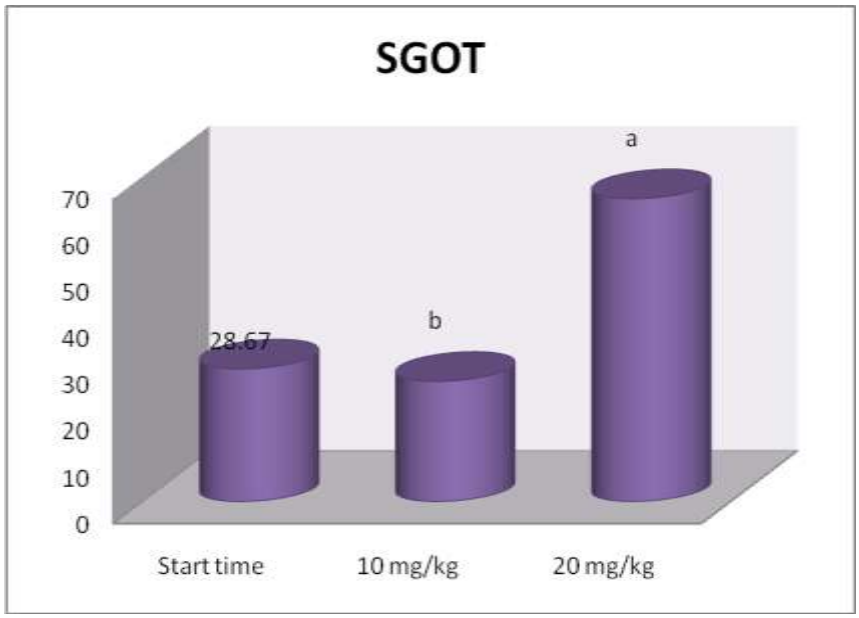

Chart 8: SGPT

There is meaning full difference between control croup and main group that treat with acetazolamide, there is different between control group with group that catch 2 more time of acetazolamide.

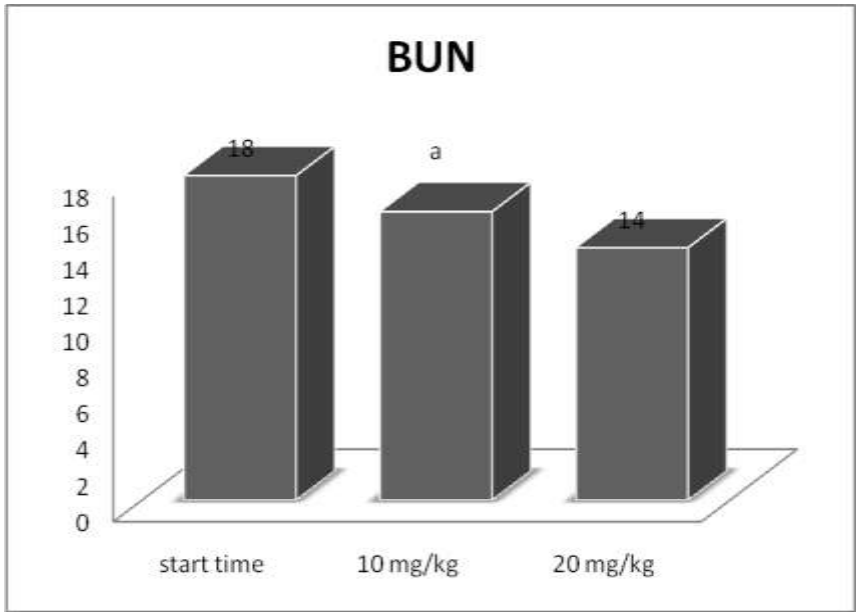

Chart 9: BUN

There is meaning full difference between control croup and main group that treat with acetazolamide, there is not different between control group with group that catch 2 more time of acetazolamide.

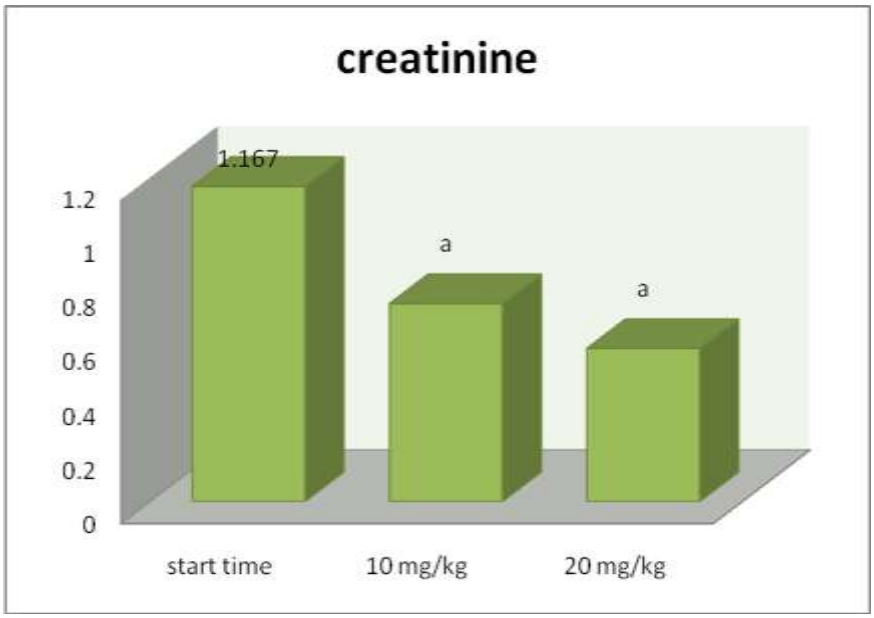

Chart 10: Creatinine

There is meaning full difference between control croup and main group that treat with acetazolamide, there is different between control group with group that catch 2 more time of acetazolamide caused reduction of blood pressure in comparative of test group.

DISCUSSION

Acetazolamide is one of the carbonic Anhidraz enzyme inhibitory drugs **[7]**. This drug can increase the level of urination also this drug can be used for treatment of glaucoma and secondary glaucoma and also help to the mount climber breathing in high level. It seems this drug can have mechanical and electrical effects of hearts work. Like the entire drug this one has side effect too so we need to measure the electrocardiography change, blood pressure change after use.

Acetazolamide that study hear show that this drug has large effect on electrocardiography blood pressure and biochemical factor. Gilbertt, H. show that it can be effective on mount climber in more than 1000 m high and show that this drug reduces the blood pressure [8]. In other research Fulco, CS. in 2002 show that blood pressure of lungs reduced [9].

Harvey,F. *et al* in 2005 show that blood pressure in mount climber increase lung pressure and dicrise total pressure [10].

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