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## Effect of fluid therapy on cardiac function

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Brejesh Singh and PC Shukla**

#### **Abstract**

The dogs admitted to TVCC Mhow with gastritis, enteritis, gastroenteritis or dehydration due to any reasons was used for the study. The Initial ECG of those dogs was taken and another ECG after fluid administration (Inj. D.N.S or Inj. R.L) was taken, and there after this difference or changes between both ECG were studied. Volume expansion is frequently used in these patients. Fluid deficits in the intra vascular space cause poor perfusion and inadequate tissue oxygenation and fluid deficit in extra vascular space cause dehydration. There was significant increase observed in the amplitude of QRS complex indicating better perfusion. There was overall increase in the amplitude P wave and QRS complex indicating better perfusion. The significant increase in PR interval along with increase in the QT and ST segment were observed.

**Keywords:** ECG, fluid therapy

#### **Introduction**

Water is the most abundant compound in the body and all of the life's essential processes take place in this aqueous environment. The total body water of most domestic animals is approximately 60% of body weight. There are a lot of diseases of animals in which there are disturbance of body fluids (free water) electrolyte and acid base balance. Hyponatremia, hypokalemia, hypocalcemia and hypochloremia are common electrolyte imbalance. Fluid therapy is prerequisite for these conditions in veterinary patients.

The use of fluid as part of the veterinary armamentarium for treatment of certain specific disorders undoubtedly should occupy an important place in veterinary practice today. Fluid has been used in the therapy of disease for a long time. The efficacy of normal saline solution in the therapy of acute hypovolemic shock associated with cholera was reported in 1832 [1]. In 1891, a report of the first use of normal saline solution for acute hemorrhage appeared in Lancet [2].

#### **Material and methods**

The dogs came to TVCC Mhow with gastritis, enteritis, gastroenteritis or dehydration due to any reason was used for the study. The Initial ECG of those dogs was taken and another ECG after fluid administration (Inj. D.N.S or Inj. R.L) was taken, and there after this difference or changes between both ECG were studied. Total 20 dogs were used for this study.

#### **Results and Discussion**

The dogs admitted to TVCC Mhow with gastritis, enteritis, gastroenteritis or dehydration due to any reasons was used for the study. A total twenty dogs were used for study. The fluid at tissue level is responsible for delivering nutrients to the cells, support of the tissue structures. Volume expansion is frequently used in these patients. Fluid deficits in the intra vascular space cause poor perfusion and inadequate tissue oxygenation and fluid deficit in extra vascular space cause dehydration. After administration of Inj. Dextrose normal saline (5% DNS) or Inj. Ringer's Lactate, there was significant increase observed in the amplitude of QRS complex indicating better perfusion. There was overall increase in the amplitude P wave and QRS complex indicating better perfusion. The significant increase in PR interval along with increase in the QT and ST segment were observed.

The goal of fluid resuscitation and maintenance is to restore perfusion and hydration. There was significant increase observed in the amplitude of QRS complex indicating better perfusion. There was overall increase in the amplitude P wave and QRS complex indicating better perfusion.

There was significantly increase in PR interval along with QT and ST segment. This finding in support of by <sup>[3,4]</sup>.

#### Reference

1. O'shaughnessy WD. Letter to the editor. Lancet, 1832; 2:281.
2. Archibald EW, McLean WS. Observations up on shock with particular reference to the condition on as seen in war surgery. Annals of Surgery. 1917; 66:281.
3. Ahmad A, Haque S. Studies on clinico biochemical and electrocardiographic changes in dehydrationj in dog. Intas Polyvet. 2003; 4(1):88-90.
4. Saini N, Dva K, Randhawa SS, Uppal SK. Effect of fluid therapy on electrocardiography of dog. In national symposium & XXI ISVM Convention Bikaner, 2002, 181. (Absr.).