Various signs you can look for with dehydration in an animal

Environment, Animals

There are various signs you can look for with dehydration in an animal. At 6-8% water loss, elasticity may be lost in the skin, causing it to be slower to snap back if pulled out of place. You may also see an increase in capillary refill time and the eyes may sink into the orbits to some extent. At 10-12% dehydration you note dry mucus membranes, increased symptoms with skin elasticity and eye sunkeness. As well as some possible signs of shock and general wooziness or instable consciousness. At 12-15% you'll generally see more defined signs of shock, as well as imminent death.

Assuming a 10-12 % rate of dehydration or lower and no signs of shock, it can probably be assumed that the animal isn't to the point where it's severely dehydrated, hence normal fluid distribution methods can be use. You normally start fluid therapy with an administration rate of 10-16 ml/kg and hour, though at higher rates of dehydration, it's nearly impossible to deliver liquids too quickly.

In order to calculate the rate of fluid infusion for an adult cat, you must first find their normal fluid usage rate. The Normal fluid rate rate for an adult cat is about 65 ml/kg a day, which for a cat of 8 pounds translate to 65 ml x 3. 62kg or 235. 86 mls (Bassert & McCurnin, 2010). This is about 9. 82 Ml an hour, when divided by the 24 hours in a day.

With this number in mind you can then perform two calculations. The drop factor and the amount of fluid in drops per minute. To start you need to first consider the equipment being used, which is normally use a mini drip set for cats, which operates at 60 drops an ML. From that you can calculate the drop factor, which is the number 60 divided by the number of drops per ML. The

drop factor in this scenario would be 60 divided by 60 drops/ml, which is equal to 1. Then to calculate the amount of fluid in drops per minute, you need to take the desired ml per hour divided by the drop factor. In this scenario that would be 9. 83 ml/hr divided by one or 9. 82. This translates to 9. 82 drops/min to deliver the required fluid.

Monitoring fluid administration requires the user to look at multiple parameters in a patient. Including packed cell volume, mucus membrane color, warm, body weight and total plasma protein heart rate. You can also measure the urine output of an animal, which should normally be 2ml/kg/hr.

You should also mark fluid given in a fluid solution bag, with your starting date, along with the total solution to be given, and increments listed downward of the amount of solution given hourly. Though commercial pump machines are preferred to manual marking, as they are less prone to human error.

A final monitoring strategy is monitoring the central venous pressure of an animal, or the amount of blood pressure in the vein and right side of the heart. To do this attach a manometer of venotub to a three wat stopcock. Then make the zero point of the manometer around the level of the animals sternum when laying on its side. Tape the manotube or venotube to a nearby solid object and try to keep the animal and attachment point at a steady position. Then hang the fluid bag or saline and the regular administration set about the manotube and attack it to a port of the stopcock, before attaching an extension venotobue to the other port. Finally allow the entire

venotube/monotube set to fill with fluid, before attaching one of the venotube extensions to the intravenous catheter in the animal. When the stopcock is turned off the level in the manometer on the stationary object will fall, and the CVP will be equal to level of fluid in said manometer when equilibrium has been established.

Measure CVP this way should be done up to 8 times, and should have the animal and equipment in the same position each time it is performed. It does not need to be done back to back, though catheter patency should be maintained via heparin-saline flushing.

It’s important to monitor IV fluid therapy due to a number of complications that can occur if a user is inattentive. For example fluid escaping outside of the intravascular space. The creation of a hematoma, swelling of clotted blood. Air embolisms, and inflammation of the veins.