

CSU Outpatient Treatment Protocol for Canine Parvovirus*

Introduction

- This protocol is not intended to be a substitute for the gold standard of care (hospitalization and administration of fluids/medications intravenously), but rather used as an alternative for clients that cannot afford the recommended treatment protocol.
- The treatment guidelines provided within this protocol are only to be used under the knowledge and supervision of a licensed veterinarian.
- The survival rates for the standard of care protocol and the outpatient protocol were 90% and 80%, respectively.

Initial Stabilization

- All dogs should have an IV catheter placed for intravascular volume resuscitation.
- Use the standardized chart below to determine the intravascular volume loss to be replaced
- Isotonic crystalloid boluses should be delivered over 15-20 minutes with subsequent reevaluation of cardiovascular parameters.
- Additional IV fluid resuscitation should be performed at the discretion of the veterinarian.

Determination of crystalloid fluid volume required for IV fluid resuscitation

Intravascular volume loss to replace (BV = Blood Volume)	Clinical Signs
< 15% BV loss (15 mL/kg IV fluid bolus)	HR increase
15-30% BV loss (25 mL/kg IV fluid bolus)	HR increase/RR increase
30-40% BV loss (35 mL/kg IV fluid bolus)	HR increase/RR increase Pale MM Prolonged CRT
> 40% BV loss (45 mL/kg IV fluid bolus)	HR increase/RR increase Pale MM Prolonged CRT Cold legs Mental dullness

Basic Outpatient Protocol

- Start subcutaneous crystalloid fluid therapy immediately after IV fluid resuscitation.
- Maintenance SQ fluid dose per 24 hrs: LRS or Normosol-R (120 ml/kg/day) divided TID (40 ml/kg/dose)
- Determine additional amount of fluids needed to rehydrate the patient based on % dehydration X body weight (kg). Divide this amount by 3 and add that to the maintenance SQ fluid dose for the next 3 doses.
- If part or all of the previous dose of SQ fluids remains at the next treatment, only give partial dose of SQ fluids (subjectively determined) or withhold additional SQ fluids that treatment period

- Do not add additives (such as dextrose or KCl) to the crystalloids.
- Provide aggressive external warming to help promote absorption of the SQ fluids.
- Monitor rectal temperature to maintain > 99 °F.
- Cefovacin is administered once at 8 mg/kg SQ once
- Maropitant is administered once at 1 mg/kg SC q24h for the duration of treatment period.
- Add ondansetron 0.5 mg/kg SQ should be administered as frequently as q8h if uncontrolled vomiting
- Administer Karo syrup 1-5 ml every 2-6 hours for glucose supplementation. Continue until patient is eating.
- Administer oral Tumil-K (0.5-1 tsp per 10 lbs, every 4-6 hours) for potassium supplementation. Continue until patient is eating.
- Buprenorphine 0.02 mg/kg SQ should be administered as frequently as q6-8h.
- Syringe feed small amounts of Hill's a/d q6h (1 ml/kg PO) as tolerated by patient.
- DVM exam daily

Outpatient Protocol Failure

Worsening clinical signs warrants switching treatment to in-hospital care for more aggressive IV medication and monitoring. Criteria for "worsening signs" include the following:

- Progressive dehydration, defined as loss of > 10% of body weight from admission or > 8% dehydration on two serial measurements, based on physical examination findings.
- Decline in mentation to stuporous/obtunded.
- Fever, defined as > 104°F.
- Other subjective criteria that sway the attending clinician towards transition to the Inpatient protocol are the discretion of the attending veterinarian.
- In the published study, 5% of dogs on the outpatient protocol had to be transitioned to the inpatient protocol.

*Modified from the document titled "What is the outpatient treatment protocol utilized for the treatment of parvoviral enteritis at Colorado State University?" posted on the Colorado State University Center for Companion Animal Studies on May 23, 2013.