

FOCUS

Assessing CPR

Studies on cardiopulmonary resuscitation (CPR) are limited in veterinary medicine. The recent Reassessment Campaign on Veterinary Resuscitation (RECOVER) greatly contributed to the knowledge of cardiopulmonary arrest (CPA) and factors that affect CPA outcomes and survival. In this prospective study, performed before publication of RECOVER, the authors examined factors that may improve or impair CPR outcome in dogs and cats. The study included 121 dogs and 30 cats that underwent CPR at a university hospital. Return of spontaneous circulation (ROSC) was achieved in 70/121 (58%) of dogs and 17/30 (57%) of cats. However, only 10% of dogs and 10% of cats were alive 24 hours after CPR, and only 6% of dogs and 3% of cats survived to hospital discharge.

Of the dogs and cats that attained ROSC, 30% rearrested and 60% were euthanized. The presence of an IV catheter before CPA and palpable pulses during CPR were both positively associated with ROSC. Factors that were negatively associated with ROSC included increased time from CPA to CPR, longer

duration of CPR, and neurological cause for the CPA. No association was found between ROSC and ventilation or compression rate. The survival rate after CPR is much lower for dogs and cats than humans; advances in human post-CPR care could positively affect veterinary CPR success rates. Regularly scheduled CPR review for veterinarians and team members should help with faster detection of CPA, and thus initiation of CPR, and decrease preventable errors.

Commentary

Dismal recovery rates from CPA followed by CPR are discouraging. There are few clinical studies evaluating CPR method in veterinary medicine. Many practitioners have asked me, “Why bother?” Depending on the situation, I have 3 answers:

1. You cannot make it worse by trying.
2. Group statistics do not mean anything to the patient that responds.
3. How can we get better if we do not work to find solutions?

The authors of this article tried to do just that—look for something that may help predict or affect outcomes in CPR events. What I found interesting was that, in this small prospective observational study, they found that having a board certified emergency and critical care veterinarian involved in CPR efforts did not make a difference in outcome. It

is unclear, however, if CPR method was standardized or if all those performing CPR had the same training. Also, the traditional CPR method (ie, establishing an airway, initiating ventilation, starting chest compressions) was used. Since this study was conducted, updated CPR guidelines for dogs and cats published by RECOVER¹ recommended that if there is no airway obstruction, chest compressions should be immediately initiated before establishing an airway for assisted ventilation. The RECOVER method may bring about more successful outcomes. For those interested in learning more about basic life support in cats and dogs, taking the VERITAS course (veritasdvm.com) or CPR dry labs or attending other CE symposia taught by a veterinary BLS-certified instructor, is encouraged.—*Elke Rudloff, DVM, DACVECC*

Reference

1. Special Issue: Reassessment Campaign on Veterinary Resuscitation: Evidence and knowledge gap analysis on veterinary CPR. *JVECC*. 2012;22(s1): i-i, S1-S31.

Source

- McIntyre RL, Hopper K, Epstein SE. Assessment of cardiopulmonary resuscitation in 121 dogs and 30 cats at a university teaching hospital (2009-2012). *JVECC*. 2014;24(6):693-704.

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