Aspirator Bulbs for Puppy Resuscitation

FOCUS: Emergency/Critical Care

Puppies delivered by cesarean section can be affected by respiratory distress syndrome. Removal of amniotic fluid is the first step toward successful resuscitation. Various methods have been described, including rocking the puppy in an arc with its head and neck stabilized in cupped hands, but neonatal resuscitation via *swinging* is dangerous and may induce significant brain trauma by cerebral hemorrhage. This study evaluated 2 additional methods for removing mucus and fluids from nostrils of puppies delivered by cesarean section. In the first, a plastic syringe mount was attached to a 1-mL syringe; the mount was placed into each nostril and air suctioned out. This method was practical in 62 of 78 puppies; fluid was removed in 50 puppies. Bleeding was observed in 4 puppies but possibly because of their small size. The second method involved compressing the ball of a nasal aspirator, placing it close to the nostril, and removing the compression so that air was suctioned out. This method was successful in all neonates and was reported by the authors to be 100% efficient in fluid removal. Use of the aspirator bulb, which is easy to clean and inexpensive, was superior and recommended.

Commentary

Fluid removal from nostrils, mouth, and pharynx of neonatal puppies is an important component of resuscitation. A nasal aspirator may remove fluid from the nostrils without causing intranasal bleeding. A suction device attached to a syringe can be the best choice for fluid removal from the mouth and pharynx. Strict attention must be given to sterilizing all devices, especially those with a small orifice (eg, soft nasal aspirator). Swinging puppies to move fluid cranially is *not* recommended. A review of physical and chemical methods of neonatal resuscitation is useful.[1]—*Margaret V. Root Kustritz, DVM, PhD, DACT*

Source

New method for removing mucus from the upper respiratory tract of newborn puppies following caesarean section. Goericke-Pesch S, Wehrend A. ***VET REC*** 170:289, 2012.

1. **Resuscitation of canine and feline neonates.** Traas AM. *Theriogenology* 70:343-348, 2008.

NSAIDs: A Comprehensive Review

Understanding NSAID use in dogs must include knowledge of mechanism of action in order to minimize adverse events. This review focused on clinical pharmacology, potential side effects, and drug–drug interactions. NSAIDs exert their effect through inhibition of cyclooxygenase (COX) enzymes (primarily COX-1 and COX-2). COX eicosanoid products (eg, prostaglandins, prostacyclin) are critical to the integrity of the gastric mucosa and renal blood flow. Although less prevalent with newer NSAIDs, GI side effects remain a concern. COX selectivity may not be clinically relevant in the diseased GI tract and has no proven benefit in the kidney and liver. Cases of NSAID-induced nephropathy are commonly associated with high doses or other complicating factors (eg, hypotension, hypovolemia). Hepatic side effects may be either dose dependent or idiosyncratic and appear to be related to production of reactive metabolites, not COX inhibition. Contraindications may include concurrent disease, volume or sodium depletion, and concurrent administration with antihypertensives. Adverse effects are well documented with concurrent use of multiple NSAIDs or NSAIDs with corticosteroids. A washout period is recommended when switching oral NSAIDs, but exact withdrawal times have not been determined. Caution, standard withdrawal times, and gastroprotective agents are advised when switching NSAIDs. NSAIDs were concluded to remain the mainstay of treatment for chronic canine osteoarthritis.

Commentary

This article should be read by students in pharmacology courses, small animal clinicians, and residents preparing for board examinations, as it provided a critical review of studies that examined mechanisms of action, efficacy, and safety. The authors noted a lack of well-controlled comparisons of safety and efficacy among these drugs to guide medication selection. This article dispelled long-held assumptions about the actions of NSAIDs and critically examined the shortcomings in other NSAID studies. Advantages and disadvantages of drugs known to be COX-2 selective and whether these selective drugs have lived up to their promise are explained. The reader will not be provided a clear choice of which drug would be best for patients but will be more informed about this class of medication.—*Mark G. Papich, DVM, MS, DACVCP*

Source

Clinical pharmacology of nonsteroidal anti-inflammatory drugs in dogs. KuKanich B, Bidgood T, Knesl O. ***VET ANAESTH ANALG*** 39:69-90, 2012.