

I've written about Laryngeal Paralysis before, but wanted to drill down on one component of the polyneuropathy that underpins the condition (in the idiopathic Geriatric Onset Laryngeal Paralysis Polyneuropathy, GOLPP). I think of the condition as a "trifecta"-- three regions are effected and show us clinical signs, 1) larynx, 2) rearlimbs, and 3) esophagus. The larynx manifests as Laryngeal Paralysis with its associated stridor and respiratory distress. The rearlimbs manifest as weakness, difficulty rising, and a "two-engine" gait with the front legs moving faster than the rear. The esophagus manifests as a "flabby esophagus" (very rarely classic megaesophagus) with silent or overt regurgitation and the enhanced potential for aspirating gastric contents.

The flabby esophagus is probably the biggest contributor to a life-threatening aspect of this polyneuropathy, pre-op and especially post-op-- aspiration pneumonitis that progresses to aspiration pneumonia.

It also can be a significant contributor to a reduced quality of life for these geriatric dogs. When the esophagus doesn't have proper muscle action (because the nerves are bad), it cannot cause normal direction propulsions of food and fluid AND it doesn't act as a barrier to food/fluid sneaking back up with normal chest movements (breathing, coughing), abdominal movements (straining to defecate, etc.) or head-down positions.

Sometimes owners "see" these food/fluids come up (i.e. they land on the floor). Sometimes they are "silent", and owners might catch their dogs smacking their lips, burping or swallowing rapidly. And sometimes it is brewing silently as "heartburn, with signs of aggressively seeking to eat grass, sitting up and panting after lying down, restlessness.

Veterinary medicine does not have any medications that will stimulate the esophagus to move in the correct direction.

We do have medications that will stimulate the stomach to empty.

40 of 40 cases of Laryngeal Paralysis evaluated (in a Michigan State study) had abnormal esophageal function on the esophagrams they performed (solid food moved better than soft food better than liquid food.) From this, my experience and the high incidence of aspiration pneumonia, we should conclude that we should treat this concern specifically.

If we can keep the stomach empty and moving routinely and fast, we can reduce the likelihood of any food/fluid from the stomach sneaking back up the flabby esophagus.

The only medications we currently have in veterinary medicine to stimulate the stomach to move are: ranitidine, erythromycin (a lower dose than that used as a common antibiotic) , cisapride and metoclopramide.

Famotidine, cimetidine, omeprazole and other prescription acid reducers have NOT been demonstrated to change stomach movement/emptying. They reduce stomach acid levels.

Ranitidine is also an acid reducer and what it is best known for, but it also stimulates the stomach movement/emptying.

The logic for using acid reducers in these cases is that they will make the reflux fluid less acidic and less

damaging to the lungs "when" it is aspirated. These medications do not have data supporting (that I know of) stomach movement effect.

So, strictly speaking about medications to prevent reflux/regurg/heartburn/GERD associated with Lar Par (and there are many other things to do besides medications)-- ranitidine, cisapride, erythromycin, and metoclopramide are the drugs we have to choose from. They each have their risks and benefits; I list them in the order I recommend them (based on effectiveness, ease of administration, availability), and I do trials. If one is not working, move to the next.

The question of whether to use an acid reducer is a tougher one, I think. There is some data to suggest that a lower acid content in the stomach fluids can reduce the "tightness" of the lower esophageal sphincter at the junction between the stomach and the esophagus-- MAYBE predisposing to reflux. But, as mentioned above, if fluid is aspirated, I'd prefer the lungs not experience a scalding pH of 2-- the pneumonitis and then pneumonia that results is less severe.

This information is how I make decisions regarding my patients with Lar Par. I do not dispute anyone's personal experience with the use of various medications. But I take the prophylactic treatment of esophageal reflux/regurgitation very seriously, during the surgical/anesthetic timeframe and longterm. This complication is THE thing we must fight against very specifically. I believe all patients diagnosed with/suspected of having Lar Par (surgically treated or not) should be on "promotility" medications lifelong, to prevent aspiration pneumonia and make them more comfortable without heartburn.

Until we know more...this is my current "best" practice.

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