Laryngeal Paralysis

The Disease
Laryngeal paralysis is caused by a degeneration of the nerves which motivate the muscles of the larynx (voice box). When these muscles do not work the doorway into the windpipe at the back of the throat does not open properly when a breath is taken. There can also be a problem with the larynx closing properly to avoid inhaling food & water. It is quite common in elderly dogs.

Although the Labrador, Irish Setter and Afghan Hound are particularly susceptible, practically any breed of medium to large size can be affected. There is also an inherited form in some breeds (Bouvier des Flanders, bull terriers, Siberian Husky and Dalmatian) that affects younger dogs. It can also be seen as part of a wider neurological problem or secondary to problems in the chest.

Signs
These may be insidious in onset and go unnoticed because owners expect elderly dogs to slow down and to huff and puff a bit at exercise. There are two main groups of signs:

1)  
   - Noisy, laboured breathing that is mainly noisy when breathing in and relatively normal when breathing out.
   - Breathing noise deteriorates and effort increases as the breathing gets heavier.
   - Reduced ability to exercise.
   - Sometimes periods of extreme respiratory difficulty, usually triggered by excitement and/or hot weather.

2)  
   - A moist, retching cough.
   - Coughing associated with drinking or eating.
   - A change in the character of barking.
**Diagnosis**
Laryngeal paralysis is often confused with other serious respiratory or cardiac disorders. Confirmation depends upon watching the movement of the opening of the larynx under a light general anaesthetic. In addition, neurological tests and x-rays of the chest are necessary to look for potential causes and complications associated with the disease, and to rule out other causes of the signs.

**Treatment**
A surgical procedure known as a ‘tie-back’ can be performed to fix one of the larynx doors in an open position to improve the flow of air through the larynx. In spite of the age of many of the dogs subjected to this surgery, the results are generally excellent.

However, it should be noted that only the signs in the first group above will be improved by the surgery. Those in the second group will not be improved by the surgery and can be worsened or appear as post-operative complications.

**Aftercare following surgery**
Dogs are usually retained in the hospital for 24 hours after surgery to watch for signs of serious airway swelling that could require intervention. However, dogs that bark excessively may be sent home for fear of tearing out the internal stitches or increasing airway swelling.

Dogs may be sedated for collection to prevent excessive excitement on return to their owners.

Surgery will have been performed through a wound on the underside of the neck on the left side. Please avoid the use of a collar or lead on the neck until the stitches are removed. Some swelling of this area is likely and an appointment should be made for removal of the skin sutures in 10-14 days.

The diet should be modified for at least six weeks after surgery. The consistency of the food is more important than what it contains because the aim is to aid swallowing and prevent inhalation as the dog gets used to the new arrangement of the larynx. The texture of uncooked sausage meat is ideal – i.e. not too hard, not sloppy and not flaky/dusty. A
gradual return to normal can be made after this 6-week period according to progress, but avoidance of dusty food or gravy is advisable even then.

Give only water to drink for life. Inhalation of milk or gravy is very bad for the lungs.

Exercise should be limited during the first six weeks but most patients control themselves to what they can manage.

**Progress**

Although an immediate improvement of the respiratory problem will be evident, the full benefits of the surgery will not be apparent for a couple of weeks, when the internal surgical swelling will have dispersed. The results are never as good as nature intended, but a great improvement on the situation before the surgery.

After ‘tie-back’ surgery most dogs cough to clear their throats to begin with. This may be frequent in the first week or two, particularly after eating or drinking. The coughing will subside in most cases, but a few dogs will cough indefinitely a few times a day.

**Prognosis**

Serious complications are uncommon with an experienced surgeon, with about 1 in 20 suffering airway swelling in the immediate post-operative period. Most dogs will have a greatly improved quality of life. Complications can be seen with regard to coughing and sometimes with the inhalation of food & water. Problems are more likely if there are concurrent problems or the paralysis was part of a generalised neurological problem.