



Bronchopneumonia in the Irish Wolfhound

Essential Information for Veterinary Surgeons

Bronchopneumonia in an Irish Wolfhound is a severe and rapidly life-threatening condition which must be treated urgently.

It often does not present with typical symptoms, thus it is crucial to be aware of this so that timely intervention can be made. In some cases a dog will die because the condition is not recognized in time to treat it effectively. Standard treatments may not be enough to save the dog or prevent recurrence.

There are a number of publications on the subject of respiratory disease in Irish Wolfhounds and a number of postulated reasons why this might occur (Wilkinson 1969, Leisewitz et al 1997, Clercx et al 2003, Greenwell and Brain 2014, Bodey 2015).

Information on recognizing pneumonia and outcomes of individual dogs have been shared between breeders/owners for many years. However, the majority of vets may not have dealt with the condition before, unless experienced breeders/owners are amongst their clients.

The IW Health Group took the step of putting together this information sheet based on first-hand experiences with the input of Angela Bodey BSc, BVSc, PhD, MRCVS and Mark Dunning MA, VetMB, PhD, CertSAM, DipECVIM-CA, MRCVS. Drs Bodey and Dunning are working with the IWHG on a project that aims to identify significant factors that influence the development and outcome of this condition and if possible the most appropriate treatment.

We would very much appreciate any assistance with case details for this study if you have happened to come across this in the past. Surveys are being collected on behalf of Dr. Bodey by Miranda Brace who can be contacted on **email:** mirandabraehead@gmail.com or directly via an online survey which can be found on our Pneumonia webpage <http://www.iwhealthgroup.co.uk/pneumonia.html> your help would be much appreciated.

The information herein has been accumulated from outcomes of the many cases that we are aware of and we hope it may be of value both to the vet and to the owner – we hope this may in some way help save the life of a Wolfhound. Whilst the intention is not to tell a veterinary surgeon their job, we hope these notes may be helpful to communicate what has been learned from extensive experience within the breed community.



A PICTURE OF PNEUMONIA

This is the typical stance of an Irish Wolfhound with pneumonia, with the head and neck stretched forward. The eyes are preoccupied and dull, she is reluctant to lie down and if she does is unable to lie on her side. The photograph was taken as soon as the dog became ill. Her owner, who knew the signs of pneumonia, said "When the photo was taken she had difficulty breathing, couldn't lie down, and had a temperature of 40.2 degrees C".

<p>Problems facing the Veterinary Surgeon</p>	<p>TIMING: If your client is an experienced IWH owner/breeder, the chances are they have seen this condition before and will recognize it. They will realise that time is of the essence. We hope their help with early identification will be of value to you. However, critical delays in recognizing the condition may occur when:</p> <ol style="list-style-type: none"> 1. <u>The owner is inexperienced</u> and may not recognize the symptoms so the dog may have been ill for several days and already in a critical condition. 2. <u>The symptoms are atypical.</u> This condition is frequently overlooked as a differential due to the absence of overt clinical signs (particularly the absence of a cough), this condition is often mistaken for congestive cardiac failure. 3. <u>Delays in recognizing this condition can lead to life-threatening consequences.</u>
<p>Clinical Signs</p>	<p>The symptoms come on very suddenly, frequently with no premonitory signs. The dogs often have both tachypnea and dyspnea, however audible changes on thoracic auscultation may be absent. Classically, the dog's head is lowered and the neck outstretched; whether standing or lying. Dogs may have a nasal discharge, a cough and are often inappetent. The absence of a cough does not rule out bronchopneumonia. The dog is often reluctant or unable to lie on its side (trepopnoea). The dog may be pyrexia but in the early stages their temperature may be normal. Cases may progress rapidly from non-specific signs of lethargy and inappetance.</p>
<p>Diagnosis (including radiographic features)</p>	<p>One problem in reaching an early diagnosis can be the lag between clinical signs and obvious lung changes on radiographs. As with bronchopneumonia in any dog, normal or minimally abnormal radiographs at the time of presentation may be seen despite severe clinical signs. If suspicions for bronchopneumonia exist (see Clinical Signs) treatment should not be delayed; by which time the dog may be seriously ill, which increases the chance of mortality. Rapid referral of these cases has historically led to positive outcomes due to availability of advanced diagnostics including CT and endoscopy and intensive supportive facilities.</p>
<p>Treatment</p>	<p>The cause of this condition is frequently unknown and therefore treatment is often empiric based on the clinical signs. In many cases a bacterial cause is suspected however BALs have infrequently been performed to guide therapy. Therefore, empirical intravenous antibiotic therapy would be a sensible approach in the absence of these results. From the evidence that has been gathered to date, antibiotics introduced as soon as possible seems to improve the likelihood of survival. A combination approach seems most appropriate although which antibiotics are the most efficacious are at present not defined (see Bodey 2015). Avoid long-acting preparations and oral routes of administration in the acute states. Treatment for 4-6 weeks would be recommended as this condition can relapse and is frequently recurrent. Supportive care is also crucial and respiratory physiotherapy including coupage, nebulization and repeated turning are essential. Additional medical supportive measures including fluid therapy and anti-inflammatory medications are also valuable. Assessment of metabolic changes particularly hypoglycaemia and blood gas parameters, is also very important as part of the supportive care. Hypoglycaemia can develop and is often overlooked, increasing the chance of mortality.</p>
<p>Critical Timing</p>	<p>If response to treatment is not seen within 24 hours, we would encourage speaking to a specialist or seeking referral, as time is of the essence.</p>
<p>Outcome</p>	<p>It is recognized by experienced owners and breeders that their dogs may suffer repeated episodes of respiratory disease. This may be due to underlying susceptibility to infections as a result of abnormal oesophageal function, immunodeficiencies or ciliary dyskinesia. In these cases, additional investigations would be recommended and appropriate therapy introduced if this is possible to reduced recurrence.</p>