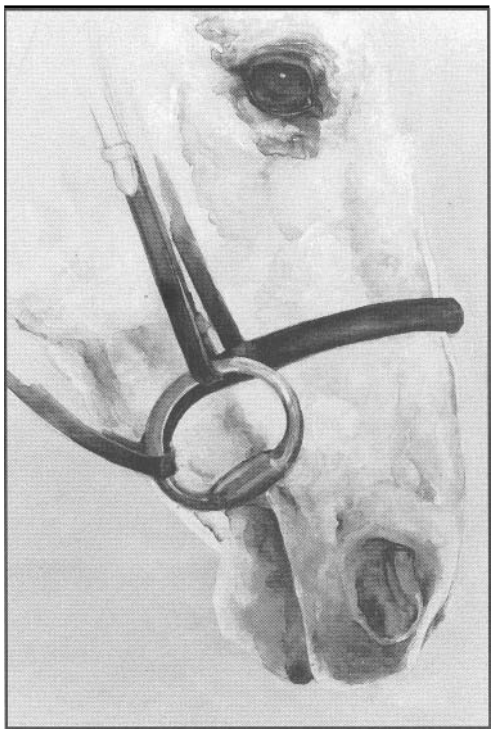

RESPIRATORY DISEASE

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Introduction

The purpose of this book is to provide up-to-date information on equine respiratory disease, for anyone with an interest, whether professional or personal, in the subject.

Such information is often complex and necessarily has sometimes to be presented in a language that poses difficulties for those with no medical background. However, for anyone involved with horses, the importance of having some knowledge of the technical aspects of disease cannot be underestimated. Technical definitions are a part of standard sales terms. They also matter in the routine conduct of law. It is important, therefore, that horseowners should have some understanding of specific respiratory conditions which they are likely to encounter (in sales catalogues for instance) and what they mean in relation to airway obstruction and soundness.

It is to be hoped that *Respiratory Disease* will become a standard textbook for non-veterinarians, marrying the latest in scientific knowledge with the practical everyday information of clinical practice. Its ultimate aim is to bring to the horseman and horsewoman solid advice on the management of respiratory disease which is an essential adjunct to any form of therapy.

Understanding the respiratory system is particularly important because of the dynamic nature of the horse and the principle purpose, athleticism, for which it is used today. As this system is the medium of gaseous exchange between living animal and surrounding environment, it is responsible for providing all oxygen requirements of the body, including the musculature during locomotion. It also allows the removal of carbon dioxide to the exterior. At exercise, without adequate oxygen, there is

reduced capacity to perform - even when the deprivation is only partial. The influence of such shortage is critical to any competing horse.

Oxygen deficiency occurs in horses and is recognised as an expression of functional respiratory disease, including infection, or as a secondary consequence of diseases of other organs such as the heart and blood. For example, heart disease can often result in lowered tissue oxygenisation because of failure to circulate the blood; and, as a different example, nitrite poisoning can cause a reduction of the blood's capacity to carry oxygen.

In the United Kingdom and Ireland today there is a high incidence of primary respiratory disease in horses. This directly affects the interests of many people and has a significant economic influence on the equine industry. Infection occurs because the respiratory system is a common portal of entry for foreign matter into the body, including organisms such as bacteria and viruses. There is also a high incidence of non-infectious respiratory disease, such as chronic obstructive pulmonary disease (COPD), which has allergic and other causes. In reality, much of this disease reflects errors that are being made in the controllable aspects of horse management, including the environment of the stable.

Low-grade viral infection would appear to have increased remarkably in modern times. This has been due in part to an increase in horse numbers but also reflects the new styles of management which a growing horse population requires, especially in the areas of breeding and sport. Increased competition and wider international transport for racing and breeding purposes now allows for a more distant spread of infectious organisms and the added stress of travel can make individual horses more susceptible to attack. Once infected, these horses introduce their germs to the varying populations with which they come into contact.

Both environment and management influence the establishment of disease and have a profound affect on the manner in which resistance and immune mechanisms help horses to withstand challenge. It is vital to the control of infection that these processes be understood; also that the character and nature of organisms be appreciated, and interference made at the appropriate time and place, in order to break the cycle they can establish.

The present day approach to control appears to be for the reduction of disease by vaccination alone. Not only is this approach unsatisfactory because of the quality of present vaccines, but it would be foolish in the extreme to believe that even effective vaccines will stem the problem as we now know it. To suggest this is to fail to appreciate the principles involved; unless we broaden our understanding the lessons to be learned will be even more painful than those of the past. Simply expressed, there

is a growing pool of disease agents that we recognise and an increasing, susceptible, horse population. Unless we appreciate the real significance of this, disease will prosper and human interest will be made to suffer.

Finally, there is a changing temper internationally in the attitudes of equine sales companies to the problems of mechanical diseases of the upper respiratory tract. The best known of these diseases is ILH - or, as it is more commonly referred to, 'whistling and roaring' (its medical description is idiopathic laryngeal hemiplegia).

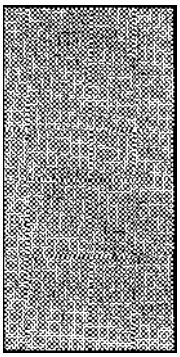
The broadening of understanding regarding conditions of the larynx has come with the advent of the fibreoptic endoscope, but this understanding rests largely within the professional sphere. It is becoming increasingly important that owners, trainers and others should have a ready reference to these problems, all of which are within the remit of this book.

On the other hand, it is not the purpose of the book to take the reader into the sphere of advanced clinical technology. While it is important to encourage the horse owner to achieve a higher standard of management and observation, there is a line beyond which an animal must be entrusted to expert and specialist care; that line is drawn between information and responsibility and this book sits astride it, where it can best benefit layman and veterinary surgeon alike.

Peter Gray

Author Note

I have used everyday and common terms when naming parts of the horse. In veterinary practice, of course, technical names are used for greater accuracy of definition. When it will aid the reader, therefore, I have occasionally used both in the text and index.



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