Risk Factors for Inflammatory Airway Disease in U.K. National Hunt Racehorses

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The early training period and the isolation of Streptococcus zooepidemicus are important risk factors for inflammatory airway disease in older racehorses. Authors’ addresses: The Royal Veterinary College, Hawkshead Lane, North Mymms, Hatfield, Hertfordshire AL9 7TA, UK (Cardwell, Smith); Department of Veterinary Medicine, Madingley Road, Cambridge CB3 0ES, UK (Wood); and Animal Health Trust, Kentford, Newmarket, Suffolk CB8 7UU, UK (Newton); e-mail: jcardwell@rvc.ac.uk (Cardwell). © 2008 AAEP.

1. Introduction
This study aimed to test the hypothesis that reductions in prevalence and incidence of inflammatory airway disease (IAD) with age are associated with time in training rather than with age, per se.

2. Materials and Methods
A prospective longitudinal study was conducted in five U.K. National Hunt yards over 2 yr. Horses were examined and sampled monthly. Risk factors for IAD were identified using multivariable mixed-effects logistic regression. IAD was defined as a combination of increased tracheal mucus and airway neutrophilia using a nine-point inflammation score with a case-definition threshold of ≥6/9.

3. Results
Multiple tracheal wash samples (n = 1184) were obtained from 177 horses. The prevalence of IAD was 7.1% and did not reduce with age. However, horses in their first 3 mo of training were at increased odds of IAD compared with horses that had been in training for longer periods of time. Streptococcus zooepidemicus was the only bacterial species associated with IAD in multivariable analyses.

4. Discussion
The early months of training are an important risk period for racehorse respiratory disease. Closer surveillance of respiratory health and the use of preventive measures during this time should be recommended to trainers. S. zooepidemicus is an important risk factor for respiratory disease in older as well as younger racehorses. Subtyping of S. zooepidemicus isolates is required to investigate type-specific associations with disease.

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