
Sarah M. Reuss, VMD; M. Keith Chaffin, DVM, MS, Diplomate ACVIM; and Noah D. Cohen, VMD, MPH, PhD, Diplomate ACVIM

There is a high prevalence and wide variety of extrapulmonary manifestations of *Rhodococcus equi*. Profound leukocytosis and neutrophilia are two factors that may aid in antemortem diagnosis of these disorders. Authors' address: Department of Large Animal Clinical Sciences, College of Veterinary Medicine and Biomedical Sciences, Texas A&M University, College Station, TX 77843-4475; e-mail: sreuss@cvm.tamu.edu. © 2008 AAEP.

1. Introduction

*Rhodococcus equi* bronchopneumonia is a prevalent cause of disease in foals. The bacterium is also associated with multiple extrapulmonary disorders (EPDs). These EPDs are difficult to recognize clinically but may affect prognosis. The purpose of this study was to describe the frequency, types, and outcome of EPDs and to identify risk factors for EPDs.

2. Materials and Methods

Medical records of foals diagnosed with *R. equi* infections at Texas A&M University’s Large Animal Teaching Hospital between 1987 and 2007 were reviewed, and information was collected regarding signalment, history, clinical signs, diagnostic testing, treatment, outcome, and post-mortem examinations.

3. Results

One hundred and fifty foals met the inclusion criteria. Of these, 77% had at least 1 of 40 different EPDs. The most commonly identified EPDs were diarrhea, immune-mediated polysynovitis, ulcerative enterotyphlocolitis, intra-abdominal abscessation, abdominal lymphadenitis, uveitis, and pyogranulomatous hepatitis. Risk factors significantly associated with the presence of EPDs included referral status, duration of clinical signs before admission, leukocytosis, neutrophilia, and increased blood urea nitrogen concentration. Survival rate was significantly higher among foals without EPDs (80%) than among foals with EPDs (46%), but many EPDs were only recognized post-mortem.

4. Discussion

There were a wide variety of recognized EPDs, and some of these seemed to have a negative impact on outcome. All foals with *R. equi*, especially those with profound leukocytosis and/or azotemia, warrant a thorough diagnostic assessment for EPDs.