Rhodococcus equi infections in Swedish foals in 2010

Elisabeth Mandorf and Gittan Gröndahl, National Veterinary Institute, Uppsala, Sweden

Aim

The aim of the study was to investigate the current disease situation and handling of Rhodococcus equi pneumonia in foals in Sweden in 2010.

Introduction

An unknown number of foals in Sweden are treated against Rhodococcus equi infections every year. In total, 10,903 foals were registered in Sweden in 2010. When R. equi is encountered in a farm, the long treatments with broad-spectrum antibiotics provide a risk for general selection of antibiotic-resistant strains of bacteria in horses.

Methods & Results

A prospective questionnaire on demography, diagnosis, clinical findings, treatment, and survival of cases of R. equi infections in foals in year 2010 was sent to 721 Swedish equine practitioners. Ninety-one cases of R. equi infections among 1,526 examined foals were reported from 147 veterinarians. The 91 cases represented 0.8 % of the total foal crop in the country. The true incidence is estimated to be larger, as all clinicians did not report their cases. Clinical details were available for 72 cases.

Demography

Standardbred trotters (75 %) and warmbloods (17 %) were most commonly affected. Foals were 7-154 (median 58) days old. Cases were often from large stud farms (median crop 47 foals). The farms had often had R. equi infections earlier years.

Diagnostic workup

Bacterial cultures, mainly from tracheal washes, were performed in 42 of 72 foals (58 %). Lung abscesses were observed in 59 % of examined cases, by radiology in 14 of 19 foals, and by ultrasonography in 5 of 13 foals. Extrapulmonary manifestations were noted in 21 % of the cases. Hematology was the most commonly used diagnostic test (68 %).

Treatment and outcome

Clarithromycin in combination with rifampicin was mostly used, but 5 foals were treated with gentamicin in combination with rifampicin. Most foals were treated for 5 weeks. Diarrhea during the antibiotic treatment occurred in 17 %. Lethality rate including euthanasia was 19 %, of which 73 % were dead within one week from diagnosis.

Conclusions

Rhodococcus equi pneumonia was reported in ~1 % of Swedish foals, and the true incidence is probably larger. Standardbred foals from large farms predominated. Bacterial diagnosis, a recommended criterion for instigation of antibiotic therapy for R. equi, was not consistently used.