

Preface



Louise L. Southwood, BVSc, PhD
Guest Editor

Infection is a common and often serious problem affecting human and veterinary patients. Despite the frequent occurrence of infection, diagnosis and treatment are a challenge in many cases. Infection can be diagnosed readily in patients with a fever, local redness, pain, heat, and swelling (color, dolor, rubor, and tumor), purulent drainage, and a positive culture. Many cases are not that straightforward, however. A recent case at our hospital exemplified the challenges with diagnosing an infection. A mature 500 kg gelding had sustained a puncture-wound kick injury to the proximal antebrachial area 7 to 10 days before presentation. The horse had been mildly lame since the injury and had become considerably lamer when the puncture wound had closed, which was the reason for referral. The horse showed signs of infection including a fever, lameness, pain on palpation, and hyperfibrinogenemia. After repeated physical examination by at least five veterinarians, hematological analysis, fibrinogen concentration monitoring, elbow joint arthrocentesis and synovial fluid analysis, numerous radiographs, and nuclear scintigraphy, it was still being debated whether the clinical signs and results of ancillary tests were associated with infection of the soft tissues of the antebrachium only and associated bone trauma as a result of the initial injury, or if the infection was in fact associated with the distal humerus and elbow joint. Similar challenges arise postoperatively in cases of suspected surgical site infection. In some cases, it is difficult to confirm the presence of osteomyelitis, peritonitis, and colitis, for example, as opposed to inflammation associated with the initial disease and surgery or an unrelated infection.

Early diagnosis and treatment are always critical for a favorable outcome. The incidence of infected synovial structures associated with a laceration, for example, has been reduced dramatically in some practices because of early recognition by referring veterinarians of synovial structure involvement, and this has led to rapid treatment and a very favorable outcome in most cases. The aim of this issue is to familiarize practitioners with the more basic and advanced diagnostic and treatment options for horses with infection so as to improve the prognosis for these patients.

Despite the emergence of new diagnostic techniques, such as scintigraphy, magnetic resonance imaging, and computerized tomography, history and physical examination are still critical for diagnosing infection. It is important that clinicians have a thorough understanding of the use and limitations of ancillary tests and interpret the results critically and in conjunction with other findings. Several articles in this issue address the use of ancillary diagnostic tests.

Morbidity and mortality associated with antimicrobial drug resistance and antimicrobial-induced diarrhea are major issues facing both medical and veterinary practitioners. Excessive antimicrobial use is common in both fields and is the major cause for antimicrobial drug resistance and antimicrobial-induced diarrhea. It should be the goal of every practitioner to critically evaluate antimicrobial-use practices and to minimize the use of antimicrobial drugs without compromising patient care. This issue provides the reader with some of the recent literature from the human and veterinary field on antimicrobial use and resistance prevention.

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Louise L. Southwood, BVSc, PhD
Department of Clinical Studies
New Bolton Center
University of Pennsylvania
382 West Street Road
Kennett Square, PA 19348, USA

E-mail address: southwoo@vet.upenn.edu