Orthopaedic Imaging

The papers published in this issue of the Journal encompass an eclectic tapestry of topics, with studies of traumatic, congenital, developmental, metabolic and developmental musculoskeletal disorders. These investigations involved a range of animal species including the sheep, horse, camel, dog, and cat. This spectrum of investigation is a highly valued characteristic that is core to the comparative interests of our Journal.

The description of portal landmarks and normal arthroscopic anatomy of the metacarpophalangeal joint of the dromedary camel is one of the first to be published about arthroscopy in camels (1). It is a valuable extension to the existing knowledge about equine and canine arthroscopy. Just like the dog and horse, the camel is used in some countries for a variety of purposes including human food, carrying loads and personal transport, as well as for racing in the arid equatorial regions. However, camels are not so highly valued universally. One of the largest populations of camels in the world is the Australian feral camel, which is found in the Australian outback where these animals thrive in the harsh environment. Camels imported into Australia in the early part of the nineteenth century were used for transport of man and materials during the construction of roads and railways across the hot and dry Australian continent. Unfortunately, with the introduction of trucks and trains a century later, the unwanted camels were abandoned into the wild, becoming feral and creating environmental problems.

The rapid improvements in imaging technology and computer software are critical to the progression of new developments in most facets of orthopaedics today. The cover image of this issue features computer generated three dimensional constructions of computed tomography images of ovine vertebrae following percutaneous injection of polymethylmethacrylate bone cement augmentation (2). This is a technique used in humans to treat compression fractures of the thoracic and lumbar vertebral bodies secondary to osteoporosis and metastatic neoplasia. Use of advanced imaging technologies would appear to be a very promising modality for the reduction of morbidity associated with minimally invasive palliation of such fractures in humans, as well as in the investigation, diagnosis and management of musculoskeletal diseases and injuries in animals. Advanced imaging techniques were used in two other studies investigating canine elbow disease (3, 4). Moreover, several other reports used quantitative and semi-quantitative radiographic assessment of outcome in their studies of bone and joint disorders (5-10).

References