A Review of Imaging Options for Subtle Lamenesses

Ten years ago, if your horse turned up lame, chances are the problem would be obvious and the diagnosis easy. Today's more astute horse owner is far more in tune with his or her horse, and we're seeing more subtle lamenesses stemming from all parts of the body. Unfortunately, this can make diagnosing today's lame horse a bit trickier. That's where nuclear medicine comes in.

Pease used this case as an example of how scintigraphy can help localize and isolate a problem, a 7-year-old mare that took a spill and landed on her left hind end. She had since displayed left pelvic limb lameness. Pease said X rays showed one bone lesion on the mandible. Said. After taking a biopsy, he diagnosed the horse with squamous cell carcinoma with a secondary bone lesion on the jaw that looked like bone loss, and nuclear scintigraphy revealed a huge hot spot there. Scintigraphy helped to determine how large the lesion was, Pease explained that scintigraphy is advantageous in cases such as this: “It shows you where bone turnover is occurring and allows you to track it over time,” he said.

When interpreting scintigraphy results, remember that bone turnover can occur for many reasons aside from an actual lesion. When evaluating scintigraphy images, it is important to consider the patient history and physical examination. Pease recommended reviewing the patient’s medical records, looking for any previous injuries or surgeries that could have led to increased bone turnover. Additionally, Pease said it is important to consider patient motion. “Nuclear medicine relies on patient motion to provide images,” he said. “If the horse is not moving appropriately, the images may be compromised.”

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Standing MRI has recently “taken the equine market by storm,” Pease said, and uses a magnetic field (the size and severity of the lesion must be such that these low field systems can detect it) and radio waves to produce detailed images of tendons and ligaments, bone edema, and even changes in blood flow and fracture activity levels. “You can use serial scintigraphy to evaluate the healing process,” he said. “It allows you to track how well the bone is healing.”

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