

● HORSE HEALTH

# Case File: Simpler Surgery for Ringbone

A gelding returns to roping after a long battle with a debilitating lameness condition.

By DEBBIE MOORS

RINGBONE ISN'T AN UNUSUAL MALADY. It's common in senior horses that have led active, athletic lives. But the plight of those older horses has been of personal interest to Ellis Farstvedt, DVM, and the CSR Equine Sports Medicine Center in Bozeman, Montana.

"I see aged horses that are extremely well-trained and talented, but they're reaching the end of their career and they have ringbone," Farstvedt says.

In July 2008, Farstvedt came face to face with such a horse. Sport, a 16-year-old, bulldog-built, well-seasoned Quarter Horse roping horse, was owned by Rich and Tammy Jo Carpenter of Kalispell, Montana, at the time.

"He was about 10 when we got him," Tammy Jo says. "We used him as a head horse. He had amazing early speed. He was pretty easygoing, but had a lot of fire when you rode him. He was very athletic and good to be around on the ground."

When Sport was about 15, he chipped a bone in his front leg during turnout over the winter. Once the injury healed, the Carpenters found he was still lame.

Sport was officially diagnosed with ringbone, with calcification in the pastern joint. Ringbone is another term for osteoarthritis in the coffin or pastern joint. Arthritis causes inflammation in the joint, and the body responds to that inflammation by building up bone around the joint. That causes the horse to have a ring-shaped swelling in the area—hence the name, "ringbone." The roots of the disease may be in an old injury or overuse of the joint, but no matter its cause, its effect is often debilitating.

The disease's severity and progression varies by horse. If you can find the in-

jury early, before there's arthritic change in the joint, you may be able to stabilize the joint and let the injury heal, preventing ringbone from developing. But once arthritis settles in, and ringbone is present, treatment options vary according to severity.

Conservative options for horses with mild ringbone may include shoeing (with a full rocker shoe) or shockwave therapy to ease the pain. Other options may include injecting corticosteroids or hyaluronic acid, and systemic joint therapy medications or nutraceutical joint supplements to bolster the joint's mobility and ease discomfort.

"We tried a series of injections to get Sport sound," Tammy Jo says. "It worked for a little while—maybe six months to a year. Then we tried to get the joint to fuse naturally."

But ringbone is a progressive disease, and, typically, horses reach a point where the conservative methods are ineffective.

When Farstvedt first saw him in his paddock, 16-year-old Sport was hobbling painfully. Just walking was difficult for him. But treatment options were limited.

At the end stage of ringbone, two procedures are commonly recommended. One involves injecting the joint with ethyl alcohol, which kills nerve fibers inside the joint capsule to alleviate pain. It's inexpensive, but is not a widely ac-

cepted—or 100 percent effective—form of therapy. Injecting Sport with ethyl alcohol hadn't worked.

The second option is surgical pastern arthrodesis. This invasive surgical procedure involves cutting open the joint capsule (in the pastern), scraping all the cartilage off the joint surfaces, then drilling some holes in the ends of the bones to allow some of the marrow cells to leak out. The joint is put back together with a plate in the center and a screw on each side of the plate. Once the site is sutured and closed, the foot remains in a cast for about four weeks as the joint fuses and heals.

For two to three days post-operation, most horses show moderate to severe signs of pain, then mild to moderate pain for another two to three weeks. The success rate is approximately 80 percent.

Surgical pastern arthrodesis can cost an owner \$5,000 to \$8,000. That's a hefty investment for an older horse, especially when considering the surgery is painful, and a lengthy recovery period is required.

"We couldn't afford a risky surgery not knowing if he'd be 100 percent afterward," Tammy Jo says.

Not wanting to put Sport down and hoping to give him a chance at recovery, Rich and Tammy Jo offered to give Sport to Farstvedt.

"I've wanted to find a way to help



**A reliable heading horse, Sport was sidelined with ringbone until Ellis Farstvedt tried an uncommon surgical procedure.**



these horses that are invaluable in terms of abilities," Farstvedt said.

In June of 2009, Farstvedt became Sport's new owner and decided to treat him with a less-invasive form of pastern arthrodesis. Rather than opening the joint, removing the cartilage and then leaving the horse with the lengthy and painful recovery, Farstvedt decided to try to get the joint to fuse by implanting screws in the pastern joint.

First, he made three small "stab incisions" that were about a centimeter long. Through each incision he placed a 5.5-millimeter cortical screw, and used a drill and radiography to guide the screws into the proper place through the joint.

"We'd drill into the bone, then take a film, check the trajectory, then drill again," he says.

The procedure—far less invasive—kept the joint intact and allowed it to fuse without opening the joint and removing the cartilage.

The procedure took about 90 minutes, compared to standard surgical arthrodesis, which can take two-and-a-half to three hours.

The procedure was successful. Sport showed little to no post-operative pain and recovered quickly.

"I was nervous about whether this would work or not," Farstvedt says. "I kept him in a little paddock for two to three months, turned him out for another three months,

and then we started using him."

Less than a year later, the gelding has recovered so completely that he's back at work and in competition, with the whole Farstvedt family roping off him. His body condition and a great quality of life have returned.

Tammy Jo and Rich were pleased to hear the procedure went well, not only because Sport is comfortable and performing well, but also because the procedure bodes well for other horses like Sport.

"We're extremely happy they learned something from the process, as well as the fact that he recovered and was usable," Tammy Jo says. "Dr. Farstvedt tried to give him back, but I said 'We gave him to you, he's your horse.' I'm thrilled to see him doing so well!"



Farstvedt implanted screws in Sport's pastern joint.



Shown here with Dr. Ellis Farstvedt's wife, Mandi Holland, DVM, Sport returned to team roping competition after Farstvedt performed a procedure that fused the joint affected by ringbone.

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