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Autologous Vaccination a Safe, Affordable Sarcoid Treatment

A circular wartlike nodule appears at the base of your horse's ear. Maybe it's just one, maybe it's an entire cluster. Maybe your veterinarian has already removed it once and, guess what, it's back! These common tumors—called sarcoids—are rarely more than cosmetic blemishes, but treating them is extremely challenging. There's no one effective treatment that works very well.

Recently, however, veterinarians have explored the efficacy of autologous vaccination, in which the practitioner removes a sarcoid lesion from the horse and implants pieces of it back into the horse's neck, with some success. David Levine, DVM, Dipl. ACVS, an assistant professor of Clinical Large Animal Surgery at the University of Pennsylvania School of Veterinary Medicine's New Bolton Center, described the results of his practice's experience with this method at the 2015 American Association of Equine Practitioners' Convention, held Dec. 5-9 in Las Vegas.

Historically, said Levine, veterinarians have used many modalities to treat equine sarcoids, including:

- Most commonly, surgical excision, with a 50-64% recurrence rate (a 36-50% success rate);
- Cryotherapy (freezing), with a 60% success rate;
- Interstitial brachytherapy (radiation), with anywhere from 50% to 100% success;
- Chemotherapy (cisplatin), which researchers performed with 96% success in one study;
- Imiquimod anti-tumor medication, which results in about 56% remission; and
- Xterra herbal paste, with a 56% response rate.

While some practitioners have dabbled in autologous vaccination to treat sarcoids, no published studies on the topic existed. So Levine and colleagues assessed its safety and efficacy on both single and multiple sarcoid lesions.

They evaluated 18 horses with sarcoids that underwent an autologous vaccination procedure at New Bolton from 2009 to 2014. During the procedure, Levine removed the sarcoid and sectioned it into several 3-mm cubes. He placed these cubes into liquid nitrogen for 10 minutes to kill any bacteria, along with the sarcoid cells. Here, Levine noted, he also changed instruments and gloves. He then stabbed two to four of the thawed sarcoid fragments into various sites along the nuchal ligament in the horse's neck. And, voila, the procedure was complete.

Sixteen of these horses were available for follow-up, on average, 10.5 months later. Based on follow-up, Levine determined that:

- 12 (75%) cases experienced a decrease in the number of sarcoids;
- 15 (93.8%) demonstrated a decrease in the size of the sarcoids;
- 11 (68.8%) cases resolved completely;
- 7 (43.8%) horses experienced complications (mainly swelling around the neck incisions);
- 75% of owners were satisfied with the results; and
- 25% of owners were satisfied with the procedure, but not with the complications.

"Although the mechanism of the autologous preparation is unknown, we suspect the tissue acts as an immunomodulatory agent to stimulate a host response not only against the debulked lesion, but on other lesions on the body," Levine said, concluding that this therapy is a safe, quick, and inexpensive method of treating sarcoids.

It does take a long time for the sarcoids to regress, he added, suggesting that owners and veterinarians continue to treat the remaining tissue post-vaccination with imiquimod or cisplatin while the immune system does its job.