**CLIENT EDUCATION HANDOUT**

**Customer Name, Street Address, City, State, Zip code**

**Phone number, Alt. phone number, Fax number, e-mail address, web site**

**Sarcoid**

**Basics**

**Overview**

* The most common skin tumor in the horse; it does not metastasize but is locally invasive
* Presents in a variety of forms from subtle hair loss and scaling to more classical lumps and bumps, and sometimes aggressive swollen, ulcerated, and weeping lesions
* High tendency to recur after surgical removal unless wide surgical margins are obtained

**Signalment**

* Affects many breeds and ages, but is more common in Quarter Horses, less common in Standardbreds, and tends to occur at a younger age than many other tumors (mean age of onset 3–9 years)

**Signs**

Variable clinical forms occur alone or in combination, and progression to more aggressive forms may occur over time or after skin trauma:

* Occult—areas of hair loss, with some scaling and skin thickening
* Verrucous—small wart-like growths
* Nodular—classical raised lumps in or under the skin
* Nodular and ulcerated—irregularly raised areas with associated rawness and weeping
* Malevolent—rare invasive locally spreading and aggressive form

**Causes**

The exact cause of sarcoids is unknown, but it involves a combination of:

* Viral infection—with some types of bovine papillomavirus (PV) that normally cause typical papillomas (“warts”) in cows
* Horse factors—inherited factors appear important to contracting sarcoids, and the cattle viruses are altered to horse-specific forms within affected horses. Normal horses can have the same cattle PV in their skin but do not develop sarcoids
* Environmental factors—outbreaks of disease occur sporadically, and transmission has been linked to flies and probably direct and indirect contact with affected horses, donkeys, or mules

**Risk Factors**

* Higher risk appears inherited in some breeds and families of related horses. Quarter Horses and possibly Appaloosas, Arabs, and Thoroughbreds are at greater risk. The presence of some horses with sarcoids in the region may increase the risk, particularly with concurrent poor management and hygiene practices

**Treatment**

**Appropriate Health Care**

* Good wound hygiene and fly control, and hygienic management practices for all horses on the premises may help reduce the incidence of sarcoids and their transmission

**Activity**

* No restrictions are required unless dictated by healing surgical wounds

**Diet**

* No specific dietary requirements

**Surgical Considerations**

* Surgical excision with wide margins is considered the optimal treatment for sarcoids. Surgical margins should be checked for extension of tumor beyond the margins, indicating further excision is required. Cryosurgery or laser surgery may be useful for restricted sites

**Medications**

Multiple drugs have been used in attempts to treat sarcoids, with or without initial surgery. Medical options may be best considered supplementary to surgical removal, but may have value as sole treatments for small superficial lesions.

* Chemotherapy—topical or injected 5-fluorouracil, injected cisplatin, and other topical cytotoxic (cell-damaging) treatments such as bloodroot extracts have been reported with variable success rates. As with any chemotherapy options, a high standard of care is required to prevent contact of drugs with human skin or mucous membranes
* Immune stimulants—a range of options have been used with the aim of stimulating the horse’s own immune system to remove the sarcoids, including topical imiquimod, injected mycobacterial products and autologous vaccines
* Antivirals—a newer treatment option, and some success for smaller lesions is reported with topical antiviral creams or gels (e.g. acyclovir (aciclovir), cidofovir)

**Follow-Up**

**Patient Monitoring**

* Careful patient monitoring for recurrence is important post treatment. Prompt follow-up with your veterinarian when advised, and early attention for any apparent recurrence is important. Early repeat treatments, and more aggressive initial treatments, are most likely to give successful outcomes

**Possible Complications**

* Surgical—wound infections or breakdown may occur post surgery, particularly to achieve wide surgical margins. Good wound care and restriction of exercise as indicated will help limit complications. Restricted movement is a possible long-term complication at sites of excision
* Immune-stimulant medications can cause temporary severe local inflammatory responses, with associated pain and discomfort—treatments may need to be reduced or delayed

**Expected Course and Prognosis**

* Progression of lesions is variable— they may remain static for years, progress quickly or slowly into more aggressive forms, or occasionally regress spontaneously
* The prognosis is poorer for aggressive or large lesions
* Early complete excision with wide margins, and checking adequacy of margins by histopathology, will improve the prognosis

**Key Points**

* Sarcoids present in a variety of forms, and can be very locally invasive and aggressive tumors
* Biopsy is important to confirm the cause as other diseases can look like sarcoids, and should always be done prior to extensive surgery or other aggressive medical treatments
* Early aggressive treatment for sarcoids, including assessment of adequacy of surgical margins and immediate wider excision or other treatments if indicated, will give the best prognosis
* Early repeat surgery and/or additional treatments for recurrence will also improve the prognosis



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*Blackwell's Five-Minute Veterinary Consult: Equine, Third Edition,* Jean-Pierre Lavoie © 2020 John Wiley & Sons, Inc.