

# Dealing With Warts

By Michael Ball, DVM

A wart is an epidermal (skin) tumor caused by a variety of different viral infections. Remember that the word tumor simply means lump or mass and does not always infer cancer. In medical terms, warts are typically referred to as papillomas with "papill" being Latin for "nipple" and "oma" meaning "a morbid growth."

All warts are basically caused by different types of the equine papilloma virus, which is a DNA type virus (the nucleic acid is DNA rather than RNA). The virus infects the skin cells, causing various replication abnormalities in the skin cells and excess production of keratin (a major protein type in skin and hair). It typically requires some type of skin damage to allow for invasion and infection--abrasions, sunburn, insect bites, etc. The virus is considered to be contagious, with the lesions being a main source for the virus, and it can survive in the environment for up to two months. It can be transmitted by hand-to-hand contact, horse-to-horse contact, insects (particularly black flies), as well as bridles, brushes, fly masks, and anything that makes contact with the lesions.

## Viral Papillomas

The common wart (sometimes called grass wart) occurs in horses less than three years of age (most commonly in those less than one year of age). The lesions are classically wart-like with multiple frond-like projections growing from the infected skin. The most commonly affected areas of the body are the lips and muzzle, and less commonly the eyelids, genitalia, and lower legs. These warts, being of viral etiology, are very contagious to susceptible horses and the spread can be limited by isolating affected animals and carefully disinfecting contaminated equipment (halters, fly masks, bridles, etc.) with an effective product, such as povidone-iodine. Horses over the age of three have most likely already had the infection when younger and have had their immune systems stimulated to prevent infection.

## Viral Papilloma Treatment

These warts typically undergo a spontaneous remission within two to three months with virtually no scarring of the affected tissue. If a more rapid resolution of the warts is desired, surgical excision and/or cryosurgery is effective at removing the masses, but there could be associated scarring or depigmentation of the skin. It has been widely reported anecdotally that stimulating a few lesions with surgical removal will create an immune response, thus speeding resolution of the remaining warts. However, a controlled study designed to test this hypothesis failed to observe this effect.

There is also anecdotal information supporting the use of wart vaccines in the treatment of this condition. The vaccines are made using excised wart tissue from an affected animal to create a vaccine specifically for use on that individual--this is called an "autogenous vaccine." Controlled study of this vaccination technique for the treatment of equine warts has failed to show that it will speed the natural regression, but it will prevent the development of new lesions.

In addition, there are numerous topical products emerging as potential treatments, but to date there are no studies confirming that any are effective.

## **Ear Papillomas**

Ear papillomas (aural plaques) are typically roundish, raised, depigmented (white) lesions on the inside surface of the ears. The condition usually occurs in horses over one year of age. In addition to the ears, the anus and external genitalia can also be affected. The plaques can be limited to just a few and remain static for some time, or the condition can progress to involve the entire inner surface of the ear. The ear plaques do not spontaneously regress as the facial warts do. The flat, smooth lesions develop a waxy coating that can appear flaky, which can be misleading when making a diagnosis. The condition has often been referred to as "ear fungus," but there is no fungal infection.

Another mistaken cause is an allergic reaction or infection related to black fly bites. It is true that the black fly (as well as other insects) contribute to the condition by causing the predisposing skin damage that allows viral invasion, and the black fly also plays a role in transmitting the virus from horse to horse.

Most of the time, the ear plaques are only cosmetic problems. Occasionally some horses will develop violent head shyness related to the aural plaques, especially during the summer months when the plaques could be aggravated by fly bites. Therefore, fly protection is important. Face masks and screens with ear coverage can work well if they are properly fitted. With respect to any of the fly repellents, I prefer they not be applied directly to any of the lesions to avoid irritation.

## **Treatment**

There is no documented treatment for aural plaques. There are anecdotal reports on a variety of topical preparations, but there are no controlled studies confirming effectiveness. The product tretinoin (Retin-A) has been reported to effectively treat this condition, but in my experience it has not been effective. In all but a few cases, my typical recommendation, aside from keeping the inside surface of the ear clean and providing fly protection, is to leave the lesions completely alone. In a few severe cases where the lesions had coalesced into a rather large mass and the horse had become severely head shy and painful, I have successfully removed some of the lesions with cryosurgery (freezing with liquid nitrogen). The big risk/complication with using freeze therapy in this area is causing damage to the thin cartilage within the ear, which can cause disfigurement as the ear heals and scar tissue forms.

One last concern is to make sure you are not dealing with a sarcoid, as there are different concerns and treatment options for these (more on these shortly). Typically the aural plaques remain well-demarcated, smooth, flat, and white. If there is rapid growth with an irregular surface, pain, and/or non-white discoloration, further evaluation is necessary, and a sarcoid should be ruled out.

## **Sarcoids**

Another skin tumor that can resemble a wart is the equine sarcoid. Sarcoids are also caused by a virus, but it is actually the bovine (cow) papilloma virus. Sarcoids are typically found on adult horses and are common on or around the ears, face, sheath, genitals, between the front legs, and behind the elbow, but they can be anywhere on the body. Sarcoids are more of a concern because of their ability to grow and become locally invasive. Many times a sarcoid will remain static and relatively insensitive, but they can become locally invasive in their growth and, depending on their location on the body, become quite painful.

If I suspect a skin lesion of being a sarcoid, I will typically start by taking a small biopsy. The nature of sarcoids is they project very small finger-like projections of their abnormal cells many inches away from the center of the lesions into the normal surrounding skin, making it very difficult to surgically

remove them without re-growth from the edges of the wound. Many sarcoids can be treated, depending on the location and individual lesion, with combinations of surgical excision/cryosurgery and/or local injection of chemotherapeutic drugs. There are also topical preparations that work well on some types of sarcoids.

### **Take-Home Message**

While warts aren't often significant problems, it is best to get them checked out by your veterinarian to be sure. He/she will recommend appropriate treatment, if there is any, or suggest management techniques to use or avoid.