DOES MY DOG HAVE WARTS?

Certain viruses are able to cause the growth of small round skin tumors commonly referred to as warts. Everyone who has every seen a drawing of a fairy tale witch knows what warts look like so when the family dog develops small round skin growths, many people assume these, too, are harmless warts. It is important to realize that viral warts are a specific condition and that a growth on the dog’s skin may or may not represent a viral wart.

Human warts are round, somewhat flat, and relatively smooth. Viral warts in dogs tend to possess frond-like structures creating more of a sea anemone or cauliflower-like appearance, though they can be smooth as well. The classical canine viral wart patient is a young dog with warts in or around the mouth or eyes. In such cases where warts have a classic appearance in a classic patient, diagnosis may be obvious but in older patients with warts in locations other than the face, other types of growths become more likely. Because growths can appear harmless but behave malignantly, removal and biopsy are often recommended.

It is usually not possible to identify a growth visually though there are some exceptions. Do not be surprised if what you are assuming is a “wart” is really something else.

In dogs, we do not call these growths “warts;” we use the more formal term “viral papilloma.” As in people, viral papillomas are caused by a papillomavirus though dogs and people have very different papillomaviruses and cannot transmit their viruses across species lines.
WHAT DO THESE PAPILLOMAS LOOK LIKE?

Viral papillomas are round but often have a rough, almost jagged surface reminiscent of a sea anemone or a cauliflower. They occur usually on the lips and muzzle of a young dog (usually less than 2 years of age). Less commonly, papillomas can occur on the eyelids and even the surface of the eye or between the toes. Usually they occur in groups rather than as solitary growths.

HOW IS THIS VIRUS TRANSMITTED?

The infection is transmitted via direct contact with the papillomas on an infected dog or with the virus in the pet’s environment. The virus requires injured skin to establish infection; healthy skin will not be infected. The incubation period is 1-2 months. This virus can only be spread among dogs. It is not contagious to other pets or to humans.

To become infected, the dog generally needs an immature immune system, thus this infection is primarily one of young dogs and puppies. Dogs taking cyclosporine orally to treat immune-mediated disease may also have an outbreak of papilloma lesions. Beyond this, transmission details are sketchy. It is not known whether the infected dog must actually show visible lesions to be contagious, nor how long after regression of lesions contagion is still of concern.

The canine papillomavirus has been shown to be able to survive at least 2 months at temperatures of 40° F but only 6 hours at 98° F.

ARE VIRAL PAPILLOMAS DANGEROUS?

Not really. They should go away on their own as the dog’s immune system matures and generates a response against the papillomavirus. There have been two cases published where viral papillomas progressed to malignancy but this is extremely rare and by no means the usual course of the infection. Typically, it takes 1-5 months for papillomas to regress with oral growths tending to regress sooner than those around the eyes. Occasionally some papillomas will stay permanently. It appears that lesions on the eyelid, head and feet may be caused by a different papilloma virus than those in the mouth.

Sometimes oral papillomas can become infected with bacteria of the mouth. Antibiotics will be needed in such cases to control the pain, swelling, and bad breath.
TREATMENT

In most cases, treatment is unnecessary; one simply allows the papillomas to go away on their own. Occasionally an unfortunate dog will have a huge number of tumors, so many that consuming food becomes a problem. Tumors can be surgically removed or frozen off cryogenically. Sometimes crushing several growths seems to stimulate the host’s immune system to assist in the tumor regression process. In humans, anti-viral doses of interferon have been used to treat severe cases of warts and this treatment is also available for severely infected dogs though it is costly and yields inconsistent results.

More recently, a topical medication called imiquimod has been used in both canine and human infections to help boost immune-mediated inflammation and thus facilitate destruction of the virus by the body. Imiquimod is being prescribed increasingly for dogs with viral papillomas.

Effective therapy for viral papillomas has been elusive though recently (May 2008) a study was published by a veterinary research group in Turkey found that a 10 day course of the antibiotic azithromycin was able to remove all lesions within 15 days with no recurrences during an 8 month follow up period. This therapy is readily available in the U.S. and has been frequently included in treatment regimens against papillomas since the publication of this paper. Results, however, are not always as definitive as the original paper has suggested they might be and stubborn cases continue to frustrate many pet owners and veterinarians alike.

Sometimes some of the warts can be removed and made into a “vaccine” which is felt to stimulate the immune system in removing the tumors. Malignant tumors have been reported to develop at injection sites occasionally. More recently a recombinant vaccine has been developed at Georgetown University. This vaccine employs only the DNA of the virus needed to generate an immune response. It can be used as a preventive vaccine or as a treatment for an active infection, though it is still considered an experimental product.