A New Approach to Treating Corns

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Corns are circular, hard and painful growths found on the digital pads of dogs. This condition is found predominately in Greyhounds and can be the source of significant lameness. If your Greyhound is limping, be sure that you and your veterinarian check the pads for corns as a possible cause.

There is very little published information in the veterinary literature on corns or their treatment. The cause of corns in Greyhounds is unknown; although several theories do exist. The most popular theory is that they are caused by the absence of a thick fatty layer in the pad which helps absorb shock and protects the skin and pad. The absence of this pad results in a concussive force between the toe and pad which causes corn formation. Another theory is corns result from cuts or punctures to the pad which heal and becomes fibrous and scarred. Two final theories are that a foreign body or papilloma virus result in the formation of corns (1). Hopefully future research will be done so that the true cause of corns can be determined.

The diagnosis of a corn can be made with a simple physical examination. The corn will be visible and should be painful on manipulation. Both authors have seen corn like growths on the pads of some Greyhounds that are not painful and do not require treatment. Differentiation of these conditions is made on the basis of discomfort. Radiographs (x-rays) of the affected paws can be taken to rule out a foreign body although it is the authors' experience that one is rarely noted. If surgery (deep tissue surgery, not hulling) is performed to remove the corn, then the corn should be sent off for biopsy. Papillomavirus testing should be performed on the corn at that time.

There are many treatment options described for corns. Soaking the paw and applying manual pressure to express the corn (2), surgical excision of the corn (2, 3), injections of silicone into the pad to provide padding to reduce recurrence of the corn (1), partial or total amputations of the affected digit (3), flattening, softening or padding of the corn are all treatments for the condition. Various surgical techniques have been described that include removal with a laser, scalpel blade or skin punch biopsy or amputation of the affected toe. However, a high percentage of corns will return 2-3 months after surgery and there can be significant post-surgical pain as the pad heals (1). Amputation is a radical approach to treatment which removes the affected digit. The risk for corns would still persist in other toes, however, and it is the opinion of the authors that this technique should only be performed when all other treatment modalities have failed. Most recently researchers at the Auburn University's College of Veterinary Medicine have studied how injections of silicone into the pad may help to provide increased cushioning similar to the fat tissue of the digit and thus prevent the reoccurrence of corns. The flattening is often accomplished through use of a Dremel drill or continual reapplication of a small piece of duct tape over the corn. The padding is accomplished by use of products such as Therapaws boots (www.therapaw.net). All of these treatment options have varying degrees of success.

A treatment technique developed by one of the authors (Carol Macherey) that has been used effectively in management of corns is to remove the hard core of the lesion. This procedure requires the use of a sharp flat tipped dental root elevator. The size of the elevator will vary based on the size of the corn. The dog should require no sedation, pain medication or local anesthesia and may remain standing for the entire procedure. The

following is a series of pictures illustrating how many corns can be peeled out of their "bed" and removed in a quick, painless and bloodless procedure. Please note this procedure should only be done by your veterinarian.

Figure 1. A flat tipped root elevator acts as a spatula. The size of the root elevator will depend on the size of the corn.

Figure 2. The Greyhound should need minimal restraint, no sedation or pain medication and remains in a standing position.

Figure 3. Gently identify the margins of the hard cornified portion of the corn. Use the root elevator to begin to separate the hard center core from the softer surrounding pad.

Figure 4. Slowly work the root elevator around the perimeter of the core. With a careful rocking movement, follow the shape of the core.

Figure 5. Care must be taken not to drive the root elevator too deeply into the pad. Continue the twisting movement until the sides of the core are released.

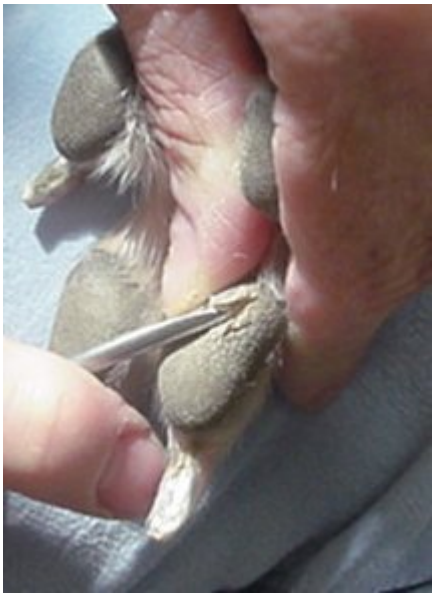

Figure 6. Once the sides are free, angle the root elevator so you are now separating the base of the core. The spatula tip is now almost parallel to the surface of the pad.

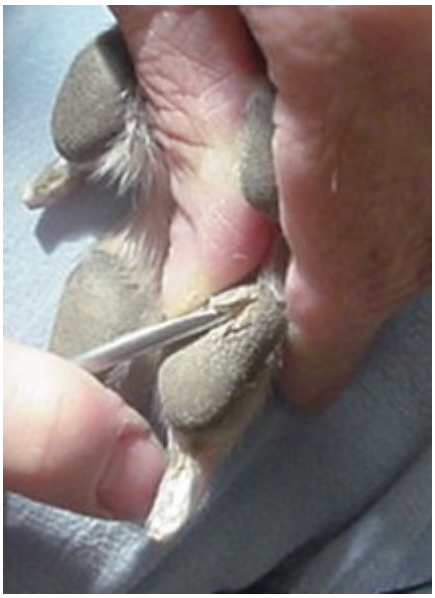

Figure 7. Any point of attachment must be freed.

Figure 8. The core is almost free from the pad.

Figure 9. The last small area of attachment may need to be snipped with scissors.

Figure 10. The result is an empty corn bed. The painful core is removed. Note there is no bleeding.

Figure 11. A cross section of a corn showing the true depth of the corn and why the hulling procedure is often only palliative.

The hulling procedure will likely need to be repeated as often as every 3-4 weeks. Some patients may not need the procedure repeated for a few months and in others the corns have resolved with no additional treatment. Recently the authors have started using

either Abreva (www.abreva.com) or Aldara (www.aldara.com) once daily after hulling. Some corns have resolved with this combination of treatment.

The hulling provides owners with an easy non-painful option for corn treatment. For additional information on corns, please review the following information:

http://www.grassmere-animal-hospital.com/corns.htm

http://www.therapaw.net/docs/Corns,%20and%20warts.pdf

References

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