Dermatology Clinic for Animals

(360) 350-4756 https://dcfawa.com

Calcinosis Cutis

Cause: Calcinosis cutis occurs when calcium crystals are abnormally deposited in the skin. The most common cause is high levels of steroids, either due to steroid administration or due to increases in steroid production by the body (http://dermvettacoma.com/cushings-disease/). Calcinosis circumscripta, a more localized form of calcium deposition in the skin, can occur on pressure points such as the paws and elbows, at suture sites, and on the tongue, but has different underlying causes than calcinosis cutis.

Affected Animals: Predisposed dogs include pets receiving long term steroids to control other diseases, such as chronic itching/allergies, inflammatory bowel disease,or autoimmune conditions. Additionally, dogs that are suffering from Cushing's Disease can develop calcinosis cutis if their disease is not well controlled.

Clinical Signs: Calcinosis cutis lesions commonly appear on the skin as bumps or flat raised areas (papules or plaques) with gritty yellow, white, or grey granules. The lesions are commonly surrounded by reddened skin, because calcinosis cutis often causes inflammation. The back, underarms and groin area are most commonly affected, but the lesions often start in one area and spread if the underlying cause is not controlled. Many animals with calcinosis cutis are itchy and uncomfortable. Their lesions often develop secondary infections, leading to red tinged or white-green discharge from the lesions and increased swelling and itching.

Diagnosis: Calcinosis cutis is definitively diagnosed using a biopsy (a sample of tissue taken and submitted to a pathologist for analysis). Biopsies will show calcium crystals deposited throughout the skin, which are often surrounded by an inflammatory reaction. Surface samples of the lesions are taken for microscopic examination during the initial appointment to determine if any secondary infection is present. When Cushing's disease is suspected, there are confirmatory tests to diagnose this disease before beginning treatment, such as an ACTH stimulation test or Low Dose Dexamethasone Suppression Test and an abdominal ultrasound.

Prognosis: When the underlying cause of the condition is identified, calcinosis cutis can usually be treated successfully. If the lesions have been present for a long time and are very severe, they may never resolve fully or the patient can be left with scarring. Without treating the underlying cause, however, calcinosis cutis will not resolve.

Treatment: Once the underlying cause is diagnosed, treatment is started to control and resolve the calcinosis cutis. In the case of chronic steroid usage, the steroids will be decreased gradually and stopped after a suitable substitute medication is found. If the patient has been diagnosed with Cushing's disease, then treatment for this disease will be started as soon as possible. If the patient is found to have a secondary infection, this will be treated with the appropriate topical and oral antibiotics. Additional treatments can include non-steroidal medications to reduce itching, antimicrobial shampoos to decrease the risk of future infection, and/or oral minocycline and aluminum-based antacids to help bind calcium. When appropriate, a topical gel medication (Dimethylsulfoxide –DMSO) is added to encourage the reabsorption of calcium from the skin. Regular bloodwork monitoring is often recommended to make sure the liver and kidneys are unaffected by the underlying cause or the treatment for calcinosis cutis.

Prevention: Avoiding overuse of oral and injectable steroids is important because they are known to induce calcinosis cutis with long term, high dose use.

8300 Quinault Drive NE Suite A, Lacey, WA 98516