

## Injection Site Alopecia

Injection site alopecia (hair loss) occurs at the site of subcutaneously administered drugs and vaccines (Rabies vaccine is most often responsible). The cause of this condition is not known but several different mechanisms have been suggested including an immune-mediated etiology. The condition has been seen in many dog breeds but Poodles and Bichon Frises are at an increased risk. Show animals of predisposed breeds should avoid injections in prominent areas.

Alopecia and hyperpigmentation generally occur 3-6 months after administration of an injection, but lesions may develop up to 10 months after an injection. The area of hair loss can vary from 2-10 cm in diameter and overlies the injection site. Rarely, animals may become depressed, lethargic, and febrile. Alopecia may develop over the face, limbs, ear margins, and tip of the tail. In some instances, thickening of the skin and skin erosions will occur. In rare instances ulcers have been noted on the tongue, footpads, elbows, and around the eyes. Muscle atrophy has been observed in severe cases. Revaccination may exacerbate the condition.

A clinical history and physical examination is usually sufficient to suggest a diagnosis. Infectious etiologies are ruled out by performing skin scrapings and fungal cultures. Confirmation of



the diagnosis can be made by histopathologic examination of biopsy samples taken from areas of hair loss.

Areas of hair loss will usually re-grow hair but may take up to a year. An oral medication called pentoxifylline has shown to have beneficial effects in healing lesions resulting from vaccines. A combination of the antibiotic tetracycline and niacinamide given orally can also be tried in conjunction with a topically applied tacrolimus ointment.