

## Differentiating Keratinization Disorders: When Scales Are Not Equal

Keratinization defects in dogs and cats are characterized by abnormal haircoats with concurrent scaling and crusting. In this cases series, 3 dogs with similar skin biopsy findings were described. Although the dogs were first examined as adults, signs first appeared when they were puppies. The haircoat was reported to be dry, dull, and brittle with progressive scaling, hair casts, and hair loss. Two of 3 dogs for which follow-up was available responded to topical shampoo therapy combined with topical emollients (propylene glycol spray). One dog was treated with concurrent oral vitamin A and another with evening primrose oil.

### ■ Commentary

Clinically, the dogs in this case series were

indistinguishable from other dogs with whole-body keratinization disorders. In addition to starting when young, another interesting finding was that lesions tended to start on the head, with the earliest clinical finding being ear margin scaling and matting of the hairs on the ears. Lesions progressively spread over the body and hair casts; poor coat quality and hypotrichosis developed. One important differential for young dogs is granulomatous sebaceous adenitis (SA). Skin biopsy can help differentiate the 2 diseases, but it is important to take several samples at various body places to ensure the pathologist has adequate tissue. In SA, key findings depend on whether samples are taken early or late in the disease process. If taken early, the classic inflammatory response

obscuring the sebaceous glands may be seen. If samples are obtained after this inflammatory response, sebaceous glands are described as absent. In contrast, the glands are present in sebaceous gland dysplasia but are irregularly clustered, irregular in shape and orientation, and smaller. Clients may ask why the differentiation is important; with SA, some dogs respond to cyclosporine. In my experience, response can take up to 12–16 weeks.—Karen A. Moriello, DVM, DACVD

### ■ ■ Source

Scaling dermatosis in three dogs associated with abnormal sebaceous gland differentiation. Peters-Kennedy J, Scott DW, Loft KE, Miller WH. *VET DERMATOL* 25:23-e8, 2014.

## Scrub, Scrub, Scrub Those Bugs Away

This pilot study described preoperative patient and surgeon preparation in 10 small animal veterinary clinics. With staff knowledge, wireless surveillance cameras were placed in 10 clinics for 9–14 days. A video coding scheme coded 148 surgical patients with 31 surgeons and 190 preoperative preparations. Data recorded included hair removal method, scrub pattern, and solution contact time.

Hair removal was performed as recommended in a preparation area in 9/10 practices but was routinely done in the OR in one practice; however, the main variation in both patient and surgeon preparation was antiseptic contact time, which was often shorter than recommended. For patients, contact time with soap ranged from 10–462 seconds and with alcohol from 3–220 seconds. For surgeons, hand preparation using soap and water contact time ranged from 7–529 seconds; for alcohol-based hand rub, the range was 4–123 seconds.

Reviewed texts recommended contact times for patient preparation ranging from 0.5–3 minutes, emphasizing adherence to the antiseptic manufacturer's instructions. For surgeon preparation with soap and water, recommendations were 2–7 minutes. The more recent publications promoted the use of alcohol-based surgical hand rub, with recommended contact times of 1.5–2 minutes. Textbooks also recommended either chlorhexidine or povidone iodine for patient preparation. More evidence-based guidelines for surgical preparation and increased awareness of and adherence to guidelines are needed.

### ■ Commentary

How many of us still scrub our hands and patients exactly as we were taught in veterinary school? Most practices studied used recommended antiseptic chemicals. Most also used concentric circle preparation for the surgical site, but not consistently. Contamination of the surgical site was noted in 36% of patients during transport from

the preparation area to the OR. Few study surgeons used alcohol-based hand scrub, despite it being recommended by the World Health Organization as superior and cheaper.

Staff members were aware of the cameras and no difference was seen in preparation methods at the beginning or end of the study, so these results are likely accurate. Specific training, per guidelines in current veterinary surgery textbooks, in proper patient preparation for aseptic technique should be performed regularly to avoid complacency.—Jonathan Miller, DVM, MS, DACVS

### ■ ■ Source

Observational study of patient and surgeon preoperative preparation in ten companion animal clinics in Ontario, Canada. Anderson MEC, Foster BA, Weese JS. *BMC VET RES* 9:194, 2013.

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