DERMAL DECONTAMINATION

Dealing with Sticky Situations

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Overly curious cats can find themselves on messy footing.

Animals are a curious lot. By nature, dogs and cats like to explore their surroundings. In doing so, however, their haircoat and skin may become exposed to a variety of potentially harmful substances. A dog may walk through tar, road oil, or asphalt. A cat may rub up against wet paint. A pet may have unknowingly investigated a "sticky" glue trap, or an owner may have applied an inappropriate insecticide to a pet. Pets have been known to get into such products as superglue, and one of the most dreaded and difficult dermal exposures is skunk spray.

Along with dermal exposures, oral exposure is often possible when the animal self-grooms. Health concerns from oral exposure should be ruled out as well.

There is no established method for all dermal decontamination in dogs and cats, and in some cases it may be acceptable to let the substance simply "wear off." It is important to evaluate the animal – and the substance to which the animal was exposed – before decontamination. If systemic absorption is significant and signs of toxicity are present, stabilization procedures will take precedence. The overall dermal condition should be evaluated as well, because self-mutilation sometimes occurs and can lead to secondary dermal infection. This article focuses on some practical solutions to the sticky situations mentioned above.

REMEDIES FOR REMOVAL

Sticky Stuff

Substances such as coal tar, road oil, asphalt, cyanoacrylate adhesive (superglue), or oil-based paint that are on the haircoat or skin may be removed successfully by bathing the affected areas with warm water and a mild hand dishwashing liquid such as Dawn (electric dishwasher detergent is much too harsh and should not be used). Dried and stubborn areas may require a cream containing polysorbate 80, butter, margarine, vegetable oil, or a mechanic's hand degreaser (Goop Hand Cleaner, Critzas Industries) to loosen the material before bathing with a mild dishwashing liquid. In some cases, clipping or shaving areas of the animal's coat may be the best solution for removing the foreign substance.[1,2]

Glue Traps

Sticky glue traps that are attached to an animal's coat or skin should be handled carefully to prevent further attachment. Baby powder or cornstarch can be applied to the trap to cover the remaining sticky areas while you are working with the animal. It may be necessary to clip or shave the coat in order to remove the trap. If the owner is opposed to clipping or shaving, or if the trap is stuck directly to the animal's skin, cream containing polysorbate 80, butter, margarine, vegetable oil, or a mechanic's hand degreaser may help remove the trap. Sedation may be required if a trap is stuck to the face or if the animal is aggressive or is experiencing pain. Analgesia may be needed for these animals as well. After removal of the

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trap, bathing the patient's haircoat with a mild dishwashing liquid will help wash off any remaining glue as well as the substances used to help remove the glue.[2]

Skunk Spray

The persistent malodorous spray from a skunk can be extremely offensive. Several commercial products are available to help in the decontamination of pets that have come into contact with a skunk. If one of these products is not available, owners or veterinary staff may want to try bathing the animal using the following deodorizing mixture[1]:

- 1 quart 3% hydrogen peroxide
- ¼ cup baking soda (sodium bicarbonate)
- 1 tsp liquid soap

This bath should be followed by a tap water rinse. It is important that the pet does not ingest the deodorizing mixture. It should not be applied near a heat source or open flame. In addition, owners should be told that the mixture may have a bleaching effect.

▲ Many substances can be removed by bathing the animal with mild dishwashing liquid in warm water.

Decontamination Tips[1–3]

- Any animal that is exhibiting systemic signs should be treated and stabilized before dermal decontamination. An animal that has been exposed to a substance that is likely to cause seizures may need to be treated before dermal decontamination as well.[2]
- Wear impermeable gloves and protective clothing (e.g., plastic apron).
- Use hand dishwashing liquid (not electric dishwasher detergent) for baths.
- Repeat baths until the smell of the substance has been significantly decreased or eliminated.
- Always rinse the pet thoroughly with tap water after a bath.
- Do not bathe the pet with an insecticidal shampoo because the insecticide may interact with the substance you are attempting to remove.
- Never use solvents such as kerosene, gasoline, acetone, or paint thinner to remove substances from the skin or haircoat. These solvents may disperse the chemical, increase the exposed surface area, and alter the permeability of the skin. Solvents may also cause severe irritation, dermal pain, and chemical burns.[1]
- Do not use fingernail polish remover to remove superglue.
- Be sure to remove contaminated items from the animal (e.g., collar, towels/blankets used in transport).
- Keep animals warm while drying to prevent hypothermia.

PET AND STAFF SAFETY

The amount of a toxicant that is absorbed through the skin may vary based on lipid solubility, skin condition, location of exposure, and composition of the toxicant. Serious cutaneous or systemic effects may result from dermal exposure to certain chemicals. Veterinary staff should use precautions to prevent dermal exposure to themselves when handling and treating exposed animals. Protective clothing, impermeable gloves, and in some cases a surgical mask should be worn when handling and treating exposed animals.[3]

If an animal has been dermally exposed to a toxic substance, stabilization of the patient should be considered as mentioned above. Oily or oil-soluble agents may be removed by bathing the pet with a mild dishwashing liquid. Keratolytic shampoos can help to remove agents from hair follicles. Dry substances such as powder, dust, or granules should be brushed or vacuumed from the coat or skin before bathing to prevent further dermal absorption. Vacuuming should take place in a well-ventilated area or outdoors. Staff involved in this procedure should wear protective clothing and a surgical mask.[1,2]

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