

Dermatology cases are one of the most common types of cases seen by general practitioners. A crucial diagnostic tool in these cases is the skin biopsy. They are indicated in cases that do not respond to normal therapy, pustular, or ulcerative disease, and suspected neoplasia.

Before Taking a Skin Biopsy

Prior treatment should also be considered before taking a skin biopsy. Secondary bacterial infections affect the histopathology masking underlying causes that predispose them to bacterial infections, treating with antibiotics for 2-3 weeks prior to sample collection help reduce secondary infection and allows one to judge response to treatment. Furthermore, corticosteroid therapy both oral and long-lasting injectable should be suspended 2-8 weeks prior to biopsy depending on the corticosteroid's half-life.

Site Preparation

Preparing the skin site and type of biopsy are also important. The site should be prepared by cutting the hairs with scissors and not electric clippers. Aggressive use of electric clippers, can introduce artifact and destroy delicate features. Lightly wash the site with water and pat dry. Be sure to leave any crusts or scales intact as they are key diagnostic structures for the pathologist. Punch biopsies are most commonly used, but larger lesions may require wedge biopsies. If using punch biopsies, the optimum size is the 6 to 8mm where practical. In addition, biopsies from multiple locations on the animal are also useful. TVMDL typically recommends 3 to 5 biopsies per case. The best locations are from fully developed lesions or at the leading edge of a developing lesion. Chronic, ulcerative, or resolved lesions are less diagnostic. Handle biopsies with care using Adson-Brown tissue forceps making sure not to crush the delicate tissue.

Submitting Biopsy Samples

Once collected, submit biopsy samples in 10% formalin in individually labeled jars, if possible. If a bacterial infection is a differential, consider submitting one of the biopsies fresh to allow testing for bacterial culture and sensitivity. Fresh samples should be submitted in a sterile red top tube with a small amount of sterile (not bacteriostatic) saline solution to prevent desiccation of the tissue.

In addition to properly preparing the sample for history, TVMDL strongly encourages clients submit clinical histories. It is vital that a pathologist have this information for interpretation of the histopathology. It should include the signalment, location, clinical signs (pruritus, alopecia, etc.), distribution of the lesions, treatment history, other diagnostics (skin scarping, clinical pathology findings, cultures, etc.) and response to treatment. Clients should also state in the history any additional pertinent information and any differentials to rule out. Following these recommendations will maximize the amount of information that can be obtained from skin biopsies submissions.

For more information on submitting skin biopsies, visit tvmdl.tamu.edu or call one of the agency's full-service laboratories.