Skin scraping

It is a routine technique used for diagnosis ectoparasites in different species of animals.

A. **Direct method:** The skin scrapings are placed on clean and dry glass slide with one drop • sodium hydroxide and cover it with cover slipe. Examine under low power of microscope.

B. Heat method:

in a clean test tube add skin scrape with equal volume of $1 \cdot \frac{1}{2}$ KOH, heating the mixture on a flame, cooling at room temperature, centrifuge the mixture at $1 \circ \cdot \cdot$ rpm for \circ minutes then discard supernatant and take the sample from sediment apply on a glass slide followed by covering by a cover slide finally examine under microscope under low power.

C. Digestion and concentration method :

in a clean flask or test tube add skin scrape with °. KOH, heating the mixture on a flame with covering to obtain completely digestion and concentration ,cooling at room temperature, centrifuge the mixture at `o.. rpm for o minutes discard supernatant, add equal volume of distaled water and centrifuge again for o minutes discard supernatant and examine the sediment under low power of microscope .

N.B: if the sample appear negative you can discard supernatant but re suspend sediment with saturated sucrose solution ,centrifuge at *`o..* rpm for *o* minutes , examine the top of the mixture microscopically.

C. Examination of skin scrapings for fungi:

Wood's Light Examination :

Examination of the hair coat with a Wood 's lamp (ultraviolet light, rr to ϵr , nm wavelength) is a quick and easy initial screen for presence of certain dermatophyte infections but clearly is not definitive.

UV is directed on the skin or scrabings collected in petridishes. If the fungus microsporum is present, it gives yellow green fluorescence, while no fluorescence in negative infection.

Direct Microscopic Examination:

Hair and scale may be wet mounted in 1.% to 7.% potassium hydroxide (KOH) overnight or heated gently in the same solution for 1.% minutes for clearing of keratin and visualization of fungal elements. Direct examinations can be performed using mineral oil is recommend.

Fungal Culture:

"Gold standard" for diagnosis. _ Choose hairs that fluoresce under Wood's lamp if possible. <u>Sampling</u> methods: Pluck hairs from the periphery of an alopecic area. Brush hair coat with a sterile toothbrush. On Dermatophyte test media(

	mange	Ring worm
cause	Sarcoptic mange	Microsporum
	Psoroptic mange	Tichophyton
	Demodectic mange	
Clinical	Irregular Alopecia	Typical round alopecia with out
signs	itching	itching
Skin	mite	fungi
scraping		
treatment	Sulfer oint	lodine oint

sabaroud dextrose agar media)

dermatophytes change media color, examine inoculated media daily. Microscopic examination of the growth for microconidia and macroconidia necessary to confirm pathogenic dermatophyte

APPROPRIATE HEALTH CARE

_Most animals are treated as outpatients.

_ Consider quarantine owing to the infective and zoonotic nature of the disease.

Treatment of ring worm :

_ Topical therapy and clipping recommended concurrently with systemic therapy; may help prevent environmental contamination; may be associated with an initial exacerbation of signs

Rinses: lime sulfur (1:11 dilution or \land oz. per gallon of water), miconazole/ chlorhexidine ($\cdot, ??$), or enilconazole ($\cdot, ??$) applied once to twice weekly; lime sulfur is odoriferous and can stain; enilconazole is not currently approved for use in companion animals in the US. Shampoos containing 1-?? ketoconazole, miconazole, or $\cdot, ??$ climbazole; a minimum of a "-minute contact time is recommended; have little to no residual effect.

Itraconazole—similar to ketoconazole, but more effective; fewer side effects, expensive: dogs, $\circ -1 \cdot \text{mg/kg}$ PO q^Y $\stackrel{\epsilon}{\leftarrow}$ h for $\stackrel{\epsilon}{\leftarrow} - \wedge$ weeks; cats, $1 \cdot \text{mg/kg}$ PO q^Y $\stackrel{\epsilon}{\leftarrow}$ h for $\stackrel{\epsilon}{\leftarrow} - \wedge$ weeks or until cured. Alternate dosing— $^{Y} \cdot \text{mg/kg}$ q $\stackrel{\epsilon}{\leftarrow} \wedge$ h cats and dogs. In some cats, dosage regimen is altered after $\stackrel{\epsilon}{\leftarrow}$ weeks of therapy to every other week schedule for a total of $\wedge -1 \cdot$ weeks of therapy; alternative schedule one-week-on, one-week-off with apparent efficacy to reduce drug cost; manufacture drug preferred over compounded formulations due to absorption/concentration

variability.

Treatment of mange :

Drug treatment

· Ivermectin ۱٪, ۲۰۰ mcg/kg, SC,

 \cdot Organophosphates such , that is repeated after 1 ξ , if needed. For acaricide of choice.

Deltametrin spray or dip: minor signs and discomfort with some cattle up to ^Ahrs after treatment.

pour-on solution, 1%, 0%, 17,0%

meat r days; milk nil; mutton v days.

Caution: Wash udder of sprayed animals before milking

and administration.

Public health significance: Sarcoptic manges are zoonotic and

care should be exercised to avoid human infection.





FIG. 56-4 This nodular skin lesion on a dog is a kerion caused by *Microsporum gypseum*. (Courtesy University of Wisconsin Teaching Materials, University of Wisconsin, Madison, WI.)



FIG. 56-5 Wood's light examination of a cat with dermatophytosis showing positive fluorescence results. (Photograph by Craig Greene © 2004 University of Georgia Research Foundation Inc.)



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