

PARASITOLOGY PRACTICAL 2 - MITES - ANSWERS TO QUESTIONS

Psoroptes

Diagnostic significance of size? - Just visible to naked eye, can be seen crawling on skin on infested animal, or moving when put on a microscope slide after making a scraping.

Biological significance of long legs? - Enable crawling on skin surface and easy transfer between hosts.

Chorioptes

Differential diagnosis? - Can be found on sheep and confused with *Psoroptes ovis* which is much more serious. Look at the suckers on the ends of the legs - short and unsegmented in *Chorioptes*, long and segmented in *Psoroptes*.

Sarcoptes

Why small and short legged? - Enables life crawling within epidermis.

Obtaining diagnostic specimen? - Need to scrape epidermis with side of scalpel sufficiently to cut down to the outermost layer of the dermis in order to reach sarcoptic mites within epidermis.

Demodex

Why is dermis around infested follicles densely cellular? - This is a granulomatous reaction with infiltration of macrophages, fibroblasts etc following dermal hypersensitivity reactions to foreign protein from the mites which diffuses into the epidermis (similar to a contact hypersensitivity).

Obtaining a diagnostic specimen? - Squeeze the skin hard to expel sebaceous secretions potentially containing mites. Spread on slide, add glycerol and coverslip. View under microscope.

Transfer host to host? - Close skin contact from mother to suckling young is commonest route, enables mites to crawl out onto skin surface and infest new hair follicles.

Dermanyssus

Obtain food? - Long piercing mouthparts to penetrate into dermis temporarily to suck blood.

Why so large? - Live in nest or housing of host and chase after hosts by crawling.

Trombicula

How do they feed? - Larvae only crawl onto host and feed like a small tick. Other stages not parasitic

Diagnostic specimens? - Pick feeding larvae from attachment sites, (edge of ear of dog) using fine forceps. Put on microscope slide with glycerol and coverslip. View under microscope.

Cheyletiella

Diagnostic specimen? - Comb out onto paper or use clear adhesive tape to trap them.

Characteristic feature? - Mouthparts are very large and form two pincer like structures.