Diagnostic techniques

Superficial skin scrapings are most useful for detecting superficial parasites such as Cheyletiella and Sarcoptes scabiei mites. Multiple scrapings are required. The ideal sample areas are not excoriated, with red, raised papules and yellowish crusts, i.e., near the edge of lesional areas. When looking for Sarcoptes mites, the elbows and margins of the ear pinnae should be sampled.

Superficial Skin Scraping

Technique

1. Using a blade covered in mineral oil scrape affected areas of skin in the direction of hair growth, until slight capillary ooze is observed.

2. Spread the samples on microscope slides with mineral oil.

3. Examine under low power and high power (×400).

4. If there is excessive hair and keratin debris in the samples, potassium hydroxide can be used in place of mineral oil to help clear the sample.

Interpretation

Sarcoptes

Sarcoptes mites are difficult to find. Larvae have 6 legs, nymphs and adults have 8 legs. A definitive diagnosis is achieved by observing a single adult mite, nymph or egg on microscopy. A negative skin scraping does not rule out Sarcoptes (success rate may be <50%).

- Sarcoptes eggs are about 230μm long and ellipsoid.
- Adult Sarcoptes mites are about 0.5mm long (visible at low power on compound microscope).

Cheyletiella

There may be excessive scurf present. Mites may be seen moving ('walking dandruff').