



INFECTIOUS DISEASES (BACTERIAL, FUNGAL, VIRAL, PARASITIC, INFESTATIONS)

‘WAKE SIGN’: A USEFUL CLUE FOR THE DIAGNOSIS OF SCABIES

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Background: Diagnosis of scabies is confirmed only by finding the scabies mites and/or eggs from the skin. Scabies burrows are most likely place to find the scabies mites and/or eggs, but are not always easy to find.

Observation: The burrow starts when the female mite digs into the stratum corneum. As she burrows horizontally on the bottom layer of the stratum corneum, while laying her eggs behind her, the burrow becomes visible as a linear scaly lesion of 0.4 mm wide and a few mm long, as classically described. As she burrows forward, the length of the burrow extends and a teardrop-shaped scale is formed at the back end of the burrow. As the time passes, the teardrop-shaped scale falls off as the result of keratinization, and leaves the teardrop-shaped scaly outline on the skin. Further time passes, the teardrop-shaped outline expands and forms a V-shaped scale on the back end of the burrow. We call the V-shaped scale the ‘wake’ sign of the scabies burrows, as it looks like the ‘wake’ left on the surface of water by a swimming bird. It is the result of two simultaneous movements: horizontal movement of the mite and vertical movement of keratinization, with the superimposed inflammatory reaction of the skin to the presence of the mite and its products. Scabies burrows with the wake sign have been found in babies to elderly patients, and in some patients with dark skin. The female mite sits at the front end, the direction which V-shaped scale points to, of the burrow.

The front part of the female mite is brown in colour, and is visible as a brown triangular spot, when examined by dermoscope.

Key message: ‘Wake sign’ is useful for finding the scabies burrows, as the V-shaped scales are readily visible by naked eye.

