

CASE 32-3

A 60-year-old man has a 2-year history of persistent “dry skin” on his left hand. It has not responded to the use of moisturizers and “organic” soaps. He is not particularly concerned by this condition as the appearance does not bother him and he has no symptoms. His wife encouraged him to seek medical attention because she does not like the rough feel when they hold hands. She is also concerned that his rash may be contagious.



What is the most appropriate initial step in his work-up?

- (A) Punch biopsy
- (B) Shave biopsy
- (C) KOH (potassium hydroxide) examination of scale and microscopic examination
- (D) Fungal culture of scale
- (E) Patch testing to evaluate for allergic contact dermatitis

The correct answer is (C), KOH (potassium hydroxide) examination of scale and microscopic examination.

Tinea manuum is a dermatophyte infection that affects hands. Tinea manuum can present with 2 patterns and corresponds to which surface of the hand is affected, the palmar or dorsal surface. In the former, as depicted in this case, patients typically complain of chronic dryness and present with subtle diffuse, fine scale on the palm(s). It is unilateral in about 50% of the cases. In some cases there is a concomitant fungal infection of the fingernails. A KOH exam of scale should be performed to confirm the diagnosis as tinea manuum may be clinically indistinguishable from dermatitis. KOH examination of infected scale shows branched septate hyphae.

A punch or shave biopsy, particularly with PAS staining, can provide useful diagnostic information in evaluating for tinea manuum. However, a biopsy is not the best initial step in this case. A KOH examination of scale with microscopic examination is faster, cheaper, and less invasive than a biopsy.

Fungal culture of scale can be useful to confirm a diagnosis of tinea manuum. However, this test is more expensive and takes longer to get the results than a KOH examination. Therefore, it is not the most appropriate initial step in management.

Tinea manuum may be clinically indistinguishable from dermatitis. Patch testing may have a role to further evaluate for allergic contact dermatitis. In this scenario, it would not be the most appropriate initial step in work-up. The patient in this case has a classic presentation of tinea manuum and a KOH examination of scale should be used to confirm the diagnosis.