

TREATMENT AND PROPHYLAXIS OF SCABIES

A. Application of Scabicides: General Principles

1. Gowns and gloves are worn when applying scabicides to patients.
2. Bathe patients as usual and change bed linens. Allow skin to cool completely.
3. Apply scabicide to every square inch of skin, from the posterior ear folds down over the entire body. Include intergluteal cleft, umbilicus, skin folds, palms and soles, and webs between fingers and toes. If scabicide is washed off during handwashing, toileting, or perineal care, it must be reapplied.
4. In infants and young toddlers, the elderly, and the immunocompromised, the head (forehead, temples, and scalp) requires application of scabicide. Pay close attention to the area behind the ears. Do not get the scabicide near the eyes or mouth. Prior treatment failure may be an indication to include the head upon retreatment.
5. Fingernails and toenails should be clipped and scabicide applied under nails.
6. Follow directions and precautions outlined in the package insert accompanying scabicide.
7. A cleansing bath is taken when scabicide is to be removed.
8. Linens and clothing are changed after treatment. Contaminated clothing and linens may be 1) dry-cleaned or 2) washed in the hot cycle of the washing machine and dried in the hot cycle of the dryer for 10-20 minutes.
9. Provide detailed written instructions for scabicide use when dispensing scabicide for home application by employees and household members.

B. Scabicides

1. 5% permethrin cream (*Elimite*, *Acticin*) - currently considered drug of choice.
 - a. The usual adult dose is 30 grams. A 60 gram tube should treat two adults.

- b. For adults and children, the cream should be massaged into the skin from below the chin to the soles of the feet. Scabies rarely infests the scalp of adults, although the hairline, neck, temple, and forehead may be infested in infants and geriatric patients. Infants should be treated on the scalp, temple and forehead.
 - c. The patient should be instructed to remove the medication by thoroughly bathing 8 to 14 hours after application. Contact with the eyes and mouth should be avoided. If contact with the eyes occurs, they should be immediately flushed with water.
 - d. Permethrin is regarded as safe for children two months of age and older. No instance of toxicity following accidental ingestion has been reported. The most commonly reported side effects are pruritus, edema and erythema, which may continue for up to two weeks after treatment. Patients should be told that the itching or stinging of scabies infestation may continue after treatment, and repeated application of the scabicide should be avoided. Demonstrable living mites after 14 days indicate that retreatment is necessary.
 - e. Although animal studies showed no adverse effects to reproductive function or damage to the fetus, no adequate studies have been done on pregnant women. Therefore, permethrin should be used during pregnancy only when clearly necessary. If treatment is necessary for lactating mothers, breast-feeding should be discontinued during the treatment period.
2. 10% crotamiton cream or lotion (*Eurax*)
- a. Massage thoroughly into skin once a day for two to five days. Remove by bathing 48 hours after last application.
 - b. Crotamiton is 60% effective when full five-day course is given.
 - c. Can be used on young children and elderly with dry, sensitive, but no denuded skin.
 - d. Avoid contact with eyes and mucous membranes.
3. Ivermectin (*Mectizan or Stromectol*)

Ivermectin is an antiparasitic agent shown to be safe and effective for treatment of onchocerciasis in humans in Africa. Experience with the agent in a single dose administered orally is limited, but encouraging, for treatment of crusted scabies or for infestations that do not respond to topical therapy. It is not yet approved by the Food and Drug

Administration, but can be obtained from the manufacturer (Merck and Co, West Point, Pa.). A recent report described increased mortality from all causes in a small series of elderly patients who had received ivermectin.

C. Treatment Regimen for Typical Scabies Infestation

1. A single adequate application of 5% permethrin cream is usually sufficient to eradicate typical scabies, whether a symptomatic case or asymptomatic carrier. Reevaluate response to treatment in 14 days.
2. In facilities with recurrent or endemic scabies or when application of scabicide for treatment of symptomatic scabies is not performed by a trained individual, a second application 3-7 days after the first is recommended by some authorities.
3. Asymptomatic contacts, including household and sexual contacts, of persons with clinical or confirmed scabies require one treatment with reevaluation in 14 days.

D. Treatment Regimens for Crusted (Norwegian) or Severe Atypical Scabies

1. Cases of crusted scabies and other variants of severe atypical scabies are best managed with the assistance of a dermatologist. Controlled studies to determine the most effective regimen for treatment of crusted scabies infestation have not been performed. The following regimens were selected from several that have appeared in the literature and have been successful in single or small series of cases. They are included as examples and are not necessarily endorsed by ACDC.
2. Patients with crusted or keratotic lesions should be soaked in a tub of lukewarm water for 10 minutes immediately prior to application of scabicide to hydrate the skin; use of keratolytic agents (e.g., salicylic acid) may soften scales and enhance penetration of scabicide. Allow skin to cool before applying scabicide.
3. Regimen A
 - a. 5% permethrin cream for 12 hours, followed by repeat application of 5% permethrin cream for 12 hours, wash off.
 - b. After seven days, repeat step (a), above.

- c. Seven days following last treatment, obtain scrapings from at least 3 sites. If scrapings are positive or if symptoms unabated, treat again.
4. Regimen B
 - a. Apply 5% permethrin cream, as previously described, on day one.
 - b. Apply 10% crotamiton lotion, as previously described, on days 2-6.
 - c. Reapply 5% permethrin cream on day 7.
 - d. Reassess on days 7 through 14, obtain scrapings from at least 3 sites in one month. If scrapings are positive or if symptoms unabated, begin regimen again.
5. Regimen C
 - a. Ivermectin 200 ug/kg in a single oral dose in combination with 5% permethrin cream on day one.
 - b. Two weeks after therapy (day 15), obtain scrapings from at least 3 sites. If scrapings are positive or if symptoms unabated, treat again.

E. Treatment Failures

1. Treatment failures can result from:
 - a. Inadequate application of scabicide;
 - b. Infected, crusted, or keratotic lesions with insufficient penetration of scabicide;
 - c. Reinfestation from untreated contacts;
 - d. Resistance of mites to scabicide.
2. Pruritus and rash can continue for 1-4 weeks after treatment and should not be considered evidence of treatment failure until one month after last treatment. To ameliorate these signs and symptoms, some dermatologists use 1% hydrocortisone cream or triamcinolone cream (0.1%-0.025%) applied to the most intense rash sites **after** the first scabicide treatment. Oral antihistamines are also used to alleviate the hypersensitivity response.