

## SQUARIC ACID PROTOCOL

### Protocol for wart contact sensitization

1. Apply Squaric Acid 2% to dime sized area on inside of right upper arm. Outline area with marker before application with large swab. Cover with Vaseline and Band-Aid.
2. Instruct patient to keep area dry and to remove Band-Aid in 24 hours. See patient handout.
3. Provide patient with samples/prescription of Class I steroid for severe local allergic reaction.
4. Schedule return visit in 2-3 weeks.
5. Check contact sensitization site for reaction. If no reaction, reapply Squaric Acid 2% to same site & follow steps 2, 3, & 4. Note 2-3% individuals do not react. Once patient is sensitized, apply Squaric Acid 2% to warts on hands and feet. Apply Squaric Acid 1% to warts on all other areas. Follow steps 2, 3, & 4.
6. If patient does not experience a local reaction, then increase to Squaric Acid 2%, 3%, 4%, or 5%.
7. If patient experiences a severe local reaction (i.e. blisters), then decrease concentration of Squaric Acid.
8. Treatment can be repeated every 2-3 weeks.

### Protocol for alopecia areata (You should prescribe one less strength to what the patient reacts (e.g. if redness develops to 0.1%, then prescribe 0.01%. Our pharmacy charges \$25 (no insurance coverage)/2 ounce bottle. The pharmacy makes up the preparations on the weekends (e.g. if you see patient on Wednesday, then the script will be available for pick-up the following Monday).

1. Apply Squaric Acid 2% to 2X2 cm area on inside of upper arm. Outline area with marker before application. Cover with Vaseline and Band-Aid.
2. Instruct patient to keep area dry and to remove Band-Aid in 24 hours. See patient handout.
3. Provide patient with samples/prescription of Class I steroid for severe local allergic reaction.
4. Schedule return visit in 2-3 weeks.
5. Check contact sensitization site for reaction. If no reaction, reapply Squaric Acid 2% to same site & follow steps 2, 3, & 4. Note 2-3% individuals do not react. You can then apply squaric acid 0.001% on left arm and squaric acid 0.01% on right arm using same method as steps 1, 2, 3 and 4.
6. Schedule return visit in 2-3 weeks.
7. If patient did not experience reaction at the site of application, you can then apply squaric acid 0.1% on left arm and squaric acid 1.0% on right arm using same method as steps 1, 2, 3 and 4.
8. Keep increasing concentration by power of 10 (i.e. .001, .01, .1, 1) until patient experiences tolerable redness, scaling, and itching which should last 24-36 hours.
9. Once appropriate concentration is reached, I prescribe the solution that is one less in strength (e.g. **if redness develops to 0.1%, then prescribe 0.01%**).
10. Instruct patient to apply once weekly. (My script will read: squaric acid 0.1%, apply to scalp weekly, #2 ounce bottle, 3 r/f)
11. Expect re-growth in 30% of patients after 4 months of treatment once appropriate concentration is reached.
12. If no re-growth after 12 weeks, then discontinue treatment.
13. If re-growth, taper treatment and use PRN.

**OVER**

\*Note: For Alopecia Areata Contact sensitization who travel long distances, you can first sensitize to 2% Squaric Acid, have the patient return in 2 weeks, then apply Squaric 0.001%, 0.01%, 0.1%, and 1%, to outlined circles on upper inner arms. The patient then returns in one to two weeks to report which concentration caused tolerable erythema, and pruritus. The appropriate concentration is then be ordered through the pharmacy.

### **Side effects**

- Common: pruritus, scaling, redness, change in pigmentation (hyper and hypo), lymphadenopathy (mostly occipital nodes for alopecia areata treatment)
- Rare: Systemic allergic reaction, blistering, infection secondary to blisters

### **General**

- Squaric is not an FDA approved treatment.
- Squaric acid has been used in industry as anti-fog agent for photographs.

**For more information please visit our website: [www.pennstatehershey.org/web/dermatology/home](http://www.pennstatehershey.org/web/dermatology/home) and click on Health Information Library.**

If you have any questions or concerns, please contact your provider at the location you were treated.  
Hershey Medical Center, UPC I, Suite 100 (717) 531-6820 or Nyes Road, (717) 657-4045.  
Penn State Hershey Medical Group, Colonnade Building (814)272-4445.

