Treating a hookworm inoculation rash

Following self-inoculation with infectious hookworm larvae, the bandage/dressing should be left in place for a minimum of four hours and, ideally, for twelve.

If the resulting rash is itchy, this can be treated after removal of the bandage/dressing, and a topical extra-strength (2%) diphenhydramine hydrochloride preparation is likely to be the best option. An alcohol-based version may perform marginally better than a cream, but whichever form is used, diphenhydramine is ideal because it works both as an antihistamine and as a local anaesthetic.

Topical products containing 2% diphenhydramine hydrochloride are available in several forms.

Benadryl Extra Strength Itch Stopping Cream
Benadryl Extra Strength Itch Stopping Gel
Benadryl Extra Strength Spray
Benadryl Extra Strength Itch Relief Stick

These products are available in both the US and UK - from Amazon, Ebay and other outlets - and may also be available in other countries.

A maximum strength (1%) hydrocortisone cream is another treatment option for the itch, e.g, in the US, Equate Max/Strength 1% Hydrocortisone Anti-Itch Cream 2 oz, or, in the UK, Galpharm Hydrocortisone 1% Bite & Sting Relief Cream 10g.

Any topical allergy or itch treatment should work to varying degrees. One individual swears by Calamine lotion, which he says gives him at least two hours relief, another has found a vaginal itch relief cream to be effective, and yet another has experienced relief from using Florasone Cream (containing Cardiospermum tincture). Others have reported success with a variety of substances, including honey, sea water and even toothpaste!

Oral antihistamines may also help to relieve the itch, but, unfortunately, some of these contain drugs that have anthelminthic effects. While it is unlikely that anything, other than nitrous oxide, will harm hookworms before they attach to the gut mucosa (towards the end of the third week, post inoculation) some of these drugs may harm mature hookworms.

The following colour guide is intended to help navigate the available antihistamines.

Red - may kill hookworm.
Brown - may cause harm to hookworm in some people.
Green - safe or likely to be safe for hookworm.

Several popular antihistamines are derived from, or closely related to, the anthelminthic drug, piperazine. These include cetirizine (Zyrtec, Reactine), levocetirizine (Alcet, Aller, Curin, levct, Seasonix, T-Day Syrup, Teczine, UVNIL, Vozet, Xaltec, Xozal, Xusal, Xyzal, Zilola, Zyxem), phenylephrine, desloratadine (NeoClarityn, Claramax, Clarinex, Larinex, Aerius, Dazit, Azomyr, Deselex and Delot) and possibly acrivastine (Semprex-D) in the US.

While some people have taken cetirizine or levocetirizine concurrently with helminthic therapy - sometimes for very long periods - and had no loss of benefit from their worms, there have been others who have suspected that these drugs may have been responsible for adversely affecting or even killing their worms. So it may be best for helminth hosts to avoid them.

Promethazine (Phenergan, Promethegan, Romergan, Fargin, Fargan, Farganesse, Prothiazine, Avomine, Atosil, Receptozine, Lergigan, and, in the UK, Sominex) does not appear to kill helminths, especially when administered by intramuscular injection. However, one helminth host has reported that this drug reduced his worm benefits when taken orally.

Antihistamines that appear to be safe for helminths are diphenhydramine, loratadine (Claritin) and fexofenadine (Allegra, Fexidine, Telfast, Fastofen, Tifur, Vifas, Telfexo, Allerfexo). Of these, diphenhydramine is the most likely to cause drowsiness, and fexofenadine the least likely.
Most Benadryl-branded products sold in the US contain only diphenhydramine so are worm-safe (e.g., Benadryl Allergy Ultratab Tablets / Benadryl Allergy Dye-Free Liqui-gels / Children's Benadryl Allergy Liquid / Children's Benadryl Dye-Free Allergy Liquid), but Children's Benadryl-D Allergy & Sinus Liquid also contains phenylephrine, which has anthelminthic properties and has caused a brief return of disease symptoms in one worm host after a single dose.

Benadryl-branded oral antihistamine products sold in the UK all contain drugs with anthelminthic potential - either cetirizine (Benadryl Allergy Liquid Release Capsules / Benadryl One a Day Relief Tablets / Benadryl Allergy Children's (2+ years) 1mg/ml Oral Solution / Benadryl Allergy Children's 6+ 1mg/ml Oral Solution) or Acrivastine (Benadryl Allergy Relief Capsules and Benadryl Plus Capsules).

If the above approaches do not calm the itch sufficiently, an electric hair dryer may provide additional relief. This is achieved by directing hot air from the hair dryer at the centre of the rash and holding this up to the point of feeling momentary pain. (A Miraculous Cure for Bug Bite Itching? This Remedy Really Works!) This will usually stop the itch completely for a number of hours. But one does need to be careful not to cause a burn!

The first few hookworm doses tend to produce a successively more pronounced skin rash, with the fourth and fifth inoculations leaving some people with a very angry-looking bright red rash, possibly with a further area of inflammation extending for several inches around the rash. This area of cellulitis may appear bruised, can be quite swollen, and may possibly also be as itchy as the rash itself.

Some people begin to experience less severe rashes after the fourth or fifth inoculation, but others can continue to get very angry and itchy rashes indefinitely, in which case the following procedure may be helpful.

Once there are pronounced yellow heads at the entry points - usually on the 2nd or 3rd day after inoculation - scouring the tops off these heads can bring remarkably swift relief from the itching, probably because this removes the debris left behind by the larvae when they entered the skin, thus depriving the immune system of what it was reacting to.

A rough towel or loofah may remove the heads, but a pumice stone may be more effective, and one hookworm host uses a men's pocket hair comb to scrape/rake repeatedly across the area, with the long edge of the comb aligned in parallel to the direction of its motion.

Tiny craters will then be left in place of the heads, and these may weep, sometimes quite profusely, for a couple of days. The fluid released is usually just exudate - cells and fluid that seep out of blood vessels during inflammation. It is unlikely to be suppuration - puss formed as a result of bacterial infection.

There have been no reports to date of infections taking hold at inoculation sites, even when the skin is broken, and this may be because the heightened immune activity around the rash defeats any opportunistic bacteria. There should therefore be no need for the use of antibacterial preparations, but keeping the site covered with a thick, absorbent dressing will help prevent staining of one's clothes. Half a panty liner is excellent for this purpose, thanks to its waterproof backing.

Some people have applied the homeopathic remedy, graphites, to their oozing rash, and this can be purchased as a cream, e.g., Nelsons Graphites Cream 30g. However, there have been no reports as to how effective this might be in the case of a hookworm rash.

Feedback from a couple of very early HT pioneers suggests that rash severity may reduce significantly after hosting hookworm for more than 6 years.

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