

# Cutaneous Larva Migrans in a Girl

Hervina<sup>1\*</sup>

<sup>1</sup>Departement of Dermatology and Venereology, RSUD Dr. R.M Djoelham Binjai Hospital – Medan, Indonesia

Keyword : Cutaneous Larva Migrans, a girl, 18-year-old

Abstract: Cutaneous larva migrans (CLM) is a skin disease which is a linear or winding and progressive winding inflammation caused by invasion of hookworm larvae originating from dogs and cats.<sup>1</sup> Cutaneous larva migrans (CLM) are skin disorders caused by larvae hookworm. The main causes are hookworm larvae originating from dogs and cats, namely *Ancylostoma braziliense* and *Ancylostoma caninum*. In East Asia, CLM is generally caused by *gnatostomas* in pig and cat animals. An 18-year-old girl came to the skin clinic and sex center at the DR. R.M Djoelham Binjai with complaints of red pimples forming an elongated line that meanders in the skin accompanied by itching, this has been experienced since  $\pm$  1 month ago. This skin disorder is also known as creeping eruption, creeping verminous dermatitis, stray larvae, migraine dermatosis, sandworm disease, plumber 's itch, duck hunter' s itch. <sup>3</sup> CLM has a wide distribution, mostly in warm and humid tropical and subtropical climates. One case of CLM has been reported based on clinical findings in the form of very itchy lesions on the surface of the abdomen and upper thighs with tunnel-shaped images of serpiginous papules similar to the skin. Patients were given single dose of albendazole 400 mg for 3 days and oral antihistamines. On the fifth day after therapy, the lesion undergoes spontaneous resolution and symptoms disappear.

## 1 INTRODUCTION

Cutaneous larva migrans (CLM) is a skin disease which is a linear or winding and progressive winding inflammation caused by invasion of hookworm larvae originating from dogs and cats. Cutaneous larva migrans (CLM) are skin disorders caused by larvae hookworm. The main causes are hookworm larvae originating from dogs and cats, namely *Ancylostomabraziliense* and *Ancylostomacanium*. In East Asia, CLM is generally caused by *gnatostomas* in pig and cat animals. In some cases *Uncinariastenocephala* (hookworm from European dogs) and *Bunostomumphlebotomum* (hookworm from a type of cattle) can be found (Baple et al, 2015). Creeping Eruption is a typical skin disorder in the form of a straight or winding line, progressive, due to stray larvae (Siregar, 2013). This CLM has been known since 1874 then in 1929 it was known that this disease was associated with subcutaneous migration of *Ancylostoma* larvae (Eckert, 2005).

Hygiene or hygiene factors play an important role in the spread of disease (Eckert, 2005). These

skin disorders are transmitted through direct contact with sand or soil contaminated with animal waste containing arva-filariform (infective larvae). Larvae can penetrate the surface of the skin, migrate along the epidermis and leave a linear or serpiginous characteristic rash commonly known as 'creeping eruption'. Most larvae cannot develop into an adult form or invade the deeper layers of the skin. The larva can die on its own in a few weeks to several months (Aisah, 2010; Supplee et al, 2013).

## 2 CASE REPORT

An 18-year-old girl came to the skin clinic and sex center at the DR. R.M Djoelham Binjai with complaints of red pimples forming an elongated line that meanders in the skin accompanied by itching, this has been experienced since  $\pm$  1 month ago.

From the results of the history of the patient, it was found that the initial complaint arose  $\pm$  1 month ago with the initial condition felt itchy, then the rash started with a small wound, the longer it expanded to form a winding and very itchy tunnel especially at

night. then a winding line appears in the thigh section,

The patient has experienced this disorder for the first time, there is no history of drug use, and a history of food allergies.

Physical examination found the patient looked good with good nutrition. Its generalization status is within normal limits. Dermatological status in the abdominal region, inferior limb region. In this patient Albendazole 2 x 400 mg was given for 3 days, Cetirizine 10 mg (if itchy), Ethyl Chloride (spray) was given 1 x 1. 2 weeks later the rash in the patient experienced healing.



Figure: Creeping Eruption

### 3 DISCUSSION

Cutaneous larvae migrants (CLM) are typical skin disorders in the form of linear or winding, embossed, and progressive inflammation, caused by invasion of hookworm larvae originating from dogs and cats, namely *Ancylostomabraziliense* and *Ancylostomacanicum*. This skin disorder is also known as creeping eruption, creeping verminous dermatitis, stray larvae, migraine dermatosis, sandworm disease, plumber's itch, duck hunter's itch. (Siregar, 2013) CLM has a wide distribution, mostly in warm and humid tropical and subtropical climates. Hygiene and sanitation factors play an important role. (Siregar, 2013; Padmavaty et al, 2015) Humans are incidental hosts, infections occur due to direct contact between the skin and sand or soil contaminated with animal waste containing filariform larvae (infective larvae) hookworms. (Baple et al, 2015; Supplee et al, 2013).

Larval entry into the skin is usually accompanied by itching and heat. Itching is usually more severe at night. At first papules will appear, then followed by a distinctive form, namely linear or winding lesions, arising with a diameter of 3 mm, reddish. Erythematous papule lesions suggest that larvae have been on the skin for several hours or days. Furthermore, this red papule spreads like a winding thread, polycyclic, serpiginose, arises, and forms a tunnel (burrow), reaching a length of several millimeters to centimeters per day. Predilections on the back of the hands, limbs, plantar, soles of the feet, anus, buttocks and thighs, can also be found in parts of the body that are often in direct contact with sand or soil where larvae are located (Eckert, 2005). A study in Brazil reported that the lesion length was significantly related to duration or the duration of infection, the average length of 2.7 mm per day, so it can help estimate the time and place of exposure to infection.

Another clinical manifestation is hookworm folliculitis. Patients usually present with pruritic folliculitis and creeping eruption. Folliculitis can be in the form of 20-100 follicular papules and pustules spread in certain areas, usually in the buttocks. It can also be found 2-10 lesions in the form of linear (burrow) or serpiginose tunnels of 1-5 centimeters in the same or different locations. (Baple et al, 2015) In these patients the therapy given is in accordance with the theory that first-line therapy is albendazole (400-800 mg / day) single dose orally for three days or anti-helminthicivermectin (150-200 µg / kg body weight) single dose. (Eckert, 2005) The cure rate

reaches 100 percent. However, because other safe and sufficiently effective options are topical tiabendazole and topical albendazole this drug is not available in all countries, then other therapies with ethyl chloride are given even though it is not recommended. (Aisah, 2010)

#### 4 CONCLUSION

Cutaneous larval migrans (CLM) is a skin disorder caused by animal hookworm larvae originating from dogs and cats, namely *Ancylostomabraziliense* and *Ancylostomacanicum*. One case of CLM has been reported based on clinical findings in the form of very itchy lesions on the surface of the abdomen and upper thighs with tunnel-shaped images of serpiginous papules similar to the skin. Patients were given single dose of albendazole 400 mg for 3 days and oral antihistamines. On the fifth day after therapy, the lesion undergoes spontaneous resolution and symptoms disappear.

#### REFERENCES

- Aisah S.. 2010. Ilmu penyakit kulit dan kelamin. Edisi ke-6. Jakarta: Balai Penerbit FKUI
- Baple K, Clayton J. 2015. Hookworm-related cutaneous larva migrans acquired in the UK: Case report. *BMJ Case Rep*.
- Eckert J. 2005. Larva migrans externa or cutaneous larva migrans, dalam :BienzKA, editor. *Medical microbiology*. New york: Thiame Medical Publisher.
- Falabela R, Barona MI. 2008. Update on skin repigmentation therapies in vitiligo. *Pigment Cell Melanoma Res*. 22: 42–65.
- Padmavathy L, Rao LL. 2015. Cutaneous larva migrans: A case report. *Indian J Med Microbiol*. 23(2):135-6.
- Radtke MA, Schafer I, Gajur A, Langenburch A, Augustin A. 2009. Willingness to pay and quality of life in patients with vitiligo. *Br J Dermatol*. 161:134–9.
- Siregar, R, S. 2013. *Saripati Penyakit Kulit*. Edisi 3. Jakarta: Penerbit Buku Kedokteran EGC.
- Supplee SJ, Gupta S, Alweis R. Creeping eruptions: Cutaneous larva migrans. *J Comm Hospital Intern Med Perspectives*. 2013;3:21833