

CUTANEOUS LARVA MIGRANS

S. M. SINHA * AND P. CHAKRABORTY †

Summary

A case of cutaneous larva migrans in a one year old female Hindu child is reported here. The child developed papular, vesicular and pustular lesions on the right side of the buttock accompanied by serpiginous thread like lesions. Local application of ethyl chloride spray and systemic therapy with tetramisole resulted in dramatic response.

Cutaneous larvae migrans (creeping eruption) is a distinctive cutaneous eruption due to the presence of moving parasites (larvae) in the skin affecting usually common sites of penetration like feet, lower parts of the legs and buttocks. The commonest cause of cutaneous larva migrans is *Ancylostoma braziliense*¹. *Ancylostoma braziliense* is the hook worm which ordinarily infect the dogs and cats. The larva from faeces of dogs and cats can penetrate the human skin which comes in contact with the infectious faeces. After entering the skin the larvae burrows intracutaneously between the dermis and stratum granulosum² causing the so called cutaneous larva migrans. This migration may last for 2 to 50 weeks before the larva dies. Only rarely do these larvae penetrate the internal organs producing visceral larva migrans or, the adult worms develop in the intestine of man³. *Ancylostoma braziliense* is commonly found in the central and South Americas, South U. S. A. and many tropical regions¹. Two other dog hook worm-*Ancylostoma stenocephala* and *Ancylos-*

toma caninum can also produce similar lesions³. Larva migrans (creeping eruption) may be produced by a variety of other helminths also like larvae of *Ancylostoma Ceylanicum*, *Gnathostoma spirigerum*, *Bunnostomum phebotoomum* *Dirofilaria conjunctivae* and *Capillaria* species¹. Larva *currens*, a form of creeping eruption caused by larva of *Strongyloides stercoralis*, is characterised by pruritus, urticarial wheals and progressing serpiginous thread like lesions affecting usually the perianal region. Movement of larva of *Strongyloides stercoralis* is very fast ; as much as 10 cm per hour^{1,4,5}. Migratory myiasis with larva of bot fly maggot (*Gastrophilus*) and Cattle warble fly (*Hypoderma*) can produce migrating intermittent, painful and tender oedematous swellings of different sizes on various parts of the body⁶.

Case Report

An one year old female child was brought by her mother, to the Skin out-patients' department of General Hospital, Jalpaiguri, with itching and moving eruptions affecting the right buttock and lower part of the back of the trunk. The child was of low socio-economic status. Cutaneous examination revealed papular, vesicular, pustular, scaly and crusted lesions on the right side of the

* Dermatologist,

† Pathologist and Bacteriologist,
General (Sadar) Hospital,
Jalpaiguri-735101, West Bengal.

Received for publication on 19-10-1976

buttock. Small serpentine thread like lesions were also present at the same site. Long serpentine thread like lesions arising from the above site were seen spreading in a zigzag pattern over the lower part of the back of the trunk (Fig. 1 Page No. 178). The lesion was noticed to advance at the rate of 1.5 cm per day. There was no urticarial wheal. The advancing portion of the serpentine lesion was erythematous and the older part of the same was pale and scaly. The patient was anaemic in poor nutritional state. Systemic examination did not reveal any abnormality. Stool contained ova of *Ascaris lumbricoides* and *Ancylostoma duodenale*. Diagnosis of cutaneous larva migrans was made on the basis of the clinical features.

The cutaneous lesion was treated locally by repeated ethyl chloride spray at the advancing edge of the lesion to kill the live larva. The child was administered orally one tablet of tetramisole of 50 mg (Decaris' Ethnor). Tetramisole is a racemic mixture of 2,3,5,6-tetrahydro-6-phenyl imidazo (2,1-b) thiazole Hydrochloride, a new potent broadspectrum anthelmintic⁷. After a day no movement of the larva could be traced. The other non-specific cutaneous lesions were treated with Soframycin cum steroid ointment (Sofradex cream, Roussel). The lesions cleared up within 2 weeks. The child was followed up for a period of 4 months and there was no recurrence of the lesion.

Comment

Cutaneous larva migrans is not a common entity. The case was diagnosed mainly on the basis of the clinical features which were characterised by erythematous, serpiginous, intracutaneous track, with an advancing end which was seen to migrate at the rate of 1.5 cm per day. Larva currens due to *strongyloides stercoralis* was excluded as there was no urticarial wheal and the track was neither a short line nor

fast moving^{1, 4, 5}. Gnathostomiasis was similarly excluded by the absence of migratory intermittent tender and painful subcutaneous swellings which are usually seen in this condition⁶. Gnathostomiasis is commonly seen in Thailand and also in Bengal, Malaysia, China, Japan, the Philippines and Indonesia⁷.

Treatment of cutaneous larva migrans by local freezing with carbon dioxide snow or liquid oxygen has been advocated¹. We adopted the procedure of freezing the advancing edge with ethyl chloride spray as suggested by Wright and Baird². In larva migrans, thiabendazole has been used effectively by Battistini⁹ and Stone¹⁰. Thiabendazole has been administered locally as well as systemically. In the present case tetramisole orally produced beneficial effect.

The child came from a low socio-economic background and it is not unlikely that she used to lie down and play on the ground soiled by faeces of infected dog, or cat and thereby allowing the larva of *Ancylostoma braziliense* to penetrate the skin of the buttock. Presence of ova of *Ancylostoma duodenale* and *Ascaris lumbricoides* in her stool, though incidental, confirms the view that the child was living in an unhygienic environment. Intestinal parasitism amongst the villagers and slum dwellers is a frequent finding in this part of the country^{11, 12}. Moreover, it is gathered from the local Veterinary Hospital, that the incidence of *Ancylostoma braziliense* amongst dogs and cats is quite high in this area¹³.

Prevention of the condition would be by avoidance of contact with warm, sandy soil contaminated by dog or cat faeces.

Acknowledgments

The authors are grateful to Dr. S. K. Gupta, Surgeon Superintendent and District Medical

Officer, General (Hospital), Jalpaiguri and Dr. N. N. Chanda, Chief Medical Officer of Health, Jalpaiguri, for kindly permitting us to utilise the hospital records and to publish the paper. Technical assistance of Sri Pradip Kumar Roy is thankfully acknowledged.

REFERENCES

1. Harmann RRM: Larva migrans, Text Book of Dermatology, 1st Ed, Edited by Rock A, Wilkinson DS and Ebling FJG, Blackwell Scientific Publication, Oxford and Edinburgh, 1968, p 948.
2. Wright FJ and Baird JP: Larva migrans, Tropical Diseases, Supplement to the Principles and Practice of Medicine, 10th Ed, Edited by Davidson S and Macleod J, ELBS, 1972, p 84.
3. Beaver PC: Larva migrans, Exp Parasit, 5: 587, 1956.
4. Bras G, Richards RC, Irvine RA, Milner PFA and Ragbeer MMS: Infection with *Strongyloides stercoralis* in Jamaica, Lancet, 2: 1257, 1964.
5. Stemmerman GN: *Strongyloides* in migrants-Pathological and Clinical considerations, Gastroenterology, 53: 59, 1967.
6. Rook A: Myiasis, Text Book of Dermatology, 1st Ed, Edited by Rook A, Wilkinson DS and Ebling FJG, Black Well Scientific Publication, Oxford and Edinburgh, 1968, p 986.
7. Waks J: A controlled clinical trial of tetramisole (R8299) in the treatment of Ascariasis, Enterobiasis, Trichuriasis and Necatoriasis, Abstr Rev of 8th Intern Congr Trop Med Mal, 1968, Teheran, p 1087.
8. Miyazaki I: On the genus *Gnathostoma* and human Gnathostomiasis with special reference to Japan, Exp Parasit, 9: 338, 1960.
9. Battistini F: Treatment of creeping eruption with topical thiabendazole, Texas Rep Biol Med, 27 (Supplement 2): 645, 1969.
10. Stone OJ: Systemic and topical thiabendazole for creeping eruption, Texas Rep Biol Med, 27 (Supplement 2): 659, 1969.
11. Basu SK and Chakraborty P: Helminthiasis and Amoebiasis in West Bengal and Surat and Methods for Control programme, Ind Med Gaz, 1: 457, 1973.
12. Chakraborty P, Pal KR, Roy RN, et al: A Clinicopathological study on Eosinophilia with special reference to Intestinal parasitism, Ind Med J, 65: 140, 1971.
13. Guha DK: Officer in charge, State Veterinary Hospital, Jalpaiguri, West Bengal: Personal Communication.