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CUTANEOUS AND INTESTINAL MYIASES IN LAGELU L.G.A OF OYO STATE.

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Running Title: Incidence of Myiases in Ibadan suburbs, Oyo State.

Key Words: Fly larve, Myiasis, Pustular eruptions, manual extraction, Itchin Tumbu-fly.

There cases of cutaneous myiasis by Cordylobia anthropophaga and a case of intestinal pseudo-myiasis involving Eristalis specie are reported in patients from Oyedeji, Apatere and Dagbolu all in Lagelu Local Government area of Oyo State, Nigeria. All cases involved children except the one of multiple cutaneous type which was observed in an adolescent female patient.
Patients' conditions gradually improved after recovery of the larvae from them. This report constitutes the first recorded autaneous and intestinal myiases in this rural area, albeit many such cases in the past have gone unrecorded.

INTRODUCTION

Myiasis is the infection of living tissues of vertebrate animals (and Man) by dipterous fly larvae. Several genera of calliphorid flies cause myiasis in man and animals in tropical Africa (1).

Human countaneous myiasis has been reported in various parts of the country (2-5). Human intestinal myiasis in Nigeria is not rampant neither is it frequent (6), and many reported cases involved the larvae of the syrphid fly called Eristalis. Intestinal and rectal myiases by Eristalis have been reported form south Africa (7), Zambia (8) and Egypt (9). None so far has been reported in Nigeria, although cutaneous myasis due to *Eristalis luteola* involving breast tissue invasion in a female patient has been described by Ogunba (unpublished work) in Ibadan.

The present report presents three cases of cutaneous myiasis by *C. anthropophaga* and one intestinal form by *Eristalis spp* in patients from Oyedeji, Apatere and Dagbolu, all reporting as outpatients at LGA Clinic based at Oyedeji, in Lagelu Local Government Area of Oyo State.

PATIENTS AND METHODS

Case 1

A 14yr-old female student from Apatere Community Secondary School was first seen at t he L.G.A Clinic, Oyedeji in early May, 2001. She looked pale and tired, and complained of intense itching. Multiple pustular eruptions of about one week duration were observed on her trunk, groins and thighs. Single lesions also occurred on her left upper eyelid and neck. When a lesion was squeezed, a small opening (1mm diameter) exuded a serous fluid through which a maggot was gently milked out. In all, 14 larvae were manually extracted over a period of two days. Six were extracted in day one and eight in day-two. Five were extracted from her trunk, three from her pubic region, four from her thighs and one each from her left eyelid and her neck.

The larvae were identified as those of *C. anthropophaga*. Peripheral blood examination of this patient revealed Hb of 11.1g/1, PCV of 36%, WBC of 14.0 x 10^9 /1, Neutrophils 84%, Lymphocytes 11%, Monocytes 5%. The lesions healed rapidly following extraction of the larvae.

Case 2

A 7yr-old boy brought from Dagbolu village was seen at the LGA Clinic, Oyedeji in late May, 2001. The boy had a solitary enlarged furuncle of about 8 days duration. The lesion which occurred below the left axilla was reddened and tender. The boy was diagnosed as a case of cutaneous myiasis. When the lesion was firmly pressed, it yielded a creamy-white larva of *C. anthropophaga* On further enquiry from the mother of the boy, she admitted that the family kept a dog but could not recall any incidence involving the animal and any of other members of the household.

After extraction of the larva, healing of the lesion took a short duration of time.

Case 3

A boy of 1½ years of age whose parents reside in Oyedeji was brought to the Clinic in early June, 2001 with a discharging sinus on the back of the left thigh. This had caused the boy excessive itching and restlessness for a period of three days, with attendant crying, loss of appetite and sleepless nights.

The exudates from the sinus was purulent. When gentle pressure was applied around the lesion, a live creamy-white larva of *C. anthropophaga* was extracted.

On further enquiry, the mother disclosed that the family did not keep animal pets, and none of the boy's brethren had any such lesions. The lesion healed within three days after the extraction of the larva.

Case 4

A 9 years old girl was brought from Dagbolu to the LGA Clinic at Oyedeji in early November, 2001. She was pale and constipated, and had abdominal distention. On enquiry, her mother revealed that the daughter had been treated for fever with a herbal concoction at Dagbolu village. Subsequently the girl developed abdominal pain, nausea, an irritation in her throat which frequently resulted in coughing and vomiting.

While at the Clinic the girl coughed convulsively and vomited two motile creamy-white larva. The larvae had globular anterior regions, and tail-like retractile posterior ends fringed with setae.

The two larvae were indentified as the third instar larvae of *Eristalis specie.*

Stool sample taken from the girl was examined and yielded no maggots (larvae) but showed ova of *Ascaris lumbricoides* and *Trichuris trichiura.* The girl was immedicately placed on Combantrin (Pyrante pamoate) but could not be followed up for further assessment because she defaulted clinic attendance henceforth.

DISCUSSION

In Nigeria, the tumbu fly (otherwise called *Cordylobia anthropophaga*) is an important cause of cutaneous myiasis. Female flies may oviposit on laundary exposed to air-dry in unprotected areas or on dry soils contaminated with human or animal urine or excreta.

Larvae from hatched eggs may temporarily attach to soiled clothes, and eventually penetrate the skin if such clothes are worn without ironing (10).

The distribution of lesions observed in case one was suggestive of infestation acquired from contaminated clothings although the patient did not recall any unusual incident about her clothings.

We noted that, of the three cases of cutaneous myiasis described here, two involved children below 10 years of age. The preponderance of children involvement in myiasis is a common observation (2-5). It was suggested (5) that the increased risk of infestation in children is probably due to frequent contamination of their dresses and

uncovered bodies, sleeping and playing areas with urine, faeces (fresh or dried) and other fly attractants, as well as children's closer contact with pets and other domestic animals.

Most cases of *C. anthropophaga* myiasis have been described from the western (2,4,5) and northern (3) parts of Nigeria. Iwuala and Onyeka (11) have noted that the distribution of *C. anthropophaga* ranges eastwards beyond the river Niger. Furthermore, it has been noted (12) that the fly is endemic in the neighbouring Cameroon Republic. Nevertheless, the authors of this work are not aware of any previous report documenting its occurrence in Lagelu Local Government area of Oyo State Nigeria, most especially in the present rural area being investigated.

Because our patients had not traveled outside the local government for several weeks, we presumed that infestations were acquired locally.

The saprophytic "rat – tailed" maggots of *Eristalis specie* may occasionally cause intestinal or rectal myiasis in man (6-8), and has been incriminated in 36 out of 156 cases of human intestinal infestations (13). Symptoms associated with intestinal invasion include seizures, colicky abdominal pain and bloody stool (13). These symptoms, with the exception of passage of bloody stool, were noted in the patients involved in this report. Not only intestinal myiasis, urinary myiasis involving *Eristalis specie* have been described (14) in a male patient with manifestations of urinary tract infection.

In intestinal myiasis caused by *Eristalis specie* the route of entry is presumed to be oral. Eggs presents in such infected water may initiate intestinal myiasis (10) but most infestations result from ingestion of viable larvae which may remain in the intestines, and may be excreted or vomited later (10,13).

The evidence of herbal treatment as seen in case four in this report, suggested the ingestion of larvae present in a contaminated medication. As with most reports of human intestinal tract for a long period of time, hence a case of accidental or pseudo-myiasis can be presumed.

The authors of this report did not carry out any house-to-house case study to assess or determine the extent of human or animal involvement in these infestations. However, the information volunteered by parents of the patients suggested that our observations only happened to be a recorded case out of many cases that silently went unreported to the clinic at Oyedeji.

However, the observations in this report confirmed the occurrence of myiasis-producing flies in this rural area of the local government although the magnitude and implications of the problems are yet to be fully assessed.

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