CASE REPORTS

CUTANEOUS MYASIS CAUSED BY AFRICAN TUMBU FLY

Waseem Afzal, Muhammad Asad Qureshi, Tariq M. Farani
*Ex UN Mission, Burundi, Combined Military Hospital, Rawalpindi

INTRODUCTION

The African tumbu fly is responsible for boil like - furuncular myiasis in both humans and animals living in central and sub Saharan Africa or people visiting those areas[1]. Pakistan is one of the biggest contributors of Armed Forces to the UN peace keeping missions. This has exposed our troops to diseases normally not seen in our part of the world. Medical teams visiting these areas or treating the troops returning from these areas should have a good knowledge and awareness of the diseases prevalent there. A case is reported of furuncular myiasis in a young child, sibling of Indian immigrants to Burundi-Central Africa.

CASE REPORT

A 5 year old child of Asian descent presented in outpatient department of Hospital de L'ONUB (level -2 hospital of UN Mission Burundi, Bujumbura) with a painful swelling on left side of head. His parents noticed this a week back and it was gradually increasing in size. There was no history of trauma or insect bite. There was no history of similar lesions in the past. There was a 2x2 cm papule on the left side of scalp with a central crater. Thin pale discharge from the lesion was present. On a closer look there was a central blackish dot moving slightly. It seemed as if an eye was looking back at you. Regional lymph nodes were slightly enlarged and tender.

Suspecting this to be a case of myiasis liquid paraffin solution was poured over the lesion and after a minute the lesion was compressed from both sides. Larvae popped out of the swelling. They was identified to be second stage larvae of Tumbu fly-Cordylobia anthropophagi. He was further advised oral and local antibiotics with analgesics. The wound healed in one week. He did not have similar lesions next month he came for follow up. Moreover, his parents were explained the necessary precautions like avoidance of drying clothes on land, taking good care of pets, use of proper toilet etc in order to avoid such episodes in future.

Correspondence: Lt Col Waseem Afzal, Orthopaedic Spinal Surgeon, CMH Rawalpindi
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DISCUSSION

African Tumbu fly – Cordylobia anthropophaga, also known as Mango fly, Skin maggot fly and Worms of Cayor, causes furunculosis like condition[2]. It is important to recognise this in endemic areas as treatment of incision and drainage of boil may cause death of larvae inside the body and leading to further deterioration of the disease.

Tumbu fly is a non parasitic stout compact fly of 6-12 mm length, light brown in colour with diffuse blue grey patches on thorax. The face and legs are yellow[3]. Female lays 100-500 banana shaped eggs in dry shady soil often infected with faeces and urine. They hatch in 1-3 days and these larvae are 0.5-1.0 mm in length. They lay waiting until coming in contact with host skin covered or exposed[4,5,6]. After penetration they reside in a cavity in dermis and hypodermis. They may burrow deep into host tissue causing complications like perinephric abscess[7]. This cavity communicates with the exterior through a breathing pore with the larvae lying upside down and its breathing apparatus at its tail. Inside, it passes through second and third stage acquiring a size of 1.3-1.5 cm. It has peculiar black coloured posteriorly directed cuticular spines spread irregularly on its segments. Its larva requires 7-15 days to mature inside the host after which it falls on to the ground and pupates. Adult fly comes out of the pupa shell in 10-20 days. Rats and dogs are the usual definitive hosts; however any animal coming in contact can be infested.

An erythematous papule appears 2-3 days after penetration of skin. This gradually grows

in size with some discharge. There is usually a single larva in each burrow but multiple larvae can often be seen infesting a single host[4,5]. The exact diagnosis can be made only after the extraction of larva but one should always suspect it in an endemic area or after a visit to these areas[1,5].

The treatment consists of extraction of larvae, antibiotic cover and analgesia. The usual mode of extraction is covering the breathing pore by petroleum jelly or liquid paraffin. This suffocates the larvae forcing them to move up to the skin surface where these can be easily picked. Injection lignocaine 1%-2% can be used as local anaesthesia for pain free extraction but this might make the larvae lethargic and difficult to remove. Surgical incisions are unnecessary but may be used in cases when the larva is dead or decaying. After extraction /falling off of larva the wound usually heals in a week with no recurrence as reinfestation is required for each episode. Secondary infections are rare but abscess formation, cellulitis, osteomyelitis and tetanus can occur occasionally[8].

This disease can be avoided by taking care of toilets as the fly has preference of laying eggs in a place soiled with faeces and urine. Pets such as dogs and cats are few of the definitive hosts. Close observation of any skin lesion on these animals with prompt treatment curtails the chances of spread of disease. In this regard, stray animals around the camps must be culled. The habit of drying clothes on soil is to be avoided in endemic areas as eggs reach the human host by clinging on to these objects. Clothes in these areas must be ironed properly especially the seams.

REFERENCES

1. Fujisaki R, Makimura K, Hayashi T, Yamamura M, Yamaoka T, Shiraishi K et al, Exotic myiasis caused by 19 larvae of Cordyloba anthropophaga in Namibia and identified using molecular methods in Japan. Trans R. Soc Trop. Med Hyg.2008, 102(6):599-601
2. Dada-Adegabola HO, Oluwatoba OA. Cutaneous myiasis presenting as chronic furunculosis-case report. West Afr J Med 2005; 24(4):346-7
3. The Merk Veterinary Manual, Page 1-3, www. merkvetmanual.com /mvm/htm/bc/71725.htm
4. Mashood AA. Furuncular myiasis caused by Tumbu fly. J Coll Physicians Surg Pak,2003; 13(4):195-7
5. Veraldi S. Brusasco A, Suss L. Cutaneous myiasis caused by larvae of Cordylobia anthropophaga. Int J Dermatol.1993; 32(3)187-7
6. Omar MS, Abdulla RE. Cutaneous myiasis caused by Tumbu fly larvae, Cordyloba anthropophaga in south western Saudi Arabia. Trop Med Parasitol. 1992; 43(2)128-9
7. Gibbs S. Troublesome myiasis complicated by perinephric abscess. Clinc Exp Dermatol.1995; 20(3):242-3
8. Ugwu BT, Nwadiaro PO. Cordylobia anthropophaga Mastitis mimicking Breast Cancer: Case Report. East Afr Med J. 1999;76:115–6.