

EMERGENCY CASEBOOK

Case of the month: Cutaneous myiasis in a returning traveller from the Algarve: first report of tumbu maggots, *Cordylobia anthropophaga*, acquired in Portugal

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A 61 year old woman returning to the UK from the Algarve and complaining of boil-like lesions was found to have cutaneous myiasis caused by tumbu maggots, *Cordylobia anthropophaga*. This is apparently the first report of acquisition of this form of myiasis in Portugal.

A 61 year old woman presented to the accident and emergency department with increasing gluteal discomfort and pain. There was no medical history of note. She had visited the Algarve for a two week holiday, returning to the UK 10 days previously. On examination, there were seven cutaneous boil-like lesions, associated with cellulitis spreading over one buttock (fig 1). She was constitutionally well, apyrexial and haematological parameters were within normal range. A total of eight maggots (fig 2) were obtained by surgical incision of seven lesions.

With the help of Zumpt's monograph,¹ the larvae were identified as larvae of the tumbu fly, *Cordylobia anthropophaga* (fig 3). Our case is typical of cutaneous myiasis caused by this species, which is well known and widely distributed in sub-Saharan Africa although there are some areas from which it is absent. Many cases originate from west and central Africa where the flies and maggots are most abundant in the wet season. Beyond Africa, the species is established also in southern Arabia,² an area that is zoogeographically part of the Afro-tropical region. All of eight other cases referred to the arthropod identification service in Brighton since 2000 were acquired in West Africa (seven in Gambia). A recent review of cutaneous myiasis in Spain lists only cases caused by *Cordylobia*

anthropophaga acquired in Africa or *Dermatobia hominis* acquired in Latin America.³ A literature search revealed only one case report of infection acquired in the Iberian peninsula from Spain.⁴ A case reported from the Netherlands was attributed to exposure to imported clothing.⁵ Tumbu maggots have been reported from many animal species including rodents and dogs.

The flies lay their eggs in the shade on dry sand or clothing and the larvae penetrate the skin and reach maturity in about eight days. Any area of skin may be affected, especially the gluteal region and back. Removal of the larvae is normally the only treatment required unless secondary bacterial infection develops. Early lesions may resemble insect bites, but as the larvae grow they become visible through an aperture from which serous fluid exudes. There may be associated oedema, secondary infection, inflammation, and lymphadenopathy. With care larvae can be expressed after application of petroleum jelly, and surgical incision may not be needed. Cases of cutaneous myiasis from Latin America caused by *Dermatobia hominis* present with similar boil-like lesions, but the maggots appear to be more resistant to extraction by squeezing. Surgical incision may be required to avoid rupture of the larvae and consequent granulomatous reaction.

The patient did not launder any of the clothes that she took with her from the UK and she did not obtain any new clothing while on holiday. She spent time outdoors reclining on a sun bed and it is interesting that she reported taking care to stay in the shade of a parasol. The flies oviposit only in the shade as early stages are killed by exposure to direct sunlight.¹ The usual advice to travellers is to iron clothing as this will destroy eggs.⁶

This is apparently the first case known to have been acquired in Portugal. It draws attention to the possibility that this agent of cutaneous myiasis may now be established



Figure 1 Boil-like lesions typical of cutaneous myiasis affecting the buttock.



Figure 2 Third instar larva of tumbu maggot.



Figure 3 Posterior spiracles diagnostic of *Cordylobia anthropophaga*.

outside the Afro-tropical region. Clinicians should not dismiss the possibility of tumbu myiasis in travellers returning from southern Europe.

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Consent was obtained from the patient for this case report.

REFERENCES

- 1 **Zumpt F**. *Myiasis in Man and Animals of the Old World*. London: Butterworths, 1965:1–267.
- 2 **Omar MS**, Abdalla RE. Cutaneous myiasis caused by tumbu fly larvae, *Cordylobia anthropophaga* in southwestern Saudi Arabia. *Trop Med Parasitol* 1992;**43**:128–9.
- 3 **Gurrutxaga MA**, Rementeria XB, Eguiluz GC, *et al*. Miasis cutanea por *Cordylobia anthropophaga*. *Rev Esp Salud Publica* 2001;**75**:23–9.
- 4 **Laurence BR**, Herman FG. Tumbu fly (*Cordylobia*) infection outside Africa. *Trans R Soc Trop* 1973;**67**:888.
- 5 **Bailey CG**, Moody AH. Cutaneous myiasis caused by larvae of *Cordylobia anthropophaga* acquired in Europe. *Br Med J* 1985;**290**:1473–4.
- 6 **Paul J**. Maggot infestation (myiasis). In: Dawood R, ed. *Travellers' health*, 4th edn. Oxford: Oxford University Press, 2002:197–9.

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▲ Hsu C-H, Hua Y, Jong G-P, *et al*. Shock resuscitation with acupuncture: case report. *Emerg Med J* 2006;**23**:e18. <http://emjonline.com/cgi/content/full/23/3/e18>. doi: 10.1136/emj.2004.023218

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Shock resuscitation with acupuncture: a case report ▶

On 25 August 2004, Typhoon Aere battered northern Taiwan. Torrential rains that soaked the island throughout the night washed away roads in mountainous Hsin-Chu county. A 77 year old aboriginal female became drowsy due to septic shock in an isolated village. The roads were seriously destroyed by typhoon. Helicopter was the only means for delivering critical medical care and support. Poor weather conditions delayed the arrival of the medical and support team. Without emergency medical equipment, the patient was passing away while waiting for the arrival of the helicopter. With persistent emergency acupuncture stimulation administered for 80 minutes, the patient was kept vital sign until successful transfer to hospital care. She recovered without any complications of shock and was discharged six days later.

Shock resuscitation is an emergence and critical procedure. Many advanced viewpoints of shock resuscitation and critical medical care were proposed, but none of acupuncture. How emergency acupuncture stimulation benefits shock resuscitation remains unclear. Although the findings need to be verified with a larger sample, the initial results did show the beneficial effects of emergency acupuncture stimulation for shock resuscitation. The definitive benefits need to be further determined.

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Bolus thrombolytic infusion during prolonged refractory cardiac arrest of undiagnosed cause ▶

Despite advances in resuscitation research, cardiac arrest still carries a poor prognosis. More than 70% of cases are caused by acute myocardial infarction (AMI) or pulmonary embolism (PE). Although thrombolytic therapy is an effective therapy for both AMI and PE; it is not routinely recommended during cardiopulmonary resuscitation (CPR) due to fear of life threatening bleeding complications. We present a case of successful use of bolus thrombolytics during CPR in a patient with undifferentiated cardiac arrest (undiagnosed cause) after prolonged conventional resuscitation without response to conventional resuscitative efforts. While most of the clinical evidence suggests beneficial effect of thrombolysis in cardiac arrest secondary to AMI or PE, our case documents a beneficial outcome in undifferentiated cardiac arrest with prolonged unsuccessful conventional resuscitation. The effectiveness of thrombolytics during CPR can be explained its local action at the site of coronary or pulmonary vessel thrombosis leading to rapid correction of underlying pathology, and a neuroprotective effect secondary to its action on microcirculatory reperfusion. Current clinical data, although encouraging, is insufficient to recommend routine use of bolus thrombolytic during CPR in all patients. There is a need for randomised prospective studies to identify patient who would benefit from such intervention.

▲ Sheth A, Cullinan P, Vachharajani V, *et al*. Bolus thrombolytic infusion during prolonged refractory cardiac arrest of undiagnosed cause. *Emerg Med J* 2006;**23**:e19. <http://emjonline.com/cgi/content/full/23/3/e19>. doi: 10.1136/emj.2005.029132