

# Beware, beware of walking bare foot out there!



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## Introduction

We describe a series of three patients treated in the Infection and Tropical Medicine department at the Royal Victoria Infirmary, Newcastle upon Tyne, between December 2016 and December 2017.

Although their clinical presentations were diverse, each notably had a recent travel history to Thailand, and ultimately the same organism was found to be the cause for their symptoms. We aim to highlight a potentially fatal disease of multifarious presentation, which must be considered in travellers returning from endemic areas including Southeast Asia.

NB: diagnosis given in a box in bottom right hand corner of poster.

## Clinical Cases

### Patient 1:

52F with no significant PMHx. Developed non-productive cough and coryzal symptoms one week into two week holiday to resort in Phuket, Thailand. She denies leaving the resort for the duration of her holiday. First presented to medical attention at Dubai airport (transiting on way back to UK), where she was given levofloxacin for chest infection. Deteriorated despite this, and presented in septic shock requiring critical care admission for vasopressor support. She additionally reported a faulty air-conditioning unit in her hotel room, and, in view of the consolidation seen on CXR was empirically treated for pneumonia including cover for legionella pneumophila. Subsequent CT chest (see figure 1) revealed a large mediastinal abscess and multiple cavitating nodules within both lung fields. Her antimicrobial therapy was optimised following blood culture and fluid culture results from the abscess.

Figure 1:  
CT chest



### Patient 2:

69F with Hx of T2DM. She developed malaise, fevers, a non-productive cough, and shortness of breath 3 days into a 2 week holiday to Phuket, Thailand.

Presented to medical attention two weeks later when back in the UK as symptoms continued to deteriorate. Empirically treated for community acquired pneumonia with tigecycline (penicillin allergic) as per local Trust protocol (see figure 2). Based on blood culture results she underwent a CT CAP, this was significant for a right-sided necrotising pneumonia (see figure 3), but there was no intra-abdominal pathology.

Figure 2:  
AP CXR



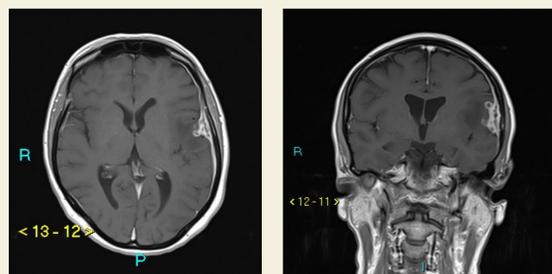
Figure 3:  
CT chest



### Patient 3:

38F with Hx of T1DM with retinopathy and nephropathy. Presented with a complex partial seizure and expressive dysphasia on a background of a several month history of left sided headache. The headache developed shortly after returning from a holiday to Pattaya, Thailand. She had made almost yearly visits to Thailand since childhood, and had lived in the country for a short while. A CT head undertaken a month after symptoms started was reported as normal (images not available). On admission an MRI brain (see figure 4) revealed a dural-based lesion in the left temporal area. Initial concern was that represented a metastatic deposit, but a CT CAP did not identify a primary tumour. At craniotomy the lesion was found to contain pus, cultures of which grew the offending organism. Her CRP remained <5, and she was afebrile throughout her inpatient stay.

Figure 4: T1-weighted MRI brain



## Discussion

The responsible organism in all three cases was a gram-negative bacillus found predominantly in the tropical and subtropical regions of Southeast Asia and Northern Australia. Cases have been reported across Central and South America, the Middle East and even Africa. Classically infection occurs due to inoculation through skin abrasions, but may also be acquired through inhalation or ingestion of the bacteria. Clinical disease usually occurs within a few weeks of exposure; however, as the bacteria have the capacity to remain dormant for years, presentation can be decades later. Affected individuals frequently have an underlying immunosuppressive condition such as diabetes mellitus or chronic renal insufficiency. Mortality in untreated infection exceeds 90%.

All three patients were empirically treated with meropenem due to antimicrobial resistance profile associated with pathogen. Followed by 3-month course co-trimoxazole/ doxycycline (depending on subsequent antimicrobial sensitivities) to reduce relapse risk (6% in first year and 13% at 10 years).

All patients went on to make a full recovery and were well at the time of last follow-up.

Additionally the husband of patient 1 also had coryzal symptoms and developed cervical lymphadenopathy. He never had the offending organism grown from blood or lymph node aspirate cultures, but was treated presumptively. He also fully recovered.

These cases highlight the diversity of presentations seen in this condition.

## Recommendation

A high index of suspicion is necessary when assessing individuals with a suspected infection and a travel history to an endemic area for this organism, to ensure the diagnosis is considered, and appropriate antimicrobial therapy initiated in timely fashion if appropriate.

## References

Oxford Handbook of Tropical Medicine. 4<sup>th</sup> Ed. Oxford University Press; 2014.