

LETTERS

Tsunami lung: a necrotising pneumonia in survivors of the Asian tsunami

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TO THE EDITOR: The disastrous events of Boxing Day, 2004 left hundreds of thousands dead, injured or homeless across large parts of Asia. Many aid teams dispatched to affected areas are grappling with the aftermath of this catastrophe. Here, I present one of many clinical observations of what we encountered in the field. It is a clinical anecdote, but one worth sharing, as it may guide future teams in similar situations.

A 62-year-old woman was admitted to hospital with a history of vague ill-health for 12 months, and a subacute illness over the 4 weeks since immersion in the tsunami, with persistent cough, dyspnoea and weakness to the point of being largely bed-bound. She was cachectic and had a fever of 37.5°C and scattered crackles in both lower lung fields. Radiology facilities were not available and she was not producing sputum. She was treated empirically with antituberculous chemotherapy, as well as broad-spectrum antibiotics in the form of amoxicillin and ciprofloxacin orally, but her condition did not improve. X-ray facilities became available soon thereafter, and a chest x-ray showed changes more in keeping with a necrotising pneumonia than tuberculosis (Box [a]). Her treatment was changed to intravenous meropenem (1 g every 8 hours) and her condition was slowly improving when we left.

During our 2-week posting in Banda Aceh, we saw about 6–10 patients at three hospitals presenting about a month after their immersion, with fluctuating fever, chronic, non-productive cough, and radiological evidence of bilateral, asymmetric,

Chest x-rays of patients with subacute necrotising pneumonia



(a) Bilateral consolidation with scarring and early cavitation in the lower lung fields



(b) Bilateral necrotising pneumonia complicated by right pneumothorax

necrotising pneumonia with cavitation. Some developed empyemas and pneumothoraces (Box [b]). They failed to respond to broad-spectrum antibiotics including ampicillin/gentamicin/metronidazole and ticarcillin-clavulanate/cotrimoxazole. *Burkholderia pseudomallei* was cultured from the pleural fluid of two of these patients, and *Nocardia* sp. from the sputum of another. A notable feature of these patients was their subacute presentation weeks after immersion in the tsunami, the persistence of symptoms despite other broad spectrum antibiotic therapy, and the development of radiological and clinical manifestations of necrosis with pleural involvement.

Many of our patients described the wave as being "black". In view of the immersion in muddy water in a tropical environment, *B. pseudomallei* is likely to have been one of the causative organisms in many of these cases. However, it has not been possible to culture *B. pseudomallei* from all patients, and it is likely that their infections were polymicrobial given the circumstances of their injuries. A variety of bacterial organisms, as well as fungi, have been recognised in other such situations.¹⁻³

When we were there, Fakinah hospital provided one of the few laboratory services in Banda Aceh, and the availability of these facilities were limited as they were focused on public health surveillance. Thus, collection of specimens for culture was not routine. Furthermore, when we arrived there were no nurses, no medical records and no medication or observation charts. While the situation improved rapidly during our stay, these limitations meant that recognition of emerging clinical patterns was important. Many of the antibiotics initially used for patients with immersion injuries were ineffective in this setting, and the use of carbapenems became our first-line, or early second-line, antibiotic in post-immersion respiratory infections in Banda Aceh.

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2. van Dam AP, Pruijm MT, Harinck BI, et al. Pneumonia involving *Aspergillus* and *Rhizopus* spp. after a near-drowning incident with subsequent *Nocardia cyriacigeorgici* and *N. farcinica* coinfection as a late complication. *Eur J Clin Microbiol Infect Dis* 2005; 24: 61-64.
3. Chaney S, Gopalan R, Berggren RE. Pulmonary *Pseudallescheria boydii* infection with cutaneous zygomycosis after near drowning. *South Med J* 2004; 97: 683-687. □