

Pathologists Tackle Tsunami Aftermath

By Lisa Mitchell

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By the time Dr Malcolm Dodd and Dr Peter Ellis arrived in Phuket on December 28 and travelled the 150kms north to Khao Lak, a surreal scene demanded their speedy appraisal. Approximately 900 bodies, nearly two acres of human remains, battered, torn and twisted by the tsunami, had been gathered by Thai locals and sprawled in a macabre portrait of natural disaster.

“Most forensic pathologists don’t have a problem with this because the bodies they deal with are decomposed, often just maggot masses, so it’s something we’re used to,” says Dr Dodd, a forensic pathologist at the Victorian Institute of Forensic Medicine. “But what we’re not used to are the sheer numbers on the ground, that overwhelm you psychologically.”

Where were they to begin with this, the largest task of disaster victim identification (DVI) ever attempted? It was beyond their experience, and almost beyond comprehension. Their brief was to identify the bodies of foreigners for repatriation to their homelands.

Dr Dodd and Dr Ellis, the director of forensic medicine at the Institute of Clinical Pathology and Medical Research at Westmead Hospital in Sydney, were soon joined by Dr Simon Stables, the clinical head of the department of forensic pathology at Auckland Hospital.

The Thai people had already separated their nationals from the many tourists by tying a red loop of rope around the wrists of their own and a yellow loop around those of foreigners. In a few days in these tropical conditions, the bodies would be unrecognisable.

After death, first bacteria proliferates in the gut, then a Caucasian body surrenders its pinkish hue to mottled green, brown and black. As gas forms in the cavities, the body bloats and at this point, a slim Caucasian could be mistaken for a morbidly obese black African, says Dr Dodd. Blisters form on the skin, which break down, until the body literally caves in on itself. In the tropics, an unrefrigerated body can turn to “soup” within a week.

“We had to do a basic external examination on the ground - a brief description of gender, items of clothing, jewellery, any distinguishing marks or scars or tattoos - fairly quickly because the bodies were out in the sun and in early bloat phase. You couldn’t tell the difference between the nationals and internationals by then,” says Dr Dodd.

With clipboards and pens, they waded through the corpses, filling out standard Interpol DVI forms, crossing out the pages and pages of fine details requested - the shape of the ear, the chin, the brow - hardly applicable to those with heads black and swollen to the size of basketballs. Refrigerated containers began to arrive a

day or two later, huge cranes stacking them like children's building blocks, perhaps 30 in the end, each holding about 40 bodies, now labelled and bagged.

Thanks to the Australian Federal Police's excellent Thai contacts, the locals were able to erect a mortuary in one of Khao Lak's temple buildings within a few days. Under the direction of Dr Dodd and Dr Ellis, plywood walls and doors flew up, plumbing, sinks and power points went in, autopsy tables, air conditioning and even dental X-ray machines arrived. The team, which included two dentists, set to work quickly with a five-phase DVI process, taking bodies from the fridge through fingerprinting and autopsy, then a dental examination, before collecting teeth (the most durable option) for DNA samples.

"We were there for two weeks and I think we'd processed 400 cases in five days," says Dr Dodd.

Normal autopsy procedure investigates the head, chest and abdomen but these examinations were limited to 20 minutes each; cause of death was not the issue. Bodies would be washed free from mud and sand, then investigated only for the presence of the gallbladder, appendix, and in women, the uterus, or obvious diseases such as cancer, to provide further clues to victim identification once medical and dental histories could be obtained.

"All this information is eventually sent to a centre in Thailand, and I believe the DNA testing is being done in China," says Dr Ellis. "We're certainly talking months before these 1000 to 1200 foreigners are identified. Some of them will never be identified. It has to be an accurate match."

Meanwhile, across Indonesia, India and Sri Lanka, teams just like theirs were working to identify tens of thousands more victims. "Although 9/11 was a major disaster, there wasn't many in-tact bodies. There wasn't the same sort of input," says Dr Ellis.

At first, the Australian team proposed collecting all the bodies in a large central facility, such as an airport hangar, to streamline the processing, but the Thai government refused. In this Buddhist nation, they learned, Thai nationals had to remain on hallowed temple ground or their spirits might drift and never pass peacefully into the next life. Media reports say Phuket is already awash with ghost stories and spooks (*The Age*, 20 January, 2004).

By the time the mortuary was up, emergency teams from Norway, Denmark, Sweden, Belgium, France, Germany, Austria and Poland had descended, crowding the simple set up with a dozen or more pathologists, dentists, fingerprint specialists and police, all wanting to help.

"There were some real issues with too many people in such a small space and it required some careful management of the mortuary itself. Rebecca Ellem, the deputy mortuary manager at the Victorian Institute of Forensic Medicine had the personal skills to do it in a light-hearted but very effective way; she was sensational," says Dr Ellis.

Dr Stables arrived from Auckland on 31 December. By then, the mortuary was working on two eight-hour shifts, and at times, with six pathology teams vying for space on the eight tables available. By 12 January, a second mortuary was set up

within the same temple grounds, twice as large as the first, he says, but some of the dentists were forced to work in an area that captured all the hot air from air conditioning units.

In spite of their combined experience in emergency and war zones such as Bali, East Timor, Kosovo, Sri Lanka and the Solomon Islands, Dr Ellis and Dr Dodd did not know what to expect of the tsunami aftermath, each day brought such challenges. Perpetual rumours suggested that 1500 more bodies were on the way, there was talk of moving the whole mortuary site down to Phuket, and talk of exhuming bodies. They had to set up clean rest areas and contaminated areas within the mortuary to protect against cholera.

Then there was the three-hour bus trip to Khao Lak from Phuket and back, because the accommodation in between had been raised. Those bus trips turned into informal debriefing sessions between professionals who thought they'd seen it all.

"We're professionals, we can do the job," says Dr Dodd, "but this took a lot of us by surprise. We just walked around and thought 'bloody heck', this is not possible, I don't know if we can actually *do* this'. . . We were literally walking around in a sea of bodies on our mobiles ringing our families, we actually choked a bit on the phone. I know I did."

In spite of all the difficulties, says Dr Stables, they could not have made such extraordinary headway without the tremendous support of the Thai locals.

"The military people were doing all the body movements in that heat; it's very hard, physically demanding work, but they just knuckled down and did it. And the local people set up a large cafe with free food, it was a fantastic effort. There were people who had lost absolutely everything who turned up and gave their time."

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At 2.30pm on December 28 2004, Dr Malcolm Dodd received a call. Could he join the Australian Tsunami team heading off to Thailand and if so, could he be at the airport in two hours? Two hours?! As specially chartered flights collected the team from around Australia, news reports and victim counts were still very fuzzy; it was impossible to prepare for what they might face.

After the Bali terrorist bombings, whose aftermath he attended, Dr Peter Ellis formed the Australian National Emergency Forensic Pathology Activation Plan.

"The pathology activation [for Bali] was a little haphazard in discovering who was available and who knew where everyone was. So [afterwards] I approached my colleagues around the country because incidents like this may well happen again. We had nobody who was automatically the point of contact for the Australian Federal Police, the agency most likely to handle these emergencies."

Dr Ellis is now that contact. He also happened to be the main man rostered for disaster duty on Boxing Day. There are about two dozen forensic pathologists

around Australia, attached to about nine different government services. Each of these institutes participates on an on-call roster for two months at a time.

Dr Simon Stables, of New Zealand's 12-strong disaster victim identification response team, is one of five, full-time forensic pathologists in the country.

"I learnt a lot in Thailand that I could bring back and apply here should a mass disaster happen in Auckland. We'd been going through how we'd organise ourselves if one happened and I'd put together a plan, but having seen how things flowed in Thailand, I'm going to modify that."

More information on Lisa Mitchell's writing at lisamitchell.net.au