



Rebuilding after the tsunami

Reflections on medical experiences in Banda Aceh

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I met Yusni in June 2006, late in the afternoon on a busy day in the orthopedic outpatient clinic at Zainoel Abidin Hospital in Banda Aceh, Indonesia. A year and a half earlier, Yusni's village on the west coast of Aceh province was swept away by the infamous Indian Ocean Boxing Day tsunami. He lost his home and 2 of his younger siblings, yet Yusni somehow managed to survive, although he did suffer a posterior hip dislocation. He was 15 years old at the time.

Yusni had been taken to see a traditional bonesetter who was unable to treat him properly and who did not reduce the dislocation. Over time, scar tissue formed around the joint such that he was able to put partial weight on his leg and walk with great difficulty. However, he remained unable to fish or do many of the things that he'd previously done to help support his family. Months later, a family friend suggested that the doctors at the hospital in the provincial capital might be able to help. Yusni borrowed money to pay for his lengthy trip and finally ended up in our busy outpatient clinic.

What was tragic about Yusni's story was that it was anything but unique. So many of the patients I saw in Banda Aceh had similarly neglected traumatic injuries and equally unfortunate stories. Having finished medical

school, I was there as a medical observer for the Surgical Implant Generation Network, a non-profit orthopedic organization. I spent my time on the orthopedic floor in Zainoel Abidin Hospital, which was filled with cases like Yusni's. Nearly half of the patients seen there in 2005 were injured during the tsunami and, of those patients, less than half had presented acutely. The vast majority were under the age of 25.

To bridge a gap

It's not hard to understand why our clinic was so busy. The only orthopedic surgeon in the province of Aceh—population 4.5 million—was Dr Azharuddin. The hospital had flooded during the tsunami, killing 75 of the hospital's 100 nurses and destroying nearly all of the hospital's equipment and supplies. A year and a half later, the hospital remained ill-equipped. In fact, before my arrival in Banda Aceh, Dr Azharuddin had been using a manual drill in the operating room instead of the electric drills that are taken for granted in Canada. Knowing that this deficiency existed, I raised donations from my medical school classmates and was able to purchase an electric drill at a special humanitarian rate from a North American orthopedic supply company. My gift was happily received.



Figure 1.
Molded acrylic fixators

In addition to securing funds from various non-profit organizations, Dr Azharuddin has come up with innovative solutions to deal with the chronic equipment shortage. For instance, he often uses external fixators in lieu of plates and screws and, often lacking conventional external metal fixators, has become adept at moulding his own fixators out of acrylic (**Figure 1**). However, Dr Azharuddin continues to struggle with material shortages daily, with even simple things like plaster bandages in short supply.

Medical treatment at Zainoel Abidin Hospital is free; however, a number of logistic, financial, and cultural factors lead rural dwellers to opt for traditional practitioners instead. For fractures and dislocations, many villagers seek treatment from bonesetters, often with poor results. Typically, bonesetters rub a sticky herbal paste over the skin, then wrap the injured limb and a rigid splint tightly with bandages. Many complications can arise from this management, including compartment syndrome and gangrene. I met one girl during my first week in Banda Aceh who had developed osteomyelitis of the hand and another who presented with malunion of a femoral fracture (**Figure 2**) after being treated by bonesetters. One young girl I met developed a severe flexion contracture of the hip subsequent to improper treatment by no less than 12 different bonesetters.

Figure 2. Malunion of a femoral fracture after treatment by a traditional bonesetter



Need for intervention

The far-reaching effects of the tsunami highlight the need for intervention by primary care providers in Aceh, particularly in remote areas. Even when rural patients are able to access district health centres, the facilities tend to be understaffed and poorly equipped. *Pus kes mas* (small district health centres that offer mainly outpatient and emergency services) are run by newly graduated doctors who are required to work there for a minimum of 1 year before they can apply for specialist

training. Unfortunately, after their 1-year commitment, physicians do not tend to stay in these rural areas, leading to chronic understaffing.

Furthermore, sick or injured villagers are reluctant to access government medical services because of a common belief that a trip to the hospital automatically means surgery, something which many rural patients fear. Additionally, wealthy patients tend to seek medical care from the private sector or else travel to Malaysia or Singapore for treatment, creating the perception that the government-funded public system is substandard.

As a family medicine resident, I was met with much enthusiasm and curiosity from the Indonesian doctors. Unfortunately, family medicine as a specialty in its own right does not currently exist in most of Indonesia, but local specialists agreed that family doctors would make the medical system in the province more effective. Family doctors could treat many of the minor injuries and illnesses which are currently being poorly treated by bonesetters and traditional healers, thereby preventing substantial morbidity and decreasing need for inpatient and surgical intervention. Family doctors would also provide continuity of care, act as advocates and resources for their communities, and liaise with specialists in order to facilitate the logistics of the referral process.

As for Yusni, we performed an open reduction of the hip and, surprisingly, he suffered no permanent neurovascular complications. He continues to follow up with the orthopedic clinic and today, almost 3 years after the tsunami, he is finally walking and working normally. We can only hope that other tsunami victims with stories like Yusni's will have equally satisfying endings. 🌿

Dr Hwang is currently completing her residency in rural family medicine at the University of Alberta in Red Deer.

Competing interests

None declared

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