THE DOCTOR, THE DICTATOR, AND THE DEADLY MOSQUITO

SAVING LIVES IN THE JUNGLE OF DEATH

BY ADAM SKOLNICK
PHOTOGRAPHS BY TOM STODDART
Harvard and Johns Hopkins, sits next to 30-year-old He Ni Hta and her three young children. Ni Hta’s eyes are vacant. She has been complaining of dizziness and numbness in her legs, her case has puzzled the young medics who staff the clinic. They’ve diagnosed Ni Hta with a thiamine deficiency known as beriberi, but Dr. Richards isn’t so sure. He takes her pulse, checks her blood pressure, and tests her reflexes. She appears on edge.

“What do you think caused this?” he asks.

Her eyes stay fixed on the woven bamboo floor. “The government destroyed our village a little more than a year ago,” she says. “We ran to a hiding place in the jungle and we stayed there. We couldn’t move for 2 weeks. Then he died.”

She was 4 months pregnant at the time. Still grieving, she managed to carry her children and their meager belongings for 3 weeks over steep jungle peaks to this camp, all the while dodging government soldiers.

“Four months after I arrived here,” she continues, “when I was 8 months pregnant, I had a stillbirth.” Birth complications, including premature delivery, have long been associated with malaria. Ni Hta may not have become ill like her husband—at least not yet—but she may well have been carrying the parasite, which, according to Dr. Richards, is what may have killed her unborn child.

Ni Hta’s 7-year-old son notices his mother’s despair and leans his head on her knee. She shoo’s him away coldly. Her three kids are charging. They smile and are engaged, but they’ve already lost a father. And now they may be losing their mother, too.

This is Ei Htu Hta (né TOO-ny), a makeshift village in eastern Burma. The nearly 4,000 people who live in this camp built for 600 have been run off their land by the notorious Burma’s military government (calling itself, without irony, the State Peace and Development Council, or SPDC), which began its campaign in the spring of 2006 to create a buffer around its new capital.

Though the reason may be new, the practice is the same as it ever was. The same ethnic minorities and the Burman majority date back centuries. Since the military regime seized power 45 years ago, it has been targeting opposition groups by clamping down on the civilians who support them. It is gradually taking control of Karen state—home to the second-largest ethnic minority in Burma—and selling the state’s natural resources such as timber to multinational corporations. In the process, the regime’s top leaders have become obscenely rich.

Ei Hua Hta is one of dozens of makeshift camps in eastern Burma. They house an estimated 550,000 displaced people who are in hiding, with very little cash to spend and even less freedom to work fields and move about. (The larger camps are located right on the Burma-Thai border because the SPDC is less likely to attack them there.) Their leaders are exiled and living as legal or undocumented refugees in Thailand. And the people who have fled for SPDC troops. They march for weeks at a time carrying military supplies and always walk in front so they will be the first to set off land mines. Young girls are often raped, village leaders are executed, and troops often demand the villagers’ cash. Other times, entire villages are evicted and interned at relocation camps. SPDC officials call them “model villages,” except these villages are over-crowded, forced in, and watched by armed guards. If villagers dis- obey, they can be shot on sight.

According to the Thailand Burma Border Consortium, the SPDC has destroyed more than 3,000 villages in the past 12 years. In addition to the half million people who’ve lost their homes, thousands of others have lost their lives. (The exact number is hard to pin down. Some families scatter and others disappear forever.)

BURMA: THE BASICS

The country

Burma, the second-largest nation in Southeast Asia geographically, is home to 52 million people and composed of 7 “divisions” and seven states. Minorities of the divisions are largely composed of groups representing 10 percent of the population. The states are home to ethnic minorities. The 3.6 million Karen people, from Karen state, are the second-largest minority.

Area of displaced refugees

The conflict

Ethnic tensions have simmered within Burma’s borders for centuries. A brief period of harmony began in 1945 when General Aung San brought groups together, formed an army, and paved the way for independence from Britain. After Aung San was assassinated in 1947, civil war ensued. Then, in 1962, General Ne Win took control in a military coup. So began 45 years (and counting) of military repression.

The name controversy

Myanmar, Burma’s military government renamed the country the Union of Myanmar. The United Nations recognizes that name, but the U.S. and U.K. governments do not. The Burmese insist refer to the country as Burma/Myanmar.

The current leader

General Than Shwe has ruled the country for the past 15 years. His Road Map to Democracy is widely viewed as a ruse to maintain power. Meanwhile, he and his generals are getting rich exploiting Burma’s natural resources. The country’s gem, jade and teak forests, are popular around the world. Chinese and Thai companies are generals are getting rich exploiting Burma’s natural resources. The country’s gem, jade and teak forests, are popular around the world. Chinese and Thai companies are
In Burma, malaria peaks during the rainy season, June through October. More people die of the disease in Africa, but here it’s more deadly because residents aren’t exposed to the parasite year-round and don’t build natural immunity.

When Dr. Richards first arrived, malaria was the region’s biggest health threat, in part because it was becoming resistant to chloroquine and sulfa-doxine-pyrimethamine, the anti-malarial drugs of choice, and had become resistant to quinine. There was little hope for change. “Nobody had ever tried to implement a malaria-control program in eastern Burma, at least not in a drug-resistant area of active conflict and where the people frequently migrate,” says Dr. Richards. “A lot of people were skeptical.”

“Early diagnosis and treatment are key,” he continues. “In remote villages, the ability of our health workers to reach patients often means the difference between life and death.”

To bring health care to the displaced, the 500-plus medics—many of them Karen refugees—trek through dense jungle, dodge land mines, and evade hostile military units. Their salaries: $780 a year. Some work out of clinics like the one in Ei Htu Hta. Others work out of backpacks as they go from village to village, often sleeping in the jungle, for up to 6 months at a time. In addition to treating malaria, they’re trained to deal with pneumonia, dysentery, and malnutrition, perform amputations with camp saws on land-mine victims, and deliver babies. They’re general practitioners for families on the run.

The SPDC does not want them here. In fact, the SPDC has torched half a dozen clinics and killed seven backpack medics since 1998.

At first, diagnosis was a significant challenge. “A number of illnesses, including dysentery and meningitis, have similar symptoms,” says Dr. Richards. It’s even more difficult when your only medical tool is a solar microscope. The solution: a 15-minute diagnostic test known as Paracheck, developed by a company in India. It’s like a pregnancy test, except you spread blood instead of urine on the stick. It’s 95 percent accurate.

As for treatment, Dr. Richards ditched the existing options in favor of a drug combination known as ACT. The malaria parasite can quickly mutate and become resistant to single drugs, often within a year or two. Using a combination improves the efficacy of the therapy. “We’re not seeing any resistance yet,” he says.

“People should be alarmed. This is a humanitarian crisis.”

But bullets and land mines aren’t the only serious threats. Malaria is the number one killer in eastern Burma. “The SPDC has figured out that if people are cut off from shelter, nutrition, and medicine, nature will often finish the job,” says Dr. Richards.

In other words, malaria has been the SPDC’s secret killer for years.

The government has destroyed more than 3,000 villages in the past 12 years. Thousands have died. A half-million others have lost their homes.

In one corner, a 28-year-old man, teeth stained red from chewing betel nut, rocks in a hammock. His wife is out getting some air. The young couple has barely introduced him to patients.

His name is Thu Ray, 24, whose village was destroyed by an estimated 1.4 million people.

Those two statements have become his rallying cry. In 2003, Dr. Richards, then an ambitious med student and a new member of the Berkeley-based Global Health Access Program (GHAP), developed a malaria control program with Eh Kalu Shwe Oo, the exiled chief of the Karen department of health and welfare. In just 5 years, thanks to simple, low-tech, and incredibly courageous field medicine, they reduced the number of malaria cases by 90 percent in the areas their medics reached. Still, malaria is responsible for 42 percent of all deaths in the region today.

Dr. Richards tells me later that evening as we sit outside our hut in Ei Htu Hta watching children play in the muddy stream that snakes through camp. “It’s a disease of the poor, and it’s preventable.”

“Some patients come here from more than 100 miles inside Karen, so they must stay until they have completed their medicine and it’s safe to return,” says the soft-spoken Eh Kalu, 52, as a bright-eyed 10-month-old girl pops out from behind his leg to catch our attention. Her grandmother laughs and Eh Kalu chuckles as the toddler hams it up.

“She had a very high fever for several days,” says Thu Ray.

Dr. Richards glances at her chart. “Yes, malaria, but her fever has really come down. She’s doing great,” he says.

As we walk away, Dr. Richards puts Burma’s malaria problem into perspective for me. “If it weren’t for our program, those kids may not have survived, and the village of Ei Htu Hta would likely be in the midst of an epidemic.”
The program is now operating in 53 villages that are home to more than 40,000 people. Karen medics visit other villages, too, when possible. In total, they treat more than 270,000 patients each year. How successful is the program? Malaria deaths are extremely rare in areas where the program is active. In fact, death occurs only if the patient is older than 65 or younger than 15. In the four years since the program started, there have been only four deaths in the Karen area. How is it all started with a simple bite from a female Anopheles mosquito. Malarias parasites enter the bloodstream from the salivary glands of the insect and multiply, first in the liver and then in the red blood cells. Successive broods of parasites grow, destroying the host red blood cells, and reproduce in the liver. Mosquitoes that bite people are usually not related to neighboring red blood cells.

Malaria is the SPDC’s secret killer. If people are cut off from shelter, nutrition, and medicine, nature will finish them off.

Two hours later. Dr. Richards, Eh Kalu, and I climb back into our boat and head toward Section 6 to meet the new arrivals. The mecha-colored Salween is about 650 feet wide, draped on both sides by impenetrable jungle that’s home to SPDC military positions. When SPDC scouts come into view, we veer hard to the far bank to avoid detection. The camp is a quarter-mile walk from the river’s edge. We pass young boys dragging bamboo to the site of what will be their new home. They are all from Toungoo. They tell me they spent 2 weeks hiding in the jungle. That’s not enough for the villagers to escape to designated hiding places in the jungle. That doesn’t mean the villagers are safe once they escape, however. “It’s very difficult and dangerous for our medics to reach people hiding in the jungle,” says Eh Kalu. “They could be killed or accidentally give away the location of the hiding place. We want to give health care to everyone in Karen. But it’s impossible.”

DARK MINDS - *Tripping* 
*thumbing* 
*swirling*

HOW A BITE BECOMES AN EPIDEMIC

If it’s caught early, malaria is highly curable. If not, here’s what happens.

1. It all starts with a simple bite from a female Anopheles mosquito. Malarias parasites enter the bloodstream from the salivary glands of the insect and multiply, first in the liver and then in the red blood cells. Successive broods of parasites grow, destroying the host red blood cells, and reproduce in the liver. Mosquitoes that bite people are usually not related to neighboring red blood cells.

4. Infection works both ways. Clean mosquitoes can carry malaria parasites to the human blood stream, but a person with malaria is unlikely to pass them on to another human victim. This perpetuates the epidemic.
The Karen medics load up on medicine and supplies in neighboring Thailand and then smuggle it into Burma on their backs.

women size us up, and men ignore us as they quickly dig latrines and build huts. About 300 displaced people are here, and 1,000 more are reportedly en route. Eh Kalu has already arranged for an additional team of medics to motor upriver, but there aren’t enough huts for 1,300 people yet.

Eh Kalu notices a woman standing in her doorway and stops. He’s still a medic, after all, and she doesn’t look right. “Are you okay?” he asks.

“I have malaria, but I’m feeling better,” says Blu Tu, 22, as her 3-month-old baby yawns in her arms and her 15-month-old son hides behind his dad.

Blu Tu’s case shows how displacement leads to disease. After her village was torched, she lived in the jungle for weeks. She was healthy at first and delivered her baby without complications. But at some point a tainted mosquito bit her. The symptoms began the day after she arrived at Section 6.

“It was raining and I was very tired. I went to take a bath, and afterward I felt a chill.”

“Did you go to the clinic?” Eh Kalu asks.

She laughs, embarrassed. “No. I waited 2 days. By then the fever was worse, so I went.”

The medics put her on ACT meds immediately. Her fever broke, and gradually she regained her energy. Luckily, she’s the only one in her family who became infected.

She leads us into her small hut, which is roughly 10 feet by 10 feet. We take off our shoes at the door and sit cross-legged in a circle on the woven bamboo floor.

“How many people live here?” Dr. Richards asks.

“Five.”

“But you have only two nets. Do you sleep under a net?”

She nods. Dr. Richards turns to Eh Kalu. “That’s probably why the malaria stopped with her.”

Distribution of insecticide-treated nets is also important for malaria control. Humans can infect mosquitoes as easily as mosquitoes infect humans. If someone in a household is infected and a clean mosquito bites him or her, the mosquito becomes a carrier. But if infected mosquitoes come in contact with the nets, they won’t live long enough to spread the disease.

If there aren’t enough nets for everyone, the next best option is to put the malaria patient beneath the mesh. “If the mosquito dies after biting an infected person, the cycle is broken,” Dr. Richards explains. “That’s how we gain the advantage.”

Before leaving Section 6 later that afternoon, we stop by the Ei Htu Hta clinic. Dr. Richards examines an infant recovering from dysentery. Eh Kalu (on hammock) translates.

OUT OF THE WOODS
At the Ei Htu Hta clinic, Dr. Richards examines an infant recovering from dysentery. Eh Kalu (on hammock) translates.

her 6-year-old niece, becomes terrified and hysterical.

“The SPDC killed her father, my older brother,” says Paw as I follow her outside. “They came and took him and two other men and killed them in front of the whole village. My niece saw everything. I come to church to pray for peace,” she continues. “So one day we can go back home and be free.” She smiles and waves goodbye. Dr. Richards, Eh Kalu, and I hike back down to the river in silence.

The next evening, after a day of traveling, we arrive back in Mae Sot, Thailand. This isn’t a pretty town. The outskirts are rimmed with large camps built for the 120,000 Karen who were granted refugee status by Thai authorities over the past 10 years. Our driver veers down a rutted alley to the dilapidated compound, a huddle of two-story wooden buildings with concrete floors and cobwebs in the rafters, where Eh Kalu lives and works. Similar compounds are scattered throughout Mae Sot, filled with members of Karen state’s government-in-exile and pro-democracy Burmese activists.

“You know,” says Dr. Richards, after we drop off Eh Kalu, “it’s very dangerous for Eh Kalu and his staff here. Border groups have been infiltrated by SPDC spies, and Thai immigration officials can arrest and deport them at any time. But he’ll never quit, no matter the danger. He’s in a unique position, in which he can help people and promote democracy and political change at the same time.”

Of course, political change is often influenced through evidence and policy. That’s why Dr. Richards is a self-avowed public-health geek. And why the next day, he’s preaching the importance of inputs, outcomes, and needs assessments to a classroom of Karen medics.

“You need to count how many nets you see,” Dr. Richards tells them, “and ask how they’re being used. Then you have to write the answers down in your house-visit book,” he says, cradling an exam paper. “This is our source of data. This is precious information.”

There are rumblings in the back of the room. A few medics are concerned that they won’t have time to collect all the data—they have too many patients to see.

“How of course your patients come first,” Dr. Richards responds.

“But can you train a villager to do this? A volunteer?” Heads nod in agreement; a rumble of affirmation fills the room.

And because of this discussion, somewhere inside Burma a villager will soon go door-to-door in the malaria zone. What he or she learns will be translated by Dr. Richards and his team into food, medicine, and mosquito nets. Lives will be saved. Children will grow to adulthood. Karen communities will become stronger. And maybe, someday, a nation will find peace.