A Retina Specialist in Nepal: Picking Up the Pieces

A retina specialist returns to his home nation to provide first-line medical assistance after an earthquake, and provides ocular surgical assistance after a second quake strikes the same region.

AN INTERVIEW WITH PRAVIN U. DUGEL, MD

The Global Perspectives column in Retina Today *generally features a surgical case performed by a retina specialist outside the United States, allowing our stateside readers to glimpse into the ORs of their international colleagues. However, when we heard that frequent* Retina Today *contributor Pravin U. Dugel, MD, served as an early responder after the Nepalese earthquake in April 2015, we knew we wanted to tell his story. This column seemed the most apt place in which to run Dr. Dugel's account of human fragility, perseverance, and generosity. We trust that you agree.*

Dr. Dugel's story reminds our readers that, although retina specialists' area of specialization concerns a few square centimeters in the back of the eye, their medical training provides a background in science and leadership translatable to providing relief to those who need it most.

—Karen Roman, Editor-in-Chief

***Retina Today:* How did you hear about the first earthquake that struck Nepal in April?**

Pravin U. Dugel, MD: I awoke one morning to a text message that basically said, "I'm sorry to hear about the earthquake in Nepal. Hopefully everything is fine." I had no clue what this person was talking about. I really didn't know what was going on until I turned on the news (Video 1).

Later, I received an email from Dr. Sanduk Ruit, a colleague in my home nation of Nepal with whom I had worked in the past. "Pravin," the email read, "this is the biggest disaster I've ever seen in my lifetime." Dr. Ruit does not normally speak like that. Based on his uncharacteristic statement and what I saw on TV, I knew the devastation was of immense proportion.

That day, I was scheduled to go with my partners from Arizona to Los Angeles to celebrate the first anniversary of Rohit Varma, MD, MPH, becoming the chairman at the University of Southern California (USC) Eye Institute, Keck School of Medicine, where I am a clinical faculty member. I knew I could speak about the earthquake with my colleagues there, and that we could make plans to take action.

Video 1: The Devastation in Nepal

***RT:* In what capacity had you previously worked with Dr. Ruit?**

Dr. Dugel: Now, Sanduk is very interesting. He was a man whom I'd heard about for many years; now, he's a man whom I've admired for many years. He grew up taking an 11-day walk to and from school in the mountains of Nepal. He is self-educated and has become a remarkable physician who devotes his life to curing blindness. He has devised a method for cataract surgery that is both extremely modern and cost effective and

has developed a network that reaches out to the far ends of Nepal to deliver such surgery. In fact, his model is so successful and efficient that it has been duplicated and franchised globally. His organization is called the Himalayan Cataract Project, and it is based out of the Tilganga Institute of Ophthalmology in Kathmandu.

When I met him several years ago, he asked me to join him in developing a similar network for retina treatment. Being a retinal surgeon born in Nepal, it seemed natural. I've been going there every 6 months or so to help develop this retina infrastructure within his network.

***RT:* How did you make the decision while at that meeting in Los Angeles that you were going to fly to Nepal to contribute to the relief effort?**

Dr. Dugel: Rohit's anniversary celebration was held at his house. At one point during the party, I was standing in the kitchen with him, Carmen Puliafito, MD, MBA, who is the dean of Keck School of Medicine at USC, and Mark Humayun, MD, PhD, who is the chief of the retina department at Keck. We were watching the news, and Carmen asked me, "Well, what do you want to do?"

I replied that it would be great if we could organize a trauma team. "That's really what they need," I said to Carmen. "It's not just ophthalmology, but they need a trauma team." And he said, "Well, let's go ahead and do it." So, within 4 hours—literally within 4 hours—we organized a trauma team from USC.

I spent a few days organizing the logistics of how to get there, how to interact with Sanduk, and so on and so forth. I know the country well, and I realized that the only way to get to the remote areas where they really needed help was through the Himalayan Cataract Project network. As bad as things were in the capital, Kathmandu, I knew that they were much worse in the remote areas where there were no TV cameras.

***RT:* Tell us more about the trauma team.**

Dr. Dugel: The team consisted of ICU nurses, trauma surgeons, and anesthesiologists; there were eight people altogether. The main issue was immediate acute trauma. Other than that, we had no idea what to expect. When we got to Nepal, we found people sleeping outside in tents. We could take only what we were able to carry ourselves, including tents, survival gear, and water purification systems.

***RT:* What about surgical equipment?**

Dr. Dugel: We took a lot of surgical equipment. We ran into numerous issues going through customs, but we dealt with it. Logistically, it was a lot of work, but there was no other option.

***RT:* What did you do when you landed?**

Dr. Dugel: The trauma team left a few days before I did. As soon as I landed, Sanduk met me, and we went to one of the epicenters of the quake. It's really eerie there. You go to Kathmandu and see the devastation there, but you expect it. You expect the damage, the devastation, everything else. But as you go further outside the city toward the epicenter, you look around and realize how beautiful it is. It's absolutely gorgeous. The land, the landscape, and the scenery. For a moment, you look back and you think, well this looks fine. But as you admire Nepal's beauty, you realize that the roads are lined with people. Thousands and thousands of people. And then it suddenly hits you that the impact is tremendous. People are on the road because they're homeless. They have nowhere to go.

***RT:* That's quite the dichotomy between beauty and misery.**

Dr. Dugel: Yeah. These people have nowhere to go, they have no shelter, they have no food, they have nothing. And then you stop at a structure in what used to be a village, and when you open the door, you smell the reek of death because bodies are rotting in there.

To get to these remote areas is really difficult, and if not for networks such as the Himalayan Cataract Project's network, we would have been out of luck. Our trauma team saw a lot of well-known relief organizations turn back because they simply couldn't access remote areas. It's not just a matter of giving aid, it's a matter of distributing aid. Network support in a situation such as this is crucial because there are so many materials that reach the disaster zone but never leave the airport. Timing is key—2 days later may be 2 days too late—and networks give you the tools to increase the speed to care.

***RT:* How do you create organization in such chaos?**

Dr. Dugel: My goal was to aid the Himalayan Cataract Project's relief effort, so luckily there was a structure to support. The trauma team's job was divided into two phases.

The first phase focused on relief (eg, figuring out ways to distribute relief, food, and shelter). The second phase focused on distribution of medical aid. We were there to suture wounds, set fractures, and treat lacerations. I had a third phase, which was personal. I needed to make sure my family members who lived in Nepal were safe. Luckily, they were still alive.

***RT*: Did you concern yourself with treating ocular trauma, or were you dealing with everything and anything that came through the door?**

Dr. Dugel: Both. Any ocular issues were referred to me, but you can't just sit there and say you will only treat ocular cases. Whether it be suturing a laceration, setting a fracture, carrying somebody, or catheterizing a patient, you did what needed to be done.

***RT:* Can you describe some of the ophthalmic work you did while in Nepal?**

Dr. Dugel: We had patients presenting with lacerations, ruptured globes, retinal detachments, intraocular foreign bodies—everything that one would see in a disaster such as this. Most of these cases were tended to at the Tilganga Institute of Ophthalmology (Figure 1).

We tried to treat patients in the field, as transporting them to a hospital was difficult and could worsen their conditions. Even the main hospital was extremely crowded. Once I started providing aid in the hospital, I mostly performed ocular surgery. Anyone working at the hospital snapped back into their specialties upon arrival. It was the best way to divide care.

***RT:* Are there any particular cases that illustrate the impact of this earthquake?**

Dr. Dugel: I can think of two. The first one is personal. I had just finished time in the OR when the second earthquake hit. It was absolutely terrifying because I was on the top floor and debris was falling everywhere. All you could do was stay under a door or some sort of a structure and pray that you weren't going to die. At a moment when you face your own mortality, you realize how fragile life is. I know it sounds trite, but it's true. And all I could think about was my kids and my wife.

As surgeons, we are generally in control of situations, and people look to us for guidance. But to realize that you have absolutely no control over fate in this type of situation terrifies you. I have never been that close to death. That evening, everyone slept outside in tents. We had 16-inch knives next to us because we knew that if another aftershock occurred and debris started to fall on us we wouldn't have time to unzip the tent, and we'd have to slice our way out. Incidentally, a large aftershock did occur, and some people did have to use their knives to get out of their tents.

Figure 1. Dr. Dugel prepares for ocular surgery at the Tilganga Institute of Ophthalmology.

Video 2: One Family's Story in Nepal

***RT:* What was the second illustrative case?**

Dr. Dugel: The second case occurred the same day as the second earthquake (Video 2). I heard that a lady wanted to speak with me, so I went to visit her. She was in her 40s. She told me about the first earthquake. Her husband went to work that day and the earthquake hit around noon. When she did not hear from him, she and her 15-year-old daughter went to find him. He was alive, but a very large beam had fallen on him. They tried for 9 hours to lift the beam, to no avail. Finally, among the chaos they found some help and freed him from the obstruction. They had to carry him to a hospital, which was so crowded and chaotic that her husband didn't receive basic treatment (eg, oxygen or an IV), and he died.

Her son, Sonam, was in the room—18 years old, tall kid—and I asked, "Well, where was your son?" He was nervously fiddling. She told me that he was in school in the United States. Now remember, these are poor people, so this news really astonished me. I asked how he could be in school in the United States. She told me that the family had saved all their money to send him to the University of South Alabama to study engineering.

Sonam was studying for his finals when he got a text message asking him to come home right away. Privately, I asked Sonam when he planned to return to the United States. He told me that he would never return. Now that his father had died, he was the man of the family, and it fell on him to earn a living to support his family. He acquired a job as a laborer, and that was the end of his academic career.

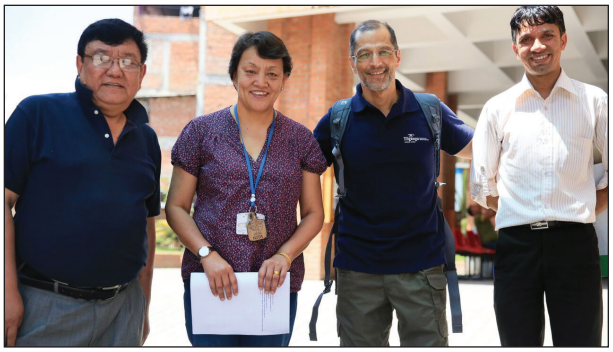

Figure 2. Dr. Ruit (left) and Dr. Dugel (second from right) outside the Tilganga Institute of Ophthalmology.

That's when it hit me. Although the earthquake lasts only a few seconds, it impacts an entire generation. Here's a kid who is so close to getting an education to allow him to essentially graduate to a different level of potential, to be an engineer. Instead, this unfortunate event took away his future. Rather than being an engineer, he will carry blocks of cement on his back.

The damage of this earthquake can't be measured by the volume of debris caught by television cameras in Kathmandu. It will be known only after we see how it affects a generation.

***RT:* How did you decide when it was time to leave?**

Dr. Dugel: [exasperated laugh] I had to come back to work, and Sanduk understood that (Figure 2). I have a busy practice, and I have an obligation to my patients. Still, it was not an easy decision, and I plan to go back in the next few months. I expect the healing—both of bodies and the nation—to slowly progress. ■

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