Dominican Stories

Lessons Learned from Developing a

Third World Retinal Surgery Program

Greg Rosenthal, MD
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A fundamentally

different life

Retinal Surgery in the Dominican Republic is as fundamentally different as the lives of the Dominican people. The people we have served are usually poor and often very poor. The “camposinos” live in the villages, or “campos” surrounding Santiago. The family above lives together in a 12 by 12 foot wooden shack with no electricity or plumbing. They do odd jobs for the rice farmers in the area, for about $2.00 a day. Still, their diet is better than it was a generation ago. Unfortunately, this has led to a severe increase in the incidence of diabetes, which is dramatically under-treated. As a result, we see many

severe cases of diabetic traction retinal detachments. Add to that untreated cases of retinal detachment, trauma, infections, and assorted other things, and there is a lot to do. And, this is just one island and a million or so people.

These needs exist throughout Latin America and indeed the rest of the third world. Retinal patients in the third world are radically underserved. This is due to the complexity and variability of retinal diseases, the relative dearth of well trained surgeons, and the operational difficulty of delivering retinal services. In Pakistan, for example, there are barely any retinal surgeons working for a population of 165 million people. A local colleague, who is from Pakistan, has a son who is a retinal surgeon. He tried to return home to Karachi and asked local authorities for help in establishing a retinal practice, He was told that they would only support anterior segment surgery. Why? Because it is just more difficult to address retina surgery, so all attention is devoted to the easier and more prevalent challenge of cataract surgery.

That does not mean that more difficult retinal diseases are not important or cannot be addressed. Retinal problems, primarily from diabetes, trauma, retinal detachment, and retinopathy of prematurity have reached crisis proportions. Populations which have subsisted on starvation diets in the past but which now have more food are seeing rapidly increasing incidences of diabetes. Unfortunately, they have very little access to care and virtually no access to treatment for severe retinal diabetic complications. Common problems such as retinal detachment and trauma are also left untreated. Unmonitored and untreated retinopathy of prematurity is an ongoing and utterly preventable tragedy.

Dr. Sebastian Guzman and I have been doing complex, high end retina surgery in the Dominican Republic for almost 5 years now, and along the way we have learned how to make this complex service efficient and successful. We have been able to distill the process down to a simple protocol that coordinates well with local care, coordinates with efficient high end surgery on periodic mission trips, includes education of local observing

surgeons, and coordinates safe followup care.

We have learned some lessons along the way. First, this is difficult. It is not stereotypical surgery such as with cataracts. Second, it requires close coordination with local doctors and healthcare organizations for good preoperative triage and postop care. Third, in spite of these complexities, it is doable. We have also learned that if we involve local surgeons in training and coordinate with them, we can create a system that provides needed care to local patients of all economic stations and a completely new market for the companies that support us.

We have worked out the operational aspects of doing third world retinal surgery in a way that is compatible with local cultures and care communities. We have begun to develop educational elements of the project, but we have not yet developed a sophisticated public health protocol. Although others have begun programs to do retinal surgery in third world setting, it is still not widely performed and in most eye surgery programs, retinal surgery is only an occasional activity, and many patients are turned away without help. Don Doyle, from the Missions Donation Program at Alcon Labs, has reported that this small program still represents a large percentage of the total charitable retinal giving that Alcon does. Alcon is the predominant surgical supplier in the retinal world. What this means is that what we have learned from our program can provide a valuable model for implementation in other areas. This would not only address an urgent third world crisis. It would also allow Alcon to benefit from the creation of a huge and entirely new market as a reward for its support of a project it is already committed to.

While we have succeeded in building a working surgical program, others have made headway in delivering educational services and addressing the more global public health issues in delivering this care. Alcon has been very supportive of both efforts, but looking ahead to a greater commitment must be done only with careful business analysis.

Creating a program to expand access to retinal surgery in the third world will require a fresh look at old assumptions. The pricing structure that has been used in the inpatient setting in American hospitals will simply not work. If, however, we looked at the third world as a new market for Accurus machines that are being exchanged in the US and Europe for Constellation machines, and if we improved the affordability of peripherals and disposable resources, and if we realized the stratification of patients' ability to pay, we could very ethically and productively create a market that provides tremendous benefit to patients, improves skills of local surgeons, uses internet technology to link to US surgeons and educational resources, and creates a self-sustaining market expansion for a company that has the foresight to help us build the system.

This is a joint project. It has an operational element, which we have learned. It also has an educational element, which we have touched upon but can improve immensely with the help of various academic efforts. Finally, it has a marketing element, which offers great promise to a multinational company such as Alcon. What we ***do*** want to do is provide advanced retinal care in the third world and educate and equip third world retinal surgeons to provide more and better care for paying as well as nonpaying patients. In recognition of Alcon's support of these efforts, and to make this program self-sustaining, we want to create new markets to grow Alcon's business around the world. What we do ***not*** want to do is spin our wheels with meetings or uncoordinated efforts that do not lead to what we can accomplish if we take a well-planned, careful approach.

We can approach these markets and these public health projects intelligently and profitably if we coordinate our efforts. Such coordination will be challenging and will require a significant time commitment. If we can obtain funding, I would be willing to devote a significant amount of time to this. This would include an academic element, teaching doctors here and in the field, development of the necessary relationships at local levels and "plugging in" to already existing anterior segment missions, helping to coordinate with various corporate and monetary supporters, and

speaking about all of these efforts to the world eye community. We can use telemedicine and electronic health records to coordinate this and leverage our ability to shrink a world of retinal needs to a manageable sphere. In the past, I spent years consulting in medical informatics, and I have a particular expertise in EMR and interface development that can genuinely bring this project together. With some support, we could make this effort work. This is what I think we need to hope for and fight for. The wonderful people we have encountered, and the millions like them, deserve no less.