Bangladesh Missions 2009 and 2011

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Figure 1. Bangladesh 2011 mission in Dhaka, visiting with the local medical team and patients from 2009.

Bangladesh is home to more than 150 million people. Bangladesh remains a developing nation but is gradually decreasing its dependency on foreign aid from 85% in 1988 to 2% in 2010. Its per capita income in 2010 was $641 USD compared to the world average of $8,985.

Although Bangladesh implemented a basic health care infrastructure in the 1980s, much remains to be done, particularly in rural areas. Major health issues are communicable disease, malnutrition, inadequate sewage disposal and inadequate supplies of safe drinking water. Only 30% of the population has access to primary health care services. Overall health care performance remains inadequate by all conventional measurements. Life expectancy is estimated at 65 years. Infant mortality in 2005 was 53 deaths per 1,000 live births. There are 3.43 hospital beds and 3 physicians per 10,000 residents.

Bangladesh medical education is provided by medical colleges which, until the early 1990s, were established by the government. Since then, several private medical colleges have opened. Medical treatment is free in the government-run medical college hospitals. Relatively better medical facilities are available in the small size private sector hospitals, but these are not accessible to the poor population.

Spine providers are not considered a separate discipline in Bangladesh (spine surgery is practiced by orthopedic surgeons), although a Bangladesh Spine Society formed, and held their first annual conference in January 2009.

Until 2009, most spine surgeries were basic procedures, eg, discectomy or decompression, although a few surgeons performed spinal instrumentation, and very few, deformity surgeries. There is no local spinal implant manufacturer in Bangladesh. Inexpensive implants are available from India or from multinational companies with some effort.

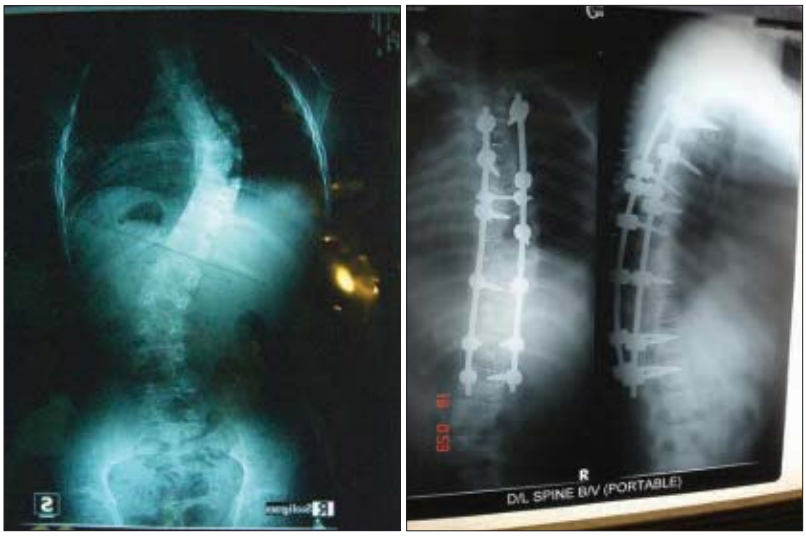

Figure 2. Left, AIS preop image and, right, postop image showing pedicle screw instrumentation.

Our first mission in January 2009 took us to Dhaka, the capital, and cultural, economic and political center of the country. Metropolitan Dhaka has a population of over 12 million, making it the largest city in Bangladesh. Located on the banks of the Buriganga River, Dhaka is known as the City of Mosques and for its fine muslin cloth.

The goal of our mission was to promote spine surgery and educate the local surgeons. We wanted to encourage the young enthusiastic doctors to have the courage to provide quality medical care, safely, within their limited resources in the government medical college hospitals. In this way we can continue serving the population with quality medical care free of charge, even after our brief visits.

Our mission was organized immediately preceding the first annual conference of the Bangladesh Spine Society to encourage participation of young physicians from around the country. The venue was Bangabandhu Sheikh Mujib Medical University (BSSMU), Bangladesh's premier

Figure 3. Live two-way audiovisual connection to local surgeons attending a Blangladesh Spine Society meeting from an OR in Dhaka's Bangabandhu Sheikh Mujib Medical University.

postgraduate medical institution. Our host, Idris Ali, MD, Associate Professor and Secretary of the Bangladesh Spine Society, was the only surgeon in Bangladesh practicing spine surgery exclusively. He requested we focus on deformity surgeries during our trip.

We had a team of four spine surgeons from the US and India, as well as one anesthesiologist and one neurophysiologist for monitoring. We operated on four scoliosis patients at BSSMU (**Figure 2**) and saw 20 other cases of spinal deformity, including idiopathic and neuromuscular scoliosis and post tubercular deformities.

We used pedicle screw instrumentation in two cases and sublaminar wires alone in the other two cases. All the implants were donated by vendors from India, who later continued their support to make these available in Bangladesh. The surgery was televised live to the delegates of the Bangladesh Spine Society via two-way communication. (**Figure 3**)

The anesthesiologists in Dhaka were quite comfortable with the procedure, including the two cases where SSEP and MEP were used. We used a regular operating table, rolled pillow for prone positioning and padded rings for head support. The medical supplies were limited, and almost no disposable items were used. We had no postop wound infection!

Our mission was well received by the local people, including Noble Laureate Muhammad Yunus, who is working to help develop Bangladesh's health system. We had the honor of spending a couple of hours with him, discussing his thoughts on the economic development in Bangladesh and sharing our views.

Our second Bangladesh mission was organized in August 2011 to coincide with the second annual conference of the Bangladesh Spine Society. Our venue this trip was The National Institute of Traumatology, Orthopedics and Rehabilitation (NITOR), popularly known as Pongu hospital, meaning hospital for the "disabled." NITOR is a teaching hospital and the largest orthopedics hospital in Bangladesh. Our host was NITOR Director, Khondkar Abdul Awal Rijvi. About 150 doctors attending the Bangladesh Spine Society meeting were able to witness the live surgery via two-way AV communication and participate in the case discussion.

We saw around 30 patients, mostly with spinal deformities, of whom 12 had solid surgical indications. We were able to operate on only three, however, because of limited OR availability and a slower pace to facilitate teaching and demonstration.

This time anesthesia was done by the local physicians. The OR facilities were the minimum necessary for performing spinal deformity surgery safely, with no frills. It is difficult to assess these facilities by western standards, but the local doctors were performing fairly complex surgeries in this environment on a regular basis. We performed three scoliosis cases, including one congenital deformity, using a combination of pedicle screws and sublaminar wiring as implants.

Among the high points of the mission were follow-up visits with all four patients treated during our 2009 mission. (**Figure 1**) They were all doing well, appeared happy and helped boost morale and confidence among the patients who came for treatment in the 2011 mission.

The most important highlight of our mission, however, was learning that local surgeons had started doing spinal deformity surgeries in Dhaka, being encouraged by our first mission in 2009. Dr. Shah Alam, MD, Associate Professor of Orthopedics in NITOR, and Dr. Kamal Ahsan, MD, Associate Professor of Orthopedics in BSSMU each presented spinal deformity surgery cases they had performed following our previous mission. This truly demonstrated we had succeeded in our goal of creating a nidus of providers in Bangladesh that will survive and grow on its own to perform surgeries for their patients, even after we depart. We look forward to continuing our missions in Bangladesh and other parts of the world in the future.

IOA 'Pledge to Give' Program

Indian Orthopedic Association (IOA) president, Dr. S. Rajasekaran, is requesting every IOA member to carry out at least one surgery free of charge before the end of 2012. The goal of the "Let's Pledge to Give" Program is 8,000 surgeries to those in need.

"By 'giving' in our place of profession, in our day to day work, in our field of expertise, to the people who need most, the contribution of IOA members will be extraordinary," said Dr. Rajasekaran. "This project will only occupy a few hours of our time but together we can touch the lives of 8,000 people..."

"The program has been a great success," says Dr. Sengupta, "and raised unprecedented enthusiasm amongst the ortho surgeons around the country."

IOA's Pledge to Give initiative is part of a broader observance highlighted with Indian Orthopaedic Day on August 4, 2012 to recognize achievements toward volunteer work.

For more information, visit:
http://www.ioaindia.org/pledge.php