

EDITOR'S PAGE

The Reality of China

Barely a day goes by when I don't read or hear about the incredible growth and development in China. The Chinese economy continues to rapidly expand, and we are frequently reminded of the monetary debt of the United States that is held by that country. Whether it is the economy, international diplomacy, or athletics, the impact of China in the world seems to be a constant consideration. I have just returned from attending the 24th Annual Great Wall meeting in Beijing. During the 4 days that I was in Beijing, the abstract notion of growth and development was brought into the clear focus of reality.

My first trip to China was in the mid-1980s, shortly after major interaction with the United States and the Western world had been re-established. Needless to say, at that time the country was largely undeveloped. Cars were few, bicycles filled the streets, housing had not been upgraded, and clothing was utilitarian. Western fashions were rarely, if ever, seen. Acupuncture and herbal medications were major factors in medicine. Although the potential for growth and prosperity was obvious, at that time, China clearly was not at the same level as the industrialized world.

I attended my first Great Wall meeting 6 years ago. Organized by Professor Dayi Hu, the scope, quality, and attendance of the meeting clearly reflected the enormous maturation of cardiology in China. Dr. Hu had the foresight to recognize the great benefit that a high-level scientific and educational convention could provide for his country. He progressively grew the meeting to include faculty from around the world who discussed leading-edge developments in cardiovascular medicine and surgery with thousands of Chinese physicians. As I traveled about the city, the meeting clearly reflected the general development of the country. Cars were more common, unfortunately resulting in traffic congestion, high-rise buildings were rising at a rapid pace, modern hotel chains had established a presence, and Western-type fashions were more frequently in evidence. Preparations were underway to host the Olympic Games. It was obvious that considerable growth and development was underway, and that the country was well into its "adolescence."

My experience in Beijing this year presented a different reality. The meeting again included every aspect of modern cardiovascular medicine and surgery. However, the level of the discussions and the sophistication of the question and answer sessions gave clear evidence of the advanced state of cardiology in China. With rare exception (transcatheter aortic valve replacement being perhaps the most obvious), the contemporary practice of cardiology in China reflected that of the developed world. In fact, given the nature of regionalization and the size of the population, patient volumes provided the opportunity for Chinese cardiologists and surgeons to make some groundbreaking observations and answer some pressing clinical questions.

I had the opportunity to visit Dr. Yu Jie Zhou and his colleagues at the Anzhen Hospital, at which he is Vice President. This massive modern general hospital of about 1,200 beds receives patients from throughout the region and has clinical volumes that stagger the imagination. I was told that 20,000 heart catheterizations and 10,000 percutaneous coronary interventions are performed at Anzhen every year. The interventional



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procedures are performed in 13 state-of-the-art catheterization laboratories by a well-trained staff of over 80 cardiologists and serviced by a 150-bed intensive care unit. Two interventional cases were underway simultaneously on the Saturday afternoon of my visit. The number of open heart surgeries is equally impressive, consisting of some 5,000 cases annually. Clearly, the case volumes at Anzhen alone rival the enrollment of many multicenter international trials. That this clinical material will be exploited for research purposes was evidenced by a biobank of more than 12 freezers (60 freezers in the whole hospital) and a staff of 20 individuals acquiring and entering information about phenotype and outcome into the appropriate database. Space was available to double this capacity. This clinical juggernaut was matched by a cardiovascular research center funded with \$20 million that contained the most modern equipment available for basic investigation, including sequencers. An animal facility (farm) has also been organized to study large animals. To call the clinical and research operations at Anzhen “impressive” would qualify as a gross understatement.

I am not sure how representative Anzhen Hospital is of all medical facilities in China; in fact, they said that their case volumes were one of the highest in the country. Nevertheless, it seemed obvious that there were a number of such facilities throughout the country. Dr. Zhou and his staff spoke matter-of-factly about their clinical experience, discussing cases and procedures on a level typical of what would be encountered in the United States. It was obvious that the state of clinical cardiology in China, at least in this setting, had now reached adulthood, and that China has the energy and determination to move into a leadership role in cardiovascular medicine internationally.

An interesting aspect of my experience in Beijing was the hunger of the junior faculty and cardiology fellows to obtain information about and be educated in the process of performing and publishing research. In fact, it was my role of editor that triggered the invitation to lecture about how to create high-quality manuscripts. These young cardiologists (a surprisingly large number of whom were female) were dedicated to devoting a large percentage of their effort and career to investigation. My impression was that this interest in research was a bit greater in China than what I have witnessed in the United States, perhaps because the opportunities for practice are not as great. This interest existed despite the fact that the clinical demands were overwhelming and that there was little or no opportunity for discretionary time to devote to research. Although these young cardiologists may be inexperienced in investigative methods and manuscript preparation, their drive,

enthusiasm, and quest for knowledge makes me confident that they will be a major force in the research enterprise in the near future.

The evolution in cardiology described above was mirrored by the developments of the city in general. Beijing was filled with new high-rise buildings, many of which were very architecturally unique and attractive. I had a hard time identifying areas of the city that had not been constructed in the last 20 years. The streets were filled with late-model automobiles similar to those that would be seen in the United States. Even traffic congestion was better than I had remembered, perhaps due to a policy of alternating the use of cars to certain days of the week. Clothes and accessories were similar to those that you might expect in any large American city, as were the cosmetics and hairstyles. Restaurants serving “modern Chinese cuisine” offered an ambiance that could have readily placed them in Manhattan. I could easily have been in Hong Kong, Singapore, or even San Francisco. The transition was nearly complete, the raw potential of China had essentially become a reality, at least in Beijing.

I am not sure exactly how one judges the societal and medical maturation of a country. However, one observation, or lack thereof, characterized the evolution for me. For the first time in several visits I no longer wondered at the enormous changes that were taking place. It was just taken for granted that the modern China was now a reality, and that the elevated standards in daily life and medicine were essentially to be taken for granted. Undoubtedly there are many regions of the country where development may lag behind Beijing's, and in the country's medical research enterprise is just getting into gear. And, of course, governmental and environmental issues exist that could not be evaluated by me in my short visit. So, perhaps the country would be best described as being in early adulthood. However, the enormous clinical volume handled very capably and the complementary research facilities to enable important data to be derived from that experience, such as at hospitals like Anzhen, exceeded that available in most institutions in North America, Europe, and the rest of Asia. The catching-up phase in China is largely complete, and one can easily get a glimpse into what the future will hold.

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