

The First Oration of the Nepal Orthopaedic Association Challenges of an Orthopaedic Surgeon in Nepal

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It is a singular honour to present this “Nepal Orthopaedic Association” oration. There is no greater honour than to be recognized by one’s colleagues and peers, and for this I will be ever grateful.

I have chosen as my topic “Challenges of an Orthopaedic Surgeon in Nepal”. I have little doubt that the challenges prevalent in the urban areas two / three decades back have not changed significantly in most of rural Nepal, as well as urban ones.

Nepal (as with most of the underdeveloped world) presented the Western trained orthopaedic surgeon of my times with three problems and three opportunities. The problems were unfamiliar diseases, suffering people and severe economic constraints. There opportunities were helping those in greatest need, self education and the chance to be a pioneer. This was very much the case with me when I started work in Nepal, and it continues to be so to a large extent even now.

While the majority of orthopaedic surgeons in the West, completing training at around the same time I did, pursued excellence – a better prosthesis/implants/arthroscope or new surgical skills in techniques – amid lavish displays in scientific exhibit halls, we in the so called third world lived and struggled in a literal orthopaedic desert. The situation was so pathetic in terms of institutional support and back up that it mattered little how skilled one was or how qualified. The means available to deliver treatment was severely limited. And my friends, this was not too far long back, just the seventies and early eighties!

In most regions of the world there is a huge deficit of orthopaedic surgeons and Nepal is no exception. Orthopaedic surgery, as we know it, was non existent till the time when Professor Jwala Raj Pandey began his orthopaedic career. Till then, orthopaedics was synonymous with fracture care, and the majority of patients received suboptimal care compared to the standard of the times.

A little deformity, loss of joint mobility or shortening were all considered natural consequences of the trauma event. Patient were reconciled to such fates and were grateful to resume some degree of functional activities. Infections were almost never diagnosed promptly and it was not unusual for patients to present with catastrophic sequel of open injuries which had either been untreated or inadequately treated. Thus it was that, when I first started work in Nepal, for many patients a bad open fracture meant a certain amputation. Polio was still very common and osteomyelitis was either fatal or a lifetime disease. Although considerable improvements have been evident in urban areas of Nepal since then, the bleak scenario continues to be prevalent in many rural settings.

The almost complete absence of organised institutional services was a rude shock to me on my return to Nepal in late 1977, on completion of my orthopaedic residency training in the USA. But it dawned upon me painfully that the challenges had to be met with determination; that it was up to us to be the local pioneers to begin setting standards of orthopaedic care for the specialty to develop. The key factor for me was to work at all costs, job or no job, salary or no salary. Thus it was that for a while I was orthopaedic surgeon at the Anandaban Leprosy Hospital. For those of you who have never visited this beautiful centre, your education is yet incomplete. For me, it was a lifetime opportunity to better understand and digest different concepts of reconstructive hand surgery and rehabilitation. I received in far greater measure from the patients I treated here than I was able to give. The experience at this unique centre has been of the greatest advantage to me throughout all these years The United Mission Hospital (Shanta Bhawan Hospital) was the centre where I came to terms with the orthopaedic desert scenario of Nepal. I had little imagined the extent of poverty prevalent in our country till then, because I had really not worked

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amongst Nepali patients before. So little money seemed available for health care that even the most public spirited doctor could not survive without outside support. And that seemed the way the United Mission Hospital was able to help the poor Nepali patients.

From a taken-for-granted scenario of New York City hospitals, I found myself suddenly having to be responsible from not only the orthopaedic surgeon's perspective but also that of the anesthetist, scrub nurse etc. An operative procedure became an immense responsibility, fraught with worries and innumerable hurdles. One needed to know what materials were required, what was already available and to supervise everyone and to participate in the delivery of anesthesia. My re-education of orthopaedic surgery began as relevant to where I was practicing. All gears were shifted into the lowest gear! There was nothing I could take for granted, and I was doing things for the first time in my life which I had imagined were relegated to orthopaedic history books only, as for example, making my own plaster rolls! And using "obsolete" implants such as the Smith Peterson nails for hip fracture fixation. One used what was available in the trunks of "donated" goods that good Samaritans visiting Nepal brought for us. Patients were not able to purchase anything and orthopaedic materials market was non-existent.

Third world orthopaedics is as much a speciality within orthopaedics as hand surgery is, the repertoire of diseases in unfamiliar; most patients are seen only when their disease has progressed to a late stage; and limited facilities require special skill to function. History is repetitive and it is worthwhile looking back into certain aspects of the worldwide challenges in orthopaedic surgery in the early part of the twentieth century, as many similar conditions were relevant to our situation in the 70s and early 80s.

The war experiences of the twentieth century have provided much needed boost to various aspects of orthopaedic trauma care worldwide, including improved pre-hospital care, rapid transport to a treatment facility and better treatment in the hospital. Many improved systems of trauma care that evolved with the war experience have found permanent places in the armamentarium of orthopaedic surgery. To name only a few, the Thomas Splint, improved prosthetics and the on-going prosthetic research implants and the external fixators used in trauma, are all direct offshoots of war challenges that have been boldly addressed and solutions made forthcoming. Challenges force innovations and new permanent

solutions emerge. Necessity is indeed the mother of invention! The huge lacunae in medical/surgical care in Nepal can be attributed to the isolated existence of Nepal which was severely underdeveloped. The limited nature of trauma early on was due largely to falls from heights and home accidents. Because of the absence of health care facilities, even potentially salvageable injuries succumbed. Thus, it was more common to encounter patients in Nepalese hospitals with isolated trauma, presenting days or even weeks after their injury. The treatment for many injuries was closed, and old age or associated medical disease would automatically relegate that patient a non-operative treatment plan. Because of the absence of intraoperative monitoring, surgery indeed carried risks. We often would see (a in the Early part of the twentieth century in major centres in the west) in the 70s and early 80s, patients with hip fractures lying in a "remote" corner of a ward going through one complication after another, mostly related to recumbency.

The greatest challenge in the late 70s and early 80s as I experienced, was to keep alive the skills that had been imparted by my training and not to sink into a cycle of frustration and depression due to the absence of opportunities to work and excel. It was partially possible to overcome this situation by offering my services to the Scheer Memorial Hospital in Banepa where, for over seven years, I volunteered a day of orthopaedic surgical work. The work was indeed challenging as it was often unfamiliar disease presenting late! The hospital was efficient, though sparsely equipped with only a limited armamentarium of supplies to get the work done. With the assistance of the surgeon there (Dr. Vigna), it was however possible to provide vital and basic services to many. It was also a time of great soul-searching, to realize that we were a backward economy and technological applications and advancements in orthopaedic surgical care were expansive and beyond the reach of most Nepalese! A balance of sorts had to be struck! Or was this going to be possible?

A patient would be admitted for surgery and it was a rude shock to find the patient "missing" from his bed the next day. Cause of death? Was any emergency care available? Due to complete absence of any monitoring and intensive care facilities, major fracture related complications were nearly always fatal, leaving one numbed and at a loss to make any rational explanation

to the family members. And again, one could plough through a difficult/long case only to have the patient develop acute renal shutdown postoperatively and die. One could only conjecture possible episode(s) of hypotension during the operative procedure which was undetected because of absent or inadequate intraoperative monitoring.

By the mid eighties things did start to change for the better in most institutions. More skilled hands became available to share in the delivery of services of governmental as well as non governmental centres. The importance of monitoring during surgery was recognized and equipment gradually became available for the same. In my own area, the pulse oxymeter became a reality in 1985 and it made surgery and postoperative care much safer. Complications started to plummet and more and more elderly and sick patients became candidates for safe interventions. The concurrent development and application of improved anesthesia, surgical nutrition along with intensive/critical care units helped to bring down mortality and reduce morbidity; where once we struggled in trauma care without X-rays, c-arm and postoperative intensive care.

The prevailing circumstances and challenges provided the opportunities to pioneer and develop institutions. The Hospital and Rehabilitation Centre for Disabled Children (HRDC) began as a small facility with a limited focus in 1985. It has gradually developed into a national level centre catering to the needs of crippled children nationwide. Setting up this centre and sustaining the services has been a great challenge from the medical as well as administrative point of view! The challenges faced by any private hospital (as there are many around today) are akin to what is being faced by us at the B & B Hospital. This represents for me the culmination of years of frustration not having access to the platform to deliver the most optimal and prompt care for your patient. Any surgeon's goal, this! Administering a hospital in the circumstances that need to exist here in Nepal, is not a bed of roses, and most of us would any day prefer others to run and develop institutions, and we continue to play the role of doctors alone! The challenges for us here in Nepal are such that, it may not be possible to shirk away from additional responsibilities that come hand in hand with the medical challenge we face. How is good care provided free or at minimal cost? Who subsidizes for free care? Is new technology always appropriate? It is certainly more expensive. I don't have the answers.

We have entered a new era of orthopaedic care and even though our services are not uniform, as a speciality we can be proud of the fact that very advanced and expert care is now readily available in many centres in different parts of the country. We have our own training programs in the country and many institutions are renewing efforts to update on expertise and equipment. The advancements in the basic sciences are already making their effects felt in the way we practice, as in the timing of primary interventions in the polytraumatized, or in the management of delayed or non unions and bone gaps.

A new and important emerging challenge that was virtually non existent in Nepal till very recently is litigation in medical/surgical practice. As a responsible care provider, it is our responsibility to maintain the standards of appropriate care. The problem arises with abnormal expectations of treatment, the fact that despite the most heroic efforts of treatment some patient's don't survive. Counselling, obtaining detailed consent for interventions, explaining risks entailed are of paramount importance. There is an increasing trend amongst some misguided, demanding populace that make medical work unpleasant. And there are instances of manhandling of doctors on duty as well. It is not only unfortunate, but a premonition of dark shadows in the health care arena of the future. As individuals in a specialist community, we must be cautious not to unwillingly collaborate with the overzealous, non suspecting populace with litigious motives.

There was a time when the orthopaedic power was primarily judged by the muscular build of a particular surgeon. Times have caught up with us too. With more and more procedures relegated to closed techniques or mini portal access, even the shy thin individual will be a regular feature in the orthopaedic family of the times to come!

I believe that a century of challenges have been very boldly addressed over the past three decades by our small group of orthopaedic surgeons. The future focus must be on maintaining uniformity in standards of care and training and keeping abreast of developments to manage age related disorders and to prevent trauma.

Thank you all once again for this honour.