LEGENDS IN UROLOGY

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When the invitation to write this article arrived, I stared at myself in the mirror and looked for the definition of "legend" in the dictionary --- one defined it as extremely famous or notorious person, especially in a particular field. My mother would have agreed with the notorious part.

I believe extraordinary events or opportunities came my way in life, and that a number of individuals opened doors necessary for me to succeed. There have also been many people behind the scenes who made me look good over the years. I have admitted previously in an editorial that there is a long list of failures in device trials and basic science, behind my success.

Values

For me the journey began in Bombay, India. My parents valued education above all else and fortunately despite India being a "poor" country, it provided me with higher education at a very low cost. My dad worked for Shell in India and we lived on the oil installations of this multinational company where English was the spoken language. We moved every few years to a different state, and I considered myself fortunate to learn English and six different Indian languages. I completed medical school through Bombay University. I had an early affinity for surgery. I was attracted to the field of urology during my internship, working with Dr. Shobha Lal and Dr. F. P Soonawala. A decade or so later it was surreal when I returned to India with Dr. Arthur Smith, in 1987 as a teacher, and saw many of my prior professors in the audience.

Equal to the education was the spiritual influence and the value of "serving" others in need. In fact the only question my father asked me when I left India for the USA, "what are you going to do for a country that has educated you?" It has remained with me throughout my life and paying it forward has brought me many dividends. The path to serve through my urological training came in 1992, after a chance meeting with "Sant Hirdaram" in a small village, Bairagarh in India. He became my spiritual guru, and his motto was: "caring for the poor, sick, young and old is your religion and prayer." He also told me to "live life like you are on a boat"—for the wake behind the boat disappears very shortly, leaving no trace of you being there. If I was forging ahead, I wanted to carry others with me.

I worked with many colleagues, including Dr. Sakti Das, Dr. Raju Thomas, Dr. Amar Singh, Dr. Jitendra Amlani, residents, and organizations. Together we made wonderful things happen around the world through volunteer work. I worked with Jeev Sewa Sansthan (JSS), an organization based in Bhopal that works to expand access to healthcare, and International Volunteers in Urology (IVUmed) here in the US. I am continuously inspired by the dedication of volunteers, especially Lachu Widhani, of JSS, and the many professionals who take time out of their lives to journey across the world to take part in volunteer medical work.

Later in life, as I took on leadership positions in various societies, I was able to raise the profile of volunteer organizations and help to recruit others to join me. I have been honored to receive recognition for my work, including the B.C. Roy medal by the President of India, but nothing can yet compare with seeing the grateful smile of the young women from my very first camp, after her fistula was repaired. I return year after year with other colleagues, fellows and trainees to seek this joy of healing. As the Secretary for the Urology Care Foundation (UCF) I continue to support the cause.

Education and Academic Pursuit

In April 1975, I was lucky to find an unmatched position in general surgery at Long Island Jewish hospital (LIJ) in NY. Starting in July, the reality of the pyramid system was evident in September—not all of us would complete the program. Although I was to go for my second year of surgery to St Agnes in Baltimore, I continued to work hard at LIJ in my 1st year. The Urology program must have noticed me enough to call me back to join LIJ after my year in Baltimore in 1977.

The training at LIJ in urology was very clinical and high volume, but lacked academic rigor. I applied for my fellowship at Baylor, but was waitlisted. My destiny changed when Dr. Arthur Smith joined LIJ as Chief of Urology in 1982. His wife, Dr. Kay Smith was an anesthesiologist and spotted my teaching enthusiasm at Nassau county hospital. She is principally responsible for convincing Arthur Smith to hire me. Dr. Smith asked his friend from South Africa, J. Keith Light to take me on as a fellow at Baylor, earlier than scheduled. I returned to LIJ in 1983 after completing my fellowship in Neuro Urology and Prosthetic implantation. Appointed as the chief at the Queens General city hospital and the only other full time adult urologist at LIJ with Dr. Smith, I was younger than both Chief residents were! I spent 22 years at LIJ and developed a clinical reputation in the field. Rose Ravalli RN was my right hand and Tanya Smith my urodynamic tech were outstanding individuals with whom I enjoyed working greatly.

My academic rise was initiated and supported by Dr. Smith, and in return, despite my fellowship and interest in Neuro Urology, I devoted my early years to Endourology, learning new skills, managing the society and journal, and making friends around the world. A founding member of the Endourological Society, I served as treasurer and executive board member for more than 25 years and worked with Michele Paoli, the heart and soul of the society and a friend forever. Visionaries Arthur Smith, Ralph Clayman and Joe Segura expanded the horizon of this minimally invasive culture throughout the world. I was managing editor for the Endourology journal and almost living two lives, one in the Endo World and the other in Society of Female Urology and Urodynamic (SUFU). My research and clinical trials found place in the incontinence world. The collagen injection trial with Dr. Ed McGuire and Dr. Rodney Appell brought me in the main stream. Many years later both Endourology Society and the SUFU honored me with a lifetime achievement award.

Research and Publications

Training in India and a clinical residency did not prepare me for research. My fellowship at Baylor gave me my start in clinical and outcomes research. Clinical trials with devices and outcomes became a significant part of my life as the publications on these topics grew. Industry grants were the initiation of multi-center trials. I became a PI for many studies. At Wake Forest, I achieved a long-held goal by forming the Female Pelvic Medicine & Reconstructive Surgery (FPMRS) unit and ACGME fellowship with Dr. Catherine Matthews. She has been a true partner and established our clinical trials team and supported the translational research.

My interest in answering clinical questions in the lab came later, associating with PhD scientists in NY but much more so at Wake Forest. In fact, a principal reason for my move from NY to Wake Forest in 2007 was an opportunity to work with Dr. Karl-Erik Anderson and Dr. Atala's lab in Wake Forest Institute of Regenerative Medicine (WFIRM). Dr. Atala's support has been unwavering throughout my time at Wake Forest. The extramural funding from NIH for team science, initiated with a primate study, supported many projects on tissue engineering and regenerative pharmacology. After the initial years, Dr. Anderson returned to Europe, but he and Dr. Koudy Williams have remained active partners in my research career. We have clearly established the regenerative pathway using the molecule CxCl12 and host derived repair in female urethra, ischemic kidney injury and male sphincter incontinence.

A new clinical partner Dr. Robert Evans, renowned for clinical expertise in interstitial cystitis, joined us at Wake Forest. A chance meeting with a molecular scientist Dr. Steve Walker initiated a team, which has been by far the most productive in receiving grants and publications in the last decade. Together we have defined the phenotyping and molecular characterization of the bladder centric vs. non-bladder centric forms of IC.

My service on the NIH/NIDDK council and as a grant reviewer has helped me greatly in my scientific pursuit. I am grateful to the AUA for recognizing my work with a Victor Politano award. My initial work was on Neuro Urology with special emphasis on cerebrovascular accidents, later basic science focus on the collagen and elastin breakdown in women with SUI and prolapse. The use of mesh and its controversy was my next phase, with work in the lab on

biomaterials. At the WFIRM role of tissue engineering and regenerative pharmacology in animal models was the focus on one side and the pursuit of characterizing IC on the other hand. Grants from NIH and a merit grant from the VA helped a great deal.

The residents, fellows, post doc students have all contributed to almost all my more than 500 publications, videos, teaching courses etc.

Leadership Experience

As a child, I recall being on stage presenting in my second grade. I have enjoyed presentations to all different audiences. Humor is a very big part of my life and of late poetry in Hindi language has become my passion. During the third year of my medical school, I was fortunate to be a part of a team to organize the annual conference of the Indian Medical Association. More than 11,000 participants came for this meeting. In the six months prior to the meeting, I worked day and night with three other students on this event as the key team. They have remained lifelong friends who continue to give me true opinions and feedback. In hindsight, this prepared me for a future role as meeting planner for every organization that I worked with and led as President or Secretary. It started with Brooklyn Queens Urological Society, to Urology Section of the NY Academy, NY section of AUA, Indian American Association of Urology, Endourology Society, Society of Female Urology, American Urological Association, Society International Urology, American Association of Genito-Urinary Surgeons, and the Urology Care Foundation. The leadership position has allowed me to serve the cause of Urology, education and allowed me to befriend urologists from around the world. I am blessed with all multinational organizations, AUA, EAU, UAA and CAU making me an honorary member thus I can say I am a global urologist. In addition, Urological Society of India and 17 other countries made me an honorary member. Expanding the global reach of the AUA education, as the Secretary was a personal mission rewarded by so many new members from around the world.

Among all the organizations I worked with, two defined me the most. I believe it is the individuals in these organizations that made it special. First is the Endourology Society, Michele Paoli and Deb Caridi are stars who made things happen. The Secretary position at the AUA was the most enjoyable part of my career as one is in a position to give and I expected nothing in return. The team at AUA, notably Mike Sheppard, Janet Skorepa, Drew Shifflet, Kevin Wohlfert, Lori Agbonkhese, Liz Selover and Ellen Molino were outstanding in their role. I respect the work Deb Polly did to improve my skills as an editor and reviewer. The changes at AUA during my tenure, such as separating the health policy and Science in two parts allowed the Data initiative. The AQUA registry is a legacy I am proud of. Defining and expanding the International aspect of AUA through an additional secretary is another example. Funding the research fellowships with the 5:1 AUA match was especially gratifying.

I think leadership in various societies is how individuals recognize me, and are sometimes surprised to look at my research output.

In this new phase of life, I am trying "Letting go", a lesson I learned from Sant Hirdaram to whom I owe so much. As I step away from all my titles and positions to enjoy the patient care, teaching and research, I look back at the lasting friendships I developed in the world of Urology. Gratitude is the key word that comes to mind as I conclude. Starting with my parents, my siblings, my friends and colleagues that I did not name.

Charu, my life partner since med school, has kept me grounded, and my children, Pooja and Chirag, along with Tom and Mike their respective partners, have made me a proud dad. My grandchildren Alina, Ronen, Mirai and Naila are my most precious trophies and looking at them smile I feel fulfilled and as I look back.

"I wouldn't change anything. I've made mistakes, but thanks to those mistakes, I've learned". *Enrique Iglesias*

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