



THE LEARNING CURVE

A NEUROSURGEON'S MEMOIR



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योगस्थः कुरु कर्माणि संगम त्यक्त्वा धनंजय।
सिद्धि असिद्धयोः समो भूत्वा समत्वं योग उच्यते ॥48॥

*Yoga-sthah kuru karmani sangam tyaktva dhanañjaya
Siddhy-assidddyoh samo bhutva samatvam yoga ucyate ॥48॥
Adhyay 2*

*Perform your duty equipoised, O Arjuna abandoning all attachment
to success or failure. Such equanimity is called Yoga ॥48॥
Chapter 2*

Srimadbhagwadgita

The Learning Curve

A Neurosurgeon's Memoir

I'm not great at talking about myself and was not sure how to tell my own story. A story that could just be as ordinary as the person about whom it's told. As the hours, days and years give cumulative wealth called life, it may still appear just ordinary, yet can be exciting. A few moments drop out of the time and engulf happenings of those moments and may lie dormant for eons, till they come alive like pearls from a shell with all their sheen and shine. We tend to cull the events or phases that may be the show-stopping tale during one's life, capturing the magic of our being, and wonder whether telling it would make a difference to others like us. These are the moments that add up to define you and your course in life. I believe there is an aspect of life tale, that can be inspirational, something we would like to claim publicly. At some point in life one realizes that now there are more yesterdays than tomorrows, more time to look back than to look forward. Over the last two years, I felt that giving expression to my story would give life to these untold moments. When I share my story, somewhere someone at some point of time may find a common thread, something relatable and identify with the narrative that is weighed with emotion. A memoir lets you to relive the cherished moments as well as moments when you wanted someone to pick you up. Time as it steals the moments, it pays back in the form of memories of those moments. And time tends to blur or take away those memories too. We may visit our memories that we remember or have them triggered by some event or object. We may remember them vividly, yet there may be clouding, producing blank spaces of those moments, which may get filled by confabulations in pathologic states. Framing the fleeting moments and giving them a physical form of written word gives them immortality.

Born in the fifties, I grew up in the neo-liberal environment of free ideas of post-colonial Nehruvian India, where parents were sending their children to schools that offered liberal and broad-based learning with great emphasis on science and math. My parents from the pre-independence generation, bestowed on me and my siblings a vision of the future, a future for ourselves, and our role in a liberal society, blurring the societal differences and burying the dogmas that came with them. Sometime in 1968, while in my seventh grade, I saw a two-paragraph article on Armed Forces Medical College, Poona, which immediately caught my attention, and became a part of my thought process permanently. As my curiosity grew, my focus on being a doctor donning the uniform became more and more sharp. I often recall my days in higher secondary school (Kendriya Vidyalaya Jullundur, Punjab) in seventies, when in the class of '73, a band of seven boys emerged, six of whom being focused on landing entry into National Defence Academy for training as military cadet, and I set my sights on AFMC entry. The learning curve made its first appearance, uphill all the way.

When looking for solution to a relatively simple issue or problem, how often have we heard of the refrain, 'Man, that's not brain surgery (or, rocket science for that matter)', implying that it's a problem that can be fixed with simple thinking or little effort. Leaving the rocket science hereon, let me talk about brain surgery. Even among the medical fraternity, neurosurgery remains something of an enigma, and correlation of neurological history and clinical signs to the pathology becomes something of a revelation. Safety margin for neurosurgical procedures is narrow, and at times non-existent because brain tissue cannot

repair itself by producing more brain cells of the same type. A liver can regenerate, gut mucosa can repair but brain or spinal cord once damaged, remains damaged. One can only have faith in the plasticity of neural tissue and brain.

There are times when I have been asked that why did I choose neurosurgery as my field of specialization? The answer is never straightforward. The selection is weighed down by several factors, the principal of these being the personality of your mentor combined with an element of fanatical commitment if you want to be in neurosurgery. Neurosurgery is a calling, and not a conventional specialty to enter. If you just want to put your toes in water, then it's not for you. There is an aura of exclusivity that places the profession on a pedestal. Every aspect of neurosurgery is a challenge, beginning diagnosis, clinical evaluation which is the final tipping point for decision making or neuroimaging studies that are giving new insights into the functional aspects, enabling the patient and the neurosurgeon to make an informed choice and final decision. Nevertheless, the safety margin remains restricted, making the neurosurgeon adopt a sober attitude combined with confidence to tackle the problem. Pathophysiological events like vasospasm will be challenging for the patient's family to come to terms with, as would a foot drop occurring after a seemingly uneventful spinal surgery. Rewards too are aplenty, that at times are nothing short of a miracle, like an airline pilot walking into my office saying that he was operated by me for meningocele, when he was a newborn or a girl with tuberculous paraplegia after complete recovery sending me her marriage invitation card. A starry eyed undergraduate will reverentially look at a neurosurgeon with awe who can do the unbelievable, that is operate on the brain and the patient walks out. Neurosurgery is spirituality in action, when it aims to give back the patient his/her original self. Just like a temple, church or a mosque gives physicality to expression of religious faith, brain is the physical manifestation and anatomical site of mind, spirituality, persona and the soul. A neurosurgeon operating on the brain touches these abstracts, aptly described as virtual reality in today's context, always aiming to do no harm (*primum non nocere*) to the body, thought or the soul of the patient. It is indeed a lifetime spent in self education, or self-realization.

The memory circuits get vivid when I remember how spending few extra minutes with the patients or with the family gives a perspective that comforts them at the time when any positive sentiment is welcome and makes the treatment and surgery gratifying for me. Holding an old granny's hand during rounds can work wonders in her recovery and motivating her to walk after spine surgery. Most of my patients were from the uniformed services, and I owe a debt of gratitude to each of them that I was able to partner them during their fight with neurosurgical problems, principally neurotrauma, tumors, aneurysmal hemorrhage and spinal disorders.

This book deals with my own scaling the learning curve, more by way of failures and with interspersed triumphs, and recognizing the human aspect of each of the patients and their loved ones. Failures, rejections, disappointments are like oak barrels in which the life-giving fluid matures. I have kept away from flat linear prose narration, and tried to infuse life and living emotions of daily events as they happened and the role each one of them played in making me more matured. I wanted the narrative to be evocative and inspiring that may make a difference to someone. I also wanted to bring out the funny aspects especially in the descriptions of some of the situations I may have found myself in. The events or moments may appear clearer on revisiting, or they may get clouded by natural airbrushing of memory. A tapestry of patient-related events that happened and left an indelible impression on my memory network may not have a journalistic accuracy, but the events and people were real, rooted in fact. It may not be a blockbuster, but it's mine.

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