

The Great Neurosurgeon and Spinal Surgery

Professor Bhabani Shankar Das: A Master Surgeon and a Great Teacher

INTRODUCTION

An anonymous green lawn under my knees, in one of those conference parties the name I am not able to recall now, just as I squeezed the shutter button, I felt a pat on my shoulder “So, you are interested in photography?” I looked up to find the friendly inquiring face of one of the pioneering leaders of neurosurgery in India towering over me. I stood up to wish him and we greeted each other as enthusiastic photographers, not as the ex-head of the department of neurosurgery at National Institute of Mental Health and Neurosciences (NIMHANS) and as a first-year resident. That was 14 years back. Today, his student, B Indira Devi and I, her student, have the privilege of writing about the man, his mission and the way it unfolded over the last half-century.



Professor Bhabani Shankar Das

EARLY LIFE AND EDUCATION

Professor Bhabani Shankar Das was born at Jajpur in Cuttack district of Odisha on 28th October 1936 to Anadinath Das and Chitrakala Debi. His father was a police officer. His two elder sisters nurtured his schooling while he pursued his desire to become either a doctor or a veterinarian. In 1960, he graduated in medicine from Sriram Chandra Bhanja (SCB) Medical College, Cuttack. During housemanship, he made-up his mind to become a surgeon. It was during the same period that he grew close to his MBBS classmate, Dr Sarala Das and married her in 1961. As a newly married couple, working as interns in the same wards, they learned to respect each other's professional opinions and expectations which laid the foundation for an enduring association.

POSTGRADUATE AND SURGICAL TRAINING

After leaving college, since he did not like a government job, he joined the Red Cross Institute of Pediatrics as an assistant surgeon in the department of surgery. Afterward, he enrolled as a postgraduate student in surgery at the King George Medical College, Lucknow. He was trained under Professor SC Mishra. Though Lucknow Medical College was not a very safe place to obtain an MS degree, he could continue there with determination. Later, Sarala Das too joined the place to pursue her postgraduation in Pathology. BS Das completed master of general surgery in 1965 and rejoined the Red Cross Institute of Pediatrics in Cuttack. At that time, he wished to specialize in the upcoming specialty of pediatric surgery. He could not do that because the hospital was taken over by the state government and he was transferred to Shrirama Chandra Bhanj (SCB) Medical College, the very next-year. He was posted there as a clinical tutor in surgery with a reduced salary.

THE JOURNEY TOWARD NEUROSURGICAL SPECIALIZATION

Dr Sanathan Rath, who had just returned from Christian Medical College (CMC), Vellore, was in the process of establishing the division of neurosurgery in SCB Medical College. Dr Sanatan Rath suggested that he take-up the post of registrar of neurosurgery. Though BS Das accepted that offer, he was not sure that he had made the right decision since his primary interest at that time was pediatric surgery. Two individuals who helped shift his allegiance to neurosurgery were Professor Earl Walker and Professor Nathan Rifkinson. Earl Walker (1907–1995), the renowned epileptologist and successor of Walter E Dandy was Professor and head of the division of neurosurgery at the Johns Hopkins Medical School and Hospital in Baltimore. He visited the SCB Medical College and delivered lucid lectures on one of his interests – the history of neurosurgery. Professor Nathan Rifkinson, the impressive Puerto Rican neurosurgeon stayed in Cuttack for a week and nudged him to take-up neurosurgery as a career.

BS Das then reached out to his former teacher at Lucknow Medical College, Professor PN Tandon at All India Institute of Medical Sciences (AIIMS), New Delhi and awaited his turn to be taken-up for the MCh neurosurgery course. Fortuitously, Sarala Das had already started working in Delhi at the Indian Registry of Pathology, ICMR, New Delhi as a postdoctoral fellow since July 1967. BS Das began working as a registrar neurosurgery at AIIMS, Delhi in March 1968. The experience, he had gained in neurosurgery at Cuttack, helped him get going. Dr AK Banerji was the only other faculty member in the department of neurosurgery in AIIMS at that time. Dr Banerji was friendly, often philosophical in approach and he consistently guided Dr BS Das. Dr Brahm Prakash, who was his immediate senior in the residency program believed in hard work, and yet he was very kind to BS Das. Ravi Bhatia, Jawahar Dar, and HN Agarwal joined as residents subsequently, and they worked well as a team. While work was heavy, the residents' families remained tightly knit and still cherished fond memories. When he completed neurosurgical course in May 1970, Professor Tandon ordered him not to come for work and take a holiday for 10 days. That was a welcome break when he could take his wife to an outing in Nainital – the first time he could relax like that after joining a grueling residency.

He returned to join Professor Sanatan Rath at SCB Medical College, Cuttack in early October 1970. They teamed-up with GB Mohanty, Professor of Radiology, to establish a documentation system for neuroradiological images, clinical summaries, and follow-up notes. The system ensured that records could be retrieved with ease for over a decade. training abroad.

In 1974, BS Das visited the United Kingdom (UK) to work at the Western General Hospital, Edinburgh and Institute of Neurology, Newcastle upon Tyne, thanks to the Commonwealth fellowship scheme. There, he got to work with legendary personalities like Professor John Gillingham, Professor Hankinson, and Professor Lassman. At Queen Square, London, he was associated with Professor Valentine Logue for a short period. Apart from learning operation skills, Dr Das learnt humble and human approach to the patients.

ESTABLISHING A NEW DEPARTMENT AT BURLA

In early 1980, Dr BS Das shifted to Veer Surendra Sai (VSS) Medical College, Burla to create the department of neurosurgery. He succeeded procuring neurosurgical instruments quickly, a new Indian-make operating microscope, and managed to get a dedicated operation theater (OT) for his new department. Within the first-year itself, he could perform all kinds of general neurosurgical operations like anterior discectomies, excision of acoustic schwannomas, and meningiomas.

A SELF-TAUGHT SPINAL SURGEON

Even though Dr BS Das had not observed a wide variety of spinal surgeries other than laminectomies for cervical spondylotic myelopathy (CSM) while he was in the UK, he was unaware of the serious complications associated with these procedures. He also realized that atlantoaxial dislocation was a crippling disorder affecting the young in India for which, at that time, there were few answers. He started spending significant amount of time in anatomy dissection halls and autopsy rooms to perfect his skills at the anterior cervical approach to the cervical spine and conceptualized the surgery of transoral odontoidectomy. Finally, in 1977, he successfully performed an odontoid excision on a 13-year-old child – A remarkable personal milestone in his surgical career. He used an improvised head light, nonspecialized instruments, and a dental drill to perform this. The patient improved much to his relief and satisfaction. Later, he did posterior stabilization and fusion by occipito-C2 wiring with bone grafts. He presented his results at the Neurological Society of India (NSI), annual meeting at Kolkata in December 1980. At that conference, he met Professor RM Verma and Professor Narayan Reddy of National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru. Professor HW Pia, Professor Sunil Pandya, and Professor AK Banerji advised him to apply for a job in NIMHANS. Dr Das respected their counsel and decided to apply for the post at NIMHANS, considering the wider scope of activities it could provide.

NATIONAL INSTITUTE OF MENTAL HEALTH AND NEUROSCIENCES

BS Das joined NIMHANS, Bengaluru as Professor and Head of the department on 15th October 1981. NIMHANS was already a full-fledged neurosciences institute and was famous for Professor RM Verma's work on ablation of subthalamic nucleus using Verma's frame for Parkinsonism. Dr Narayan Reddy was known for his work on radiofrequency ablation for trigeminal neuralgia. The initial apprehension on how he would be accepted at NIMHANS

was quickly replaced by the warmth of the welcoming spirit that faculty at NIMHANS offered him. The fact that he was already acquainted with Professor M Gouri Devi in the department of neurology and Dr AK Reddy in the department of neurosurgery lent him further support. Once Dr Sarala Das too joined the Institute as Professor of neuropathology, he felt truly at home.

COFFEE TIME AND CAMPUS LIFE AT NIMHANS

He quickly got to know his residents and colleagues in other departments at the new place. The coffee sessions on Saturdays at the Narayan Rao canteen after the morning's academic meetings were opportunities to learn the minds of colleagues and residents. These were moments to offer guidance too. That traditional march to canteen continues to this day many years since BS Das retired.

Dr Narayan Reddy pioneered anterior cervical discectomy and fusion using the Cloward's technique in NIMHANS. BS Das noticed that the Cloward's instruments were unwieldy and massive. The drilling of the vertebral bodies had to be done standing on a foot-step. He recalls that as a frightening procedure with much complications. BS Das introduced Smith-Peterson method of anterior cervical discectomy and fusion and found that the results were superior in his hands.

CRANIOVERTEBRAL SURGERY

With superior microscopes and high-speed Stryker drills, he could perform peroral odontoidectomy more efficiently and safely. Even senior neurosurgeons observed and learned this technically complicated surgery and some of them could replicate it. A Steinmann pin was contoured according to the curvature of the posterior occipitocervical junction to achieve posterior fixation by wiring it in place under the laminae along with chips of autologous bone grafts. Total care of the bony anomalies of the craniovertebral junction was now possible. The results were so encouraging that it became standard practice at that time. Dr AS Hegde and later, Dr BA Chandramouli helped BS Das in perfecting this technique. He trained Dr Indira Devi in the nuances of the art and she went on to train many more surgeons.

Today, BS Das believes that the ideal surgery for Atlanto Axial Dislocation is yet to evolve. He feels that the new concept of distraction-reduction of the atlantoaxial joints which emerged owing to the pioneering work of Professor Atul Goel, holds great promise.

ANEURYSM SURGERY

The very next day after he joined the department, he faced a challenge when the resident preparing the operation list for the next day asked him whether he would operate a patient with an aneurysm of the anterior communicating artery. Though he had assisted Professor Valentine Logue, Mr Edward Hitchcock and Mr RP Sengupta in the surgery of intracranial aneurysms, he had never clipped one all alone. With much trepidation, he decided to perform the surgery. He could clip the aneurysm, and the patient did not sustain any new deficit and did well. Spurred by that exhilarating moment of success, he pursued aneurysm surgery with much sincerity and enthusiasm.

BHABANI SHANKAR DAS VS OTHER STRONGER PERSONALITIES!

Dr KVR Sastry joined NIMHANS in 1986. Dr Sastry proved to be a very dependable colleague. His nature to strongly argue on any matter and his ability to agree to reason, the very next moment, was much appreciated. Dr Sastry was a friend and colleague who stood by his side at times of need. Dr BA Chandramouli, his student, and later a colleague, was much valued for his judgment and reliability. A man of little words, Dr BA Chandramouli was called the "wise man of neurosurgery"! Indeed, NIMHANS provided BS Das many opportunities to learn from colleagues and students.

The gang at NIMHANS needed little reason to organize a family dinner, or a party either at BS Das's place, Sastry's house, the rooftop of residents' hostel or a nearby hotel. The best of such parties which Dr BS Das can remember was the family outing at Nandi Hills. In fact, he recalls that there has not been an occasion to excel the Nandi Hill experience. It was such a lively, understanding and accommodating crowd at NIMHANS.

BS Das also fondly remembers the constant source of encouragement that Dr RN Verma, Dr Narayan Reddy, Dr Mandana, Dr HV Srinivas, Dr KVR Sastry and Professor Gouri Devi provided. A steady flow of students percolated to NIMHANS from leading teaching centers all over India for short-term training programs. It was an opportunity

to associate with a broad range of neuroscience students. Professor BS Das says he meets a former student wherever he goes. "What else can be a greater reward for a teacher?" he exclaims.

THE STORY BEHIND THE BEAUTIFUL OPERATION THEATER COMPLEX IN NIMHANS

The spacious, and beautiful operation theaters in NIMHANS are pretty impressive even now. Toward the end of his tenure at the Institute, the construction of the second-floor of the neurocenter was sanctioned through the kind efforts of the director NIMHANS, Professor SM Channabasavanna. That was a project that garnered constant supervision. There were four operating rooms, adequate ancillary space, two dedicated Intensive Care Units (ICUs), one for neurosurgery and the other for neurology. Dr Sastry and Dr Chandramouli applied their minds in building this place. The engineers in charge of construction used to address him as "Engineer Das" perhaps because for his fixation on micromanaging the execution of the project to everyone's satisfaction. Unlike the claustrophobic, modular operation theaters that one often sees in many centers, each operation room was vast and had huge glass windows to the greenery outside.

Professor BS Das retired in October 1996. He shifted back to his hometown in Cuttack. Dr Sarala Das joined him one and a half years later. Both joined at the Kalinga hospital at Bhubaneswar. Dr Das still enjoys his work at the state of the art neurosurgical facilities at the hospital. Though had no experience in working at a corporate hospital with rigid financial requirements, he derives small pleasures by foregoing whole or part of his professional fees in suitable situations. He learned this joy of giving very early in his life. He keeps alive keen interest in photography.

HIS PERSPECTIVE ON PROVIDENCE AND COINCIDENCE

Dr BS Das considers his voyage with his wife lucky in many ways. The journey that he and his wife took as MBBS classmates, the scholarships that both of them received together (during postgraduation in KGMC, Lucknow, and Commonwealth fellowships in the UK) and the fact that they chose allied subjects of neurosurgery and neuropathology seems providential. "Yet," in his words, "to qualify for God's grace, one has to put in hard labor."

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