

Prof. Shyamal Sen.

MD, FRCB FICB FIAN

President, Neurological Society of India 1988.

You can imagine the Social and Medical milieu in the years of the Second World War, as I was admitted to the Medical College, Bengal exactly in 1939 and passed out in 1945: those were times when one had to spend full six years for qualifying as a Medical Graduate - Bachelor of Medicine just M. B. The teachers were still Britishers in majority.

The Medical College, Bengal had a great tradition of being the first ever medical college in India and overseas professors and clinicians fondly used to refer to this college as the Premier Institution of the East, founded in 1835. People from all over the state of undivided Bengal and the Eastern states like Nepal, Bhutan, Sikkim, Burma (Myanmar), in addition to people from all other states would come to Calcutta and flock in the Medical College, Bengal, either for studies or for treatment.

During the war years, there was deterioration of services in all fields of human activity and sense of value and creeping competition - an usual fall out of World War situation.

The hospital was neat and clean, still disciplined during the foreign rule :Majority of teachers and clinicians were still from overseas. We had the fortune of just having an Indian principal of the College and Superintendent of the Medical College Hospitals. Lt. Col. J. C. De was a superb gentleman, a soft spoken but firm administrator and a strict disciplinarian, supervising efficiently, in both hospital work and teaching set up in the College. He would quietly step in one of the back benches of a general class, watch with interest the shuffling steps of the unaware late coming students and the punctuality of the teachers' entry in the class. He would carefully listen to the stereotyped lecture of a rather poor grade teacher, make notes of his deficiencies would call him in his office and discuss improvement in teaching methods. He would sometimes shoot out a technical question during the class and supervised teacher would fumble to answer his sharp penetrating question. He would be seen queuing up in the outpatient's line for a bottle of medicine (of course free of cost), to assess the amount of delay in registering the name of patient and his disposal after getting his "bottle". There was crowding in OPDs but a disciplined approach to attention and care of the patient clinical wards were so neat and clean that one could not afford to be untidy. The visiting physician would come and start teaching clinics exactly at 8.30 A.M. The students must come about half an hour early and get ready for the cases to be discussed, the presenter of the case must have case notes spick and span. In the evening students were taken by a Registrar and it was here that one got the feel of 'hand-on-patients'.

Neurology cases for a student was a nightmare for presentation, both for case taking as well as in examination. Higher function and speech were so problematic and then came 12 pairs of cranial nerves,-it was a job to remember them, to test for their integrity, and then the rest of it - we had no neurology teacher and in retrospect I realise not all of them liked to teach neurology.

We had a very able teacher in the person of Prof. M. N. De the first Indian Professor, as Head of the Department of Medicine, who spent some time at the Queen Square. He was Prof. and Head, Dept. of Pathology, at the Medical College after his Membership of Royal College of Physicians, London and a great teacher in pathology for that, a pathologist of supreme esteem leaving behind him a pathology Museum, which was a pride in the country. Soon he got an opening as professor of Medicine, when the last English Professor of Medicine Lt Col. Kelly retired in 1938.

Professor De was a superb teacher whose clinical teaching as well as didactic lecture was unique and legendary, a class in which I had never the privilege of calling roles before the class started, which was my duty as the class Assistant to Prof. De. In the British system in those years (1939-1945), the first boy in a competitive test in Medicine (theory, clinical, practical and oral) was designated as class Assistant. who was also awarded a Medallion, a seat on the dias and the overall monitoring of classes held in Medicine. Prof. De forbade me to call roll of students who never failed to attend Dr. Moni De's Class. The lecture hall was packed to its capacity, students from all clinical classes and a large number from the other non Govt. Medical College thronged the class room. Nobody ever thought of missing the class, so no roll call was necessary.

He excelled in teaching neurology, having a glimpse of Queen Square tradition in early 30s. He gave demonstration in clinical neurology and taught the patho-physiological as well as anatomical basis of clinical neurology. I had to copy his extensive notes on Motor Neuron Disease, Parkinson's Disease, Peripheral Neuropathies and Multiple Sclerosis on the black board before and after the lecture, for the benefit of rest of the class. My foundation in Neurology "had a philip start". I learnt the basis of upper Jackson's concept of epilepsy as a sudden excessive, transient electrical discharge in the brain as its basis. Prof. De's exposition of Parkinson's Disease was so dramatic and expressive that one remembers his demonstration of stance and gait to-day which left a permanent impression of an advanced subject with Parkinson's Disease. Sciatica was known but cervical spondylosis was not. Use of ophthalmoscope was not in vogue to clinicians, it was relegated to an ophthalmological consult- Hypertensive and diabetic retinopathy was more discussed than papilloedema. I remember the clinical features of spastic paralpegia was more discussed but myelography was done seldom as contrast media (thorotrast) was fairly toxic - spinal cord compression was rarely addressed and majority of cases were designated as of syphilitic origin. Tabes dorsalis was however a pet case for demonstration encountered both in ward clinic as well as an examination case.

During early clinical training in Neurology there was no accredited neurologist available. The visiting psychiatrist who happened to have an MRCP was designated neuro-psychiatrist and sometimes acted as neurological consultant. The general medical specialists or internists took the major part of training of neurology to undergraduates and to certain extent to post-graduates viz. the postgraduate students in general medicine. preparing for their MD in General Medicine. There was no specialization course or degree of the University for the would be neurologists.

During the years in early fifties which I spent in the Dept. of Pathology as a junior teacher, I was assigned the teaching of special pathology of brain and the spinal cord. I got interested in neurosciences at its grass-root level. We had a beautiful pathological museum and indeed there was a fine collection of specimens in it. As I was preparing for my MD (General Medicine) I started studying the specimens and was impressed with the clinico-pathological correlation of the neuro-specimens - the strokes, brain abscesses, brain tumour, spinal cord tumour, specimen of tabes dorsalis, syringomyelia. various congenital abnormalities etc. I continued my interest in Neurosciences when I was Resident Physician and an epidemic of encephalitis broke out (JBE) in some of the districts of Bengal, viz. Burdwan, Bankura and purulia. I collected about 500 cases and wrote a paper, showing my interest in neurosciences. It was in 1959 that Government of west Bengal thought of sending somebody for formal training in Neurology and picked me up for the same. I was sent on a study leave in UK and the National hospital for Neurology and Neurosurgery at queen Square, London was selected for training in Neurology for 3 months.

Training at Queen square - an Institution par excellence with tradition and heritage of British Neurology:

On January 04, 1916, I entered the main gate of the Hospital and one Mr. Campbell the doorman, short but knowledgeable man immediately escorted me to the Dean's office. There I met Miss Payne, the Dean's secretary and the Dean, Dr. Michael Kremmer. The first clinical session was with Dr. John Marshall, the then reader in Neurology,

university of London. It was a treat!. First the letter from the GP was read out; a short discussion in the way of question and answer from the gathered students was conducted. Right from the age and gender of the Patient the presenting symptoms and a few questions to the patient, a provisional diagnosis was reached in about 5 minutes time; this was which Dr. Marshall told us a historical diagnosis; a brief clinical examination was conducted to confirm the impression derived from the historical background and the diagnosis was confirmed; rather the investigation done was revealed which finally confirmed the diagnosis arrived at a historical level-usually 4 cases were taken for 2 hours outpatients clinic and one long case for indoor clinic. I used to take notes profusely; I collected 279 cases in this way in 3 months time. (I still have the notebook and have preserved it as a treasure). Later while I was attached to Dr. Denis Williams, a visiting consultant from St. George's Medical school told me- "Sen, when I have put my pen down I have made up my mind; if I haven't, I'll never make it". So tremendous was his self confidence in history taking - I thought it was an over-statement but at this mature age, I thought how much right he was ! I must admit passing through Queen Square gate one imbibes tremendous confidence in clinical diagnostic acumen in neurology. I met giants in contemporary Neurology in London, Sir Francis Walshe, Dr. Carmichael, Dr. McDonald Critchley with his flourish, the soft spoken Dr. Nevin and Dr. Ms. Dimsdale, Dr. William Goody, the Neuro-philosopher, Dr. Russel Brain (then Sir and latterly Lord), Dr. Purdon-Martin, Dr. Roger Gilliat, always busy with his EMG machine and eager to demonstrate the dive-bomber effect of EMG from muscles of patients with myotonic dystrophy. I met William McKissock who demonstrated, to me his "magic" with stereotaxic brain surgery of Parkinson's disease, stopping the tremor instantaneously with his lesion while I held the trembling hand of the unanesthetised patient coming to rest.

I met also the next generation, Dr. P.K. Thomas (the muscleman- to-be), Dr. Zilkha, Dr. Jelenik, Dr. Pamela Fullerton (later de'Quesne) from both the hospitals during training was organised viz. the National Hospital and the Maida Vale Hospital. I met the EEG man Dr. Cobb, (from Queens Square). Dr. Denis Hill and Dr. Driver from the Kings'College, Maudsley group; I learnt EMG from Dr. Bawens a Belgian born doctor later a naturalised Britisher at the St. Thomas Medical School and my EEG at a combined course at the National and Maudsley for 6 weeks.

The period spent at the Queen Square and Maida Vale Hospital will always remain a cherished memory where a neurologist was born out of an internist by a process of metamorphosis, like a Shudra by birth is changed to a Brahmin after the 'Sacred thread' ceremony. The basic change was a change in attitude to neurology following the long established and esteemed Queen Square tradition. I met many of my future colleagues like Drs. Arjundas, K. Jagannathan, K. S. Mani and others while at Queen Square.

A brief period of serving as SHO jointly under Dr. Sir Russel the legendary neurologist and Mr. Valentine Logue an outstanding neurosurgeon at the Maida Vale Hospital, was just a great experience. Sir Russel, after I got closer to him, one day asked me whether I knew Dr. Wadia of Bombay, when I answered in the negative, he asked me to meet him at the earliest when I returned to India. Meet I did and ever since remained great friends.

I wouldn't go into details of my hospital training in neurology in UK; this included the Haywards Health Hospital of Neurology and Neurosurgery (Sussex) - said to be "abode" of Queen Square Hospital during the war years; here I met my life-long friend Dr. K. K. Sinha the legendary Neurologist of Ranchi, who, you must believe me; was the Registrar in Neurosurgery and taught me, how to drill a skull hole to drain subdural haematoma. At the Midland Centre of Neurology and Neurosurgery I met Dr. Bickerstaff who was then working on his book, 'Examination of the Nervous System.' He was satisfied with the level of my training and relied on me for his letters to the doctors regarding the referred cases. I spent about 6 months with the Neurosurgeon Mr. Hamiltan who told me that a neurosurgeon is a fully trained neurologist who did some cutting also. He told me once that I could still change my line and go for neurosurgery, because after all how I would carry on with the vast number of untreatable neurological cases and depend on epilepsy myasthenia gravis

only for treatable disease. He was obviously talking on a light vein, "you cannot dedicate your life time on these two diseases alone" - and "you still need surgeons to help you in treating them".

The Edinburgh training was reassuring and I had no problem after having passed through the rigours of the Queen Square. There I met personalities like Dr. Slater (teacher of all Scottish Neurologists of his time) Dr. J.A. Simpson who later held chair at Glasgow University, Dr. Stanton and others. It was enjoyable session at the Anatomy Department of the Royal Infirmary Edinburgh, Where I revised my neuroanatomy cutting through a human brain under the guidance of Dr. Romanis, the Chief of Anatomy there and his able deputy Dr. Pollinski.

Back home in Jan 1963 I joined my own Medical College as Assistant Professor, Dept of Medicine and was given an OPD, separating Neurology from so-called (Neuro) Psychiatric OPD. I was also given the assignment of delivering didactic lecture in Neurology to the undergraduates. Apparently, though the Govt. sent me for training in Neurology, it was not prepared to undertake establishing a Neurology Unit or a separate Neurology Dept. yet. It took me about seven years before the Govt's acceptance of my proposal of creating a combined Neurology and Neurosurgery Dept., with a common administrative head; accordingly sanction was obtained from the Govt. for an independent Department of Neurology with Medical and Surgical divisions. I assumed as the Head of the combined department with two Neurophysicians and two neurosurgeons (of visiting rank and having academic assignment), two RMOs one for Neurology and one for Neurosurgery and two medical officers one for each division. The equipments were acquired gradually and ours was first combined Dept of Neurology to be established in an undergraduate medical college and second dept, in the State, the first being situated in the Institute of Post-graduate Medical Education and research, Calcutta established earlier by late Dr. T. K. Ghosh in 1950. It took Govt. about two decades to establish the second Department of Neurology in the State of West Bengal. One wonders why this delay in the development of Neurosciences in the State; the reasons are many; Interest in neurology in post-independent Medical Colleges did not develop, first due to lack of neuro tradition in the state, secondly glamour of cardiology with newer therapeutic horizons lack of interest in the teacher who taught neurology and thirdly institutional negligence. The main obstacle, in having a few ideal Neurocentres was the lack of insight in the required fabric of a neurocentre. The conflict of professional and academic life, crudely the division into the so-called practising and non-practising personnel, the spirit of development of a department rather than ones own career, the lack of political will of having the clinical material and investigational facilities as well, the proper men behind the machine and lack of a coordinated and organised approach-all contributed to one aspired goal, an efficient and viable neurocentre which was to be achieved.

So, when, I came back with a governmental authority of being seconded to neurology, I saw that my Chief Prof. J. C. Banerjee an outstanding clinician saturated with interest in Cardiology, I felt dismayed, but took a serious oath, God willing, I shall train at least a dozen internists Neurology so that Neurology would get its due status in my state. I started taking special classes in Neurology for the post-graduates and gradually a trend of taking up neurology as a career was developed and talented boys started turning up. Then, the DM in Neurology was ushered in the University College of Medicine and Neurology with its only citadel at IPGME & R came down at the undergraduate college level of course with facility of teaching of post-graduates as well. We have now more than -50 trained neurologists in the state, all the teaching institutions in the metropolis having independent Neurosciences division. It was time that Neurology developed in the teaching colleges outside the Metropolis in the so-called Moffussil towns, as well as in privately managed non- teaching hospitals.

Neurology for Internists/General physician

More than 25 years back, it occurred to me that though NSI branched out from the parent body, the Association of physicians of there. was need for the general physicians to be exposed to current trends and opinions in

Neurosciences. I, was therefore, involved in contributing more and more neurological sessions in API forum. This they appreciated in the API and I was elected as the first ever Neurologist president of API. Later, I felt that an Indian college of physicians was already overdue in the lines of Royal colleges of physicians in UK and ex-colonies like Canada, Australia, New Zealand and American college of physicians. Again I was instrumental with my able and wise physician colleagues, establishing the Indian College of physicians within the fold of APL, and was elected the Founder president of the College about a decade ago.

Regarding developing superspecialities in Neurosciences, I have always cherished the dream of starting one in "Sleep Medicine,' and one in Autonomic Nervous System Disorders. It was possible to start a sleep Unit under the aegis of Swami Abhedanand's Neurology clinic, in Vivekananda Institute of Medical Sciences – Ramakrishna mission Seva Pratishtan, in Calcutta. It could not develop or thrive because of lack of interest amongst the staff, to devote time on sleep research.

With early difficulties an Indian Autonomic society has been ushered in. Continuing as Founder president of the society for the last four years, the Presidentship has now passed into the able hand of my colleague, Dr G. Arjundas of Chennai whose devoted and inspired service will hopefully lead the Society to a bright and successful future

NSI Annual Conferences and development of Neuro Units

The activities, academic and organisational of NSI have a profound influence on its regional member states. Each year the various topics of work presented at the Annual conferences reflected the on-going research activities in the country and each region and centres would update knowledge as well as imbibe activities not covered in their own region. This inspiring and catalyst influence of the Annual conferences go a long way in development of Neurosciences in the country. In addition, the practice of inviting international luminaries in neurosciences who are important figures in their own discipline also has an outstanding contribution in the development of the science in Indian context.

The Decade of the Brain which started in 1990 also had a tremendous influence on the development of neuroscience in the country and its regional centres.

Development of Neurosciences in Eastern India

An outline of development of neurosciences in Eastern Region has already been published in the souvenir of the 11th Annual Conference of Association of Neuroscientists of Eastern India (ANEI) held at Ranchi last year. The initiative of its formation was jointly taken by Dr. K. K. Sinha and me about a decade back and when it came into existence officially into 1994, I was the Founder and first President and Dr. K. K. Sinha its Founder Secretary. He has carefully nurtured this baby in its infancy and still carries on with the same during its adolescence. The outstanding contribution of Dr. Sinha is his bringing out Annual Volumes captioned as "Advances in Clinical Neurosciences" edited jointly by him and his able Colleague, Dr. Prakash Chandra, a fine Neuro surgeon of Ranchi. This annual volume has been a prestige publication of ANEI and contains updated review articles on current topics from the pens of National and International experts on the subject. The volume is popular with all neuroscientists of the country and is read with great interest by post-graduates and DM & DNB candidates with great enthusiasm – a tribute to the editors. The ANEI Annual Conferences also are now important events in the country in which neuroscientists from all over the country participate and are comparable to the Annual events of the NSI and IAN the newly formed Indian Academy of Neurology. The mouthpiece of ANEI, Journal of Association of Neuroscientists of India (JANEI) is now on its third year of publication under the able and efficient' editorship of Prof. Ambar Chakravorty, the outstanding Neurologist of the third generation in the state. Incidentally, he

is one of the best, if not the best of my students so far trained in Neurology here, and one who had a finishing touch in his training in UK under Dr. JMS Pierce of Hull Royal Infirmary.

Neurosciences in West Bengal

The entire decade of fifties had 'the Neurologist' of West Bengal in the person of late Prof TK Ghosh who was Professor Director of the Dept. of Neurology at the Institute of post-graduate Medical Education and Research at the SSKM Hospital. He reigned supreme in the real sense of the word and was Founder of the Bangur Institute of Neurology which was included in the SSKM group of Hospitals of IPGME & R. He was the pioneer and later doyen of Neurology in the state and I would like to term him as Pioneer of Bengal Neurology rather than the first generation which may be reserved for us.

Thus, in early sixties we were 6 neurologists (leaving late Dr. T. K. Ghosh alone), I Dr. MB Bhattacharjee, Dr. B. Raychowdhury, late Dr. T. K. Chowdhury, Dr. Anupam Dasgupta and Dr. p. K Basu. All of them held academic grade of Professor and acted as Heads of the Dept. in their active service with the west Bengal Govt. A few words regarding my contemporary colleagues will not be out of place here. In 1963, the Association of Physicians of India had its APICON' 63 in Calcutta, where the NSI separated out from API. But I met the Seniors in NSI, like Dr. Baldev Singh, Prof. Jacob Chandy, Drs. B. Ramamurthi, Edie Bharucha, Gajendra Singh, NH Wadia, A. D. Desai and others. 1965 NSI had its Annual Conference at Calcutta, where Dr. T. K. Ghosh, the seniormost in this area, was chairman and Dr. Ramen Chatterjee was President & secretary respectively of the organising Committee. Dr. Asok Bagchi, a performing Neurosurgeon of great skill and great promise was to be seen everywhere. His sociable nature and aggressive but charming personality made him very prominent in the Society. He became President, Editor of (Neurology, India) and the Society's Historian and has been a great friend of me throughout the 4 decades thereafter. We were five neurophysicians in the 2nd generation in Calcutta early 60s onward while late Prof. T. K. Ghosh reigned as the Monarch for about a decade in the fifties. They were all trained abroad and contributed immediately in developing fields of Neurology. All of them later headed departments (see Table 2) and contributed in the training of future generation of Neuro-scientists in West Bengal, younger neurosurgeons like Dr. Benoy Gopal Chakravarty was also highly qualified and settled in UK in a different perspective. Prof. R. N. Roy and Durga Roychowdhury Dr. Wasek headed departments, Dr. Roy in the post-graduate Institute and the rest in the Undergraduate Departments.

It is a nice thing that the majority of the present day neurologists have been my students, in undergraduate, Post-graduate or post-doctoral phase of their training. I have the satisfaction that though it was not

possible for offering them latest equipments in neuroscience practice, they are trained fairly adequately and represent a fine band of second generation neurologists, comparable to their counterparts in any part of the country and elsewhere. I look forward to their success, in medical care, medical teaching and medical research ushering in the modernity of the 21st century. I bless them in the name of Almighty and wish them all success!!

The National Neuro-science Centre

The latest venture in updating neurosciences in the state is inauguration of a National Neurosciences Centre (NNC) based at the Peerless General Hospital, a general hospital spread in about 5 acres of land in lush green surroundings with 5 lakes around at the outskirts of the city at "Panchasayar" (5 lakes) Garia, Calcutta. It has adequate modernised facilities of a General Hospital. This is being directed by Dr.

RP Sengupta (well known Neurosurgeon in the NSI circle), and eminent consultant neurosurgeons from New Castle, UK, as the Director and 2 visiting surgeons Dr. Abhijit Guha from Toronto, Canada and Dr. C. N. Sen from New York (USA).

The total staff include me as senior consultant and two full-time Neurologists and Neurosurgeons viz. Dr. Tapas Kumar Banerjee and D. Chowdhury, Dr. A. K. Roy and Partha Bishnu, respectively. The administration will be jointly under the Neurosciences foundation of UK and the Peerless General Hospital.

Table 1 shows the early development and pioneers of neurosciences in the eastern region of India and Table 2 shows earlier development and 2nd generation of Neuroscientists in different Neurosciences centres in Bengal.

Concluding Remarks

As requested I have given my impression and reminiscences in an autobiographic style presentation stressing the social and medical milieu, the training I had in neurosciences, my teachers and contemporaries and the delay and difficulty in bringing up neuroscience centre at my place. I could have given further details particularly in setting up ideal neurocentre here but space forbids me doing that way. I may not have fully succeeded but still I feel the posterity will find some interest in

knowing the feelings of a senior citizen vis-a-vis Neurology in Bengal, regarding development and history of Neurosciences here]

Talking of learning neurosciences, I may quote..Much have I learned from my teachers, more from my colleague, and from my students more than from them all.', (Babylonian in the 2nd Century).

Table - 1
Early Development : ,The pioneers'

	Assam	Bihar	Orissa	West Bengal
Early days (anecdotal)	1979	1942 Richard Johnson	1965 Dr. Sanatan Rath	1941 Dr. P. C. Sanyal Gen.Surgeon with Neuro bias
		Archibold Leigh		
Unit		A.R Chowdhury BC Kakoty	Davis Psychosurg 1958 Dr. R.Prasad	Dr. T. K. Ghosh Dr. R.N. Chatterjee Dr. Asok Bagchi

Table – 2
2nd Generation of Neuroscientists

Assam		Bihar		Orissa
K. V. Mathai (invited by Assam Govt.) Dr. Zakir Hussa Dr. S. Sharma	Neuro surgeon	Dr R Prasad Dr N P Sinha Dr Ramesh Chandra Dr H R R Verma Dr H P Narayan	Neuro surgeon	Dr S Rath Dr B S Das Dr B N Acharya Neuro surgeon

Dr Mrs. A Mahapatra Dr A Kayal Dr Borah	Neuro Physician	Dr K K Sinha Dr A K Sinha	Neuro Physician	Dr G C Mitra Dr R V Sahu	Neuro Physician