

Perspective

Future of Neurology in Pakistan

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Neurology as a specialty of Medicine was introduced initially in Dow Medical College Karachi and King Edward Medical College Lahore in the early nineteen sixties. It was given the status of an optional specialty by the Pakistan Medical and Dental Council for undergraduate

medical colleges. This implied that unlike the essential medical specialties it was not mandatory for a medical college to have a separate department of Neurology for purposes of its recognition by the P.M.D.C. The result was that many new medical colleges that were started from time

to time in different cities of Pakistan did not create departments of Neurology and where a separate department of Neurology did not exist the subject of Neurology was taught to the undergraduates as a part of main subject of Medicine by a professor of Medicine. Even in medical colleges where a separate department of Neurology did exist it was subjected to contempt, discouragement and step-motherly treatment by the administrators of medical colleges on the plea that after all the P.M.D.C. had dubbed it as non-essential or optional only.

All medical specialties such as Cardiology, Neurology, Psychiatry Pediatrics, Dermatology, Gastroenterology, Nephrology, chest and tuberculosis etc. were regarded as optional by the Professors of Medicine who were more influential in medical colleges than their colleagues working in so-called sub-specialties. Some of these were given the status of essential specialties from time to time. The criteria for raising a specialty to essential status were artificial and often determined not by their importance but in terms of how little an average professor of Medicine knew about the subject matter of these specialties. Thus Psychiatry and Dermatology were admitted relatively easily into the status of essential specialties.

Thus generalization was patronized by the college administrations rather than specialization with marked detriment to progress and advancement in research and excellence of teaching.

Pediatrics had to fight a long drawn out battle and ultimately found its way into the essential specialties. Not only that but subsequently they fought another battle in the territory claimed by the Professors of Medicine on the plea that Pediatrics is nothing but Medicine pertaining to patients of a particular age group and therefore it should be given the

same status as Medicine in undergraduate teaching with a separate written paper and a separate clinical examination in Final M.B.B.S. examination.

When the student-teacher ratio was adversely affected due to an enormous increase in the medical admissions in all the existing medical colleges, more and more chairs in Medicine were created under the threat of de-recognition by the P.M.D.C. with arbitrary and often controversial division of teaching load amongst the professors of Medicine. It always remained a matter of controversy and even dispute between them as to who was to teach what and on what basis. To claim the basis the professors of Medicine started developing their own so called "areas of special interest" and thus some specialties started growing in illegitimate parenthood. Gastroenterology, Hepatology and Diabetology were the commonly chosen ones. This amounted to below board, half-hearted and stealthy attempt at specialization, the legitimate and above board forms of which had long been discouraged and curbed under the false cover of non-essentiality. It was not perceived that what P.M.D.C. had laid down was the minimum requirement for recognition of a medical college and not the maximum level of achievement.

In to-day's era of rapid progress and mind boggling advancement in information technology sky is the limit for progress and advancement which can only come through specialization.

So long as this basic concept remains unrecognized, the progress of Neurology and other similar so called optional specialties will continue to remain bleak in our beloved motherland.

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Neurology is a speciality which encompasses large number of diseases extending from simple headache to cerebrovascular disease, inflammatory and non-inflammatory diseases to a large group of congenital and heredity disorders.

The concept for diagnosis and management of acute and chronic nervous system disorders is changing at a very rapid pace. With new diagnostic tools such as simple MRI to introduction of Diffusion-Perfusion MRI has totally changed the concept of management in large group of CNS disorders such as ischemic stroke. The genetic analysis of CNS disorders has set upon the new strategy for prevention

of these disorders and the time is camping up rapidly whereby even genetic manipulation will be the reality.

The understanding of immune mediation in initiation and continuation of various nervous system disorders such as Multiple sclerosis, GBS, CIDP etc has opened up new therapeutic opportunities for short and long term management of diseases which at one time were considered as untreatable. These new developments in the field of neurosciences has made it a branch where a lot of opportunities lies for research for those who are interested in the field of neurosciences. It provides new practice opportunities for clinical neurologists to take proactive

approach in diagnosis and management of CNS disorders.

The era of general physician to treat all medical disorders including Stroke, Epilepsy, Parkinson disease and other CNS disorders is changing with time. It is not possible for a general physician to treat myriads of diseases with highly variable diagnostic techniques and its implications. Therefore, the role of speciality is ever increasing. The concept of active management of ischemic stroke in the earliest possible time needs a specialist who could work in a team and take immediate and prompt diagnosis and management decisions.

In Pakistan, the perception of patient with regard to who should manage him/her is also changing. The concept of speciality and its importance is being realized by the general physician as well as the people at large. The general physicians are realizing that the neurologist would be in a better position to manage the complex neurological diseases. In developing countries, like Pakistan the role of specialist Neurologist is even more important.

In the developed world there is about one neurologist for a population of 20,000. However, in Pakistan the total number of qualified neurologists is about sixty who are practicing in 7 largest cities of the country. The approximate ratio is one neurologist for a population of 2 million. The

people have to travel long distances to consult these few neurologists and that also mostly for chronic disorders or when the disease has taken up its toll.

It is obvious that if we could train and provide qualified neurologists even at the tertiary care hospitals of the country, the management of a lot many acute and subacute neurological disorders would be achieved.

At the moment, neurologists are only available in 16 tertiary care centers of the country. These include 5 hospitals in Karachi, 4 in Lahore, 3 in Islamabad and Rawalpindi, 2 in Peshawar, 1 hospital in Quetta and 1 in Faisalabad.

There is urgent need to promote the speciality and provide well-trained specialists at least in larger tertiary care centers of the country in the first phase. There is urgent need of qualified Neurologists for undergraduate and postgraduate teaching and education so that we could keep pace in the field of medicine at par with international standards.

The responsibility for prioritizing and implementing the policy lies with the government and partly with the teaching institutions of the country, both in government and private sectors.

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Pakistan is one of the most populous countries in the world with a figure of about 140 millions; 5/6 of the world population lies in China, India, Malaysia, Bangladesh and Pakistan. It has poor socio-economic conditions and health facilities. However, it has a secondary care hospital in almost every district and a basic health unit in each town, though they are functioning at a suboptimal level. With the improvement in health care facilities and with it the life expectancy, it is expected that in the near future more older population will lie in these countries. Pakistan also has a higher birth rate, infant mortality and maternal morbidity and mortality. Diabetes, hypertension, ischemic heart disease, resistant tuberculosis, malaria, meningitis and other infectious diseases, and nutritional diseases are common in this part of the world.

In the domain of neurological disorders, stroke and dementia lie among the four major cause of death in the world and the prevalence of migraine is about 10%. Local data on stroke and migraine has shown the similar pattern. A population based study on epilepsy revealed it to be 1%; higher than in the world. Pyogenic meningitis, tuberculous meningitis, cerebral malaria, treatable myopathies and

neuropathies are frequent occurrences. The uncommon neurological diseases (including Parkinson's disease, Wilson's disease, and Multiple sclerosis) are common at the tertiary care centres. Therefore, the burden of different neurological diseases is very high in Pakistan. Compared to this burden the number of neurologists is still below hundred for the above population.

The main cities of Pakistan have facilities of CT scan and MRI. Most of them though privately run, give concessions on charges to poor ones. Charity is very high in this country and many poor people get benefit of it; though insufficient for so great need.

Therefore, neurological diseases are among the common community health problems. Scope of neurology is very high in this country. A lot is to be done in this area including developing infrastructure and training of human resources (both medical and paramedical). The primary and secondary health units of the country, which are probably underutilized, can play a vital role in this scope. Training of human resources on short term basis is probably more justifiable to address the need.

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The last 25 years have seen an international transformation of Neurology from an exercise in anatomic localization to a science of therapeutic intervention. Over the same period, Pakistan has witnessed Neurology's progression of a different type. From an obscure, "non-essential" and ill-defined branch of Internal Medicine, Neurology has emerged as a challenging, well defined and rapidly expanding discipline.

The estimated burden of neurological illnesses is 15% of the total disease burden to society. This warrants a huge commitment on the part of medical profession to training and on the part of society to allocation of resources in order to combat neurological problems. Pakistan, with less than 50 trained neurologists, does not even have a fraction of what is needed for a population of 140 million. To put this in perspective, United States has 10,000 well-trained neurologists for a population of 280 million and still needs more.

The future of neurology in Pakistan is indeed very promising for the neurologists. To make it equally promising for the patients, a number of challenges lie ahead and must be dealt with:

1. Work force of neurologists must be expanded rapidly through increased opportunities for high quality post-graduate training in Pakistan.
2. Public awareness about neurological diseases, and the increasingly important role of neurologists in combating

them, should be enhanced through media, seminars, conferences etc.

3. Subspecialty training within neurology should be promoted to achieve higher standards of care.
4. Public and private sectors should come together in promoting research into indigenous neurological challenges.
5. Neurologists, through their organizations, should liaise with medical colleges to update their curricula for teaching basic and clinical neurology.
6. Pakistan needs legislation and its enforcement to create accountability and higher standards of care in neurology, as much as in the rest of healthcare system.
7. Pakistan has become the dumping ground of (pseudo)neuro-tonics by multinational pharmaceuticals. A plethora of these is marketed without a shred of evidence for their efficacy. This practice must be stopped in order to promote international standards of patient care.
8. Pakistan needs greater and better representation in the international community of neurology, not only for academics and research, but also for providing, leadership and promoting country's interests.

It is indeed time for Pakistani neurologists to come and act together to meet these challenges and secure a better future for themselves and their patients.