

# NEUROSURGICAL TRAINING IN PAKISTAN

Growth of neurosurgery in Pakistan is jeopardized by poverty and lack of an appropriate academic culture. According to the UNDP Human Poverty Index, as much as 50% of the population in Pakistan is living below the poverty line (per capita income of US\$ 2 per day). Compared to the price tag of a simple common spine surgery such as lumbar microdiscectomy (which ranges from US\$ 500 in public sector institutions to US\$ 2500 in private institutions), this is a sad, almost absurd reality. In a country that ranks 129th out of 174 nations on the Human Development Index, where medical insurance is rudimentary and the interest of health authorities to improve health delivery is abysmal, how can one seriously consider growth of a super-specialty such as neurosurgery? What is needed in this predicament facing the future of neurosurgery in Pakistan is innovation. The breeding grounds of innovation are academic institutions. But the academic programs are only as good as the faculty and the trainees.

The problem with most training programs in our setting is that they are set up as old-fashioned apprenticeships. Emphasis is more on service delivery rather than actual intellectual augmentation. Most programs are housed in public sector or semi-private institutions. The setback with these training programs is that the teaching faculty is, for all purposes, part-time. Examples exist here and there where the director of the program has done an excellent job in trying to make the best of the situation, but unfortunately the faculty's extramural private clinical practice and other conflicts of interest seriously hurt the process of mentorship. Most of the time, trainees are performing procedures without any supervision and there is minimal if any experienced input in the postoperative care of the patient. This not only jeopardizes patient safety, but also leads to the trainee picking up poor surgical techniques due to lack of adequate feedback. Some programs may have only one or two teaching faculty and they too may be inbred. Overall, these factors result in a lack of adequate quality mentoring available to neurosurgery residents.

As if lack of satisfactory mentorship was not enough of a problem, a frequent disconnect between mentor and trainee further compounds the situation. This unnatural gap is the result of two inter-related factors. Mentors have over the years picked up an attitude that is cold, stand-offish, cynical, and aloof. The other factor is the attitude of subordinates (which includes everybody in the academic hierarchy including the trainees) to unflinchingly eulogize their superiors. It is a style inculcated by the culture of our society in general, and by observing the habits of their seniors in particular. We have a tradition of elating our superiors to an unnatural degree and praising them ad nauseam. A healthy attitude between a mentor and a trainee requires sufficient frankness that does not inhibit questioning by a trainee and reverence enough to pay heed to the voice of experience.

A third factor that plagues the training of neurosurgeons in Pakistan is academic dishonesty and academic mediocrity. The culture of symposia and workshops which includes "chest thumping" sessions by senior neurosurgeons flourishes, while actual academic output is negligible. Plagiarism and "fudging" or "exaggerating" the data is very disturbing whenever you come across it. It is not rampant, but even occasional incidents of this type are

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unacceptable. It is very disappointing to see one of the country's reputed neurosurgeons publish manuscripts with clear deceit in data presentation. To get a feel of the prevailing academic mediocrity, one needs to attend the national neurosurgical meetings. Presenting small case series on techniques established decades ago and reporting a case (twice in different meetings) where head trauma presumably gave rise to glioma is plainly ridiculous. Data presented with scientific analysis is disregarded by professorial figures based on their anecdotal experience or their presumptive recollection from their own practice. These attitudes remain a formidable challenge to innovation in the field of Pakistani neurosurgery.

Change in academic culture is a slow process. I am quite hopeful that it will come with time as more "brain drain" turns into "brain gain" by ever increasing numbers of repatriates. A quick-fix to these problems can be exposure of the trainees to the academic culture in developed countries where neurosurgery is more advanced, preferably North America. This can be achieved by 3 to 6 months rotation in US or Canadian neurosurgical centers. The American Association of Neurological Surgeons and the Congress of Neurological Surgeons along with the World Federation of Neurological Surgeons may well be able to facilitate this. Funding for these activities may be enabled through the Higher Education Commission of Pakistan. The Pakistan Association of Neurosurgeons or individual programs should submit grant proposals for these important capacity-building activities. Just a few months of exposure can be an eye-opener for trainees. Back into their home country they will then propagate the quality they have imbibed. High quality can be extremely contagious.

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