

Acute stroke care and long term rehabilitation in Pakistan: Challenges and solutions

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Stroke is the leading cause of death worldwide and a major contributor to long-term adult hood disability. Acute stroke care and long-term rehabilitation has improved substantially in the developed countries in the last three decades.¹ Although Pakistani healthcare system has evolved over the years, but the management of stroke both in the acute and rehabilitation phase remains sub-optimal.² The awareness of general public and even general practitioners regarding signs and symptoms of an impending/ evolving stroke is inadequate.^{2,3} This results in loss of precious time in which patient can report to the hospital and get urgent medical attention. Absence of qualified neurologists and dedicated stroke units make it difficult to offer good acute stroke care as per the established protocols at most of acute medical care facilities in our country.² There are only two hospitals in our country which offer thrombolytic therapy (tPa) for a patient having acute ischaemic stroke. Most of the stroke patients in Pakistan are managed by internal medicine physicians and are discharged home without a neurological consult or long-term rehabilitation plan. A coordinated multidisciplinary stroke rehabilitation can result in decreased mortality, reduced number of complications, shorter length of stay and better Quality of life.^{4,5} In Pakistan only few stroke patients are provided coordinated post stroke rehabilitation, mainly due to lack of qualified rehabilitation medicine physicians (physiatrists). Large number of qualified physiotherapists (Doctors of Physiotherapy- DPT) are available in the country. The primary job of a DPT is to provide good physical therapy and mobility training. These therapists could become a great resource for coordinated care and rehabilitation of stroke patients, if properly guided and supervised by Physiatrists and Neurologists. Short term and long term rehab care protocols are needed to be developed and followed to ensure best practice.

In the absence of a regulatory authority, some of the

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physiotherapists overstep their mandate by writing prescriptions for the stroke patients in form of multivitamin injections, neuro-tonics and cerebral stimulants, which have no proven role in the management and recovery of stroke.⁶ Functional improvement and ultimately community re-integration are main objectives of rehabilitation. Long term, daily physiotherapy at home for months without proceeding toward this goal is of no benefit for patient and family.^{7,8}

The social network and a supportive family environment in Pakistan is sometimes a hindrance in regaining independence by the stroke patients. Serving the elderly especially, when disabled by an illness like stroke is considered a social obligation and religious duty. The stroke patient in Pakistan has sometimes multiple attendants (mostly close family members) who cater for all his/her needs including transfers from bed to chair, feeding and bladder and bowel care. This over caring attitudes in which the patient is offered attendant care promotes dependency rather than independence and the patient with stroke never learns the compensatory techniques or take charge of his/her own life post stroke. Families of stroke patients must be educated and trained to direct their care in making a stroke patient functional and independent.

Another issue is of alternative and complementary medicine. Due to the strong influence of alternative and traditional medicine in the country and a lack of accountability, many stroke patients end up visiting spiritual healers, homeopathy practitioners and even quacks in the quest for finding a cure for their disability. This not only drains them financially but also wastes precious time and energies, which could have been utilized in following a scientifically proven and beneficial stroke rehabilitation programme. Many a times these practitioners offer stroke patients un-proven therapies, herbal remedies and drugs with unknown composition.

Even if a patient is fortunate enough to receive good acute care and a coordinated post stroke rehabilitation tries to re-integrate back into the society, he/she faces societal and community barriers. The general attitudes of the Pakistani society towards a person with disability are negative.⁹ There are no disabled friendly public toilets and most of the

public transport, mosques, restaurants and public parks do not specifically cater for the persons with disability. It is very rare to see a person disabled with stroke driving a car or working in a public office. Most of the patients with stroke are out of service on medical grounds.

Stroke is more common in women as compared to men. Stroke rehabilitation in our country is even more compromised in women stroke victims. Lack of facilities, female physiotherapists and our attitudes toward rehabilitation of a woman stroke patient may be contributing factors.

In order to address these issues in stroke management and adequate rehabilitation there is a need to involve all stakeholders and employing a coordinated approach with short and long-term goals. This should include the government, physicians (neurologists, rehabilitation medicine physicians and general practitioners), allied health care professionals (physiotherapists, occupational therapist, speech and language therapists, social workers, community rehabilitation workers etc.), patients and their caregivers. Government should allocate budget for work force training in stroke management and rehabilitation. There is a need to establish dedicated stroke units with acute care and coordinated post stroke rehabilitation at all neurology departments in the public sector hospitals. Trained personnel should adequately staff these units. Physicians should promote a closer coordination and better communication among themselves and with the allied health care professionals involved in comprehensive stroke care and rehabilitation. Professional societies like Pakistan Society of Neurology, Pakistan Stroke society, Pakistan Society of Physical Medicine and Rehabilitation, Pakistan society of Neurorehabilitation and societies of allied health care professionals should liaison with each other. Task forces should be established to identify means of improving cooperation among different professionals. Stroke rehabilitation guidelines should be devised or modified from the current global guidelines tailored to the needs and resources available to a stroke patient in Pakistan. Patient education material in Urdu and all regional languages should be prepared and widely

disseminated to all major public and private hospitals. Lectures and workshops focusing on teaching early signs and symptoms of stroke, acute management of stroke and early rehabilitation interventions should be part of the undergraduate curriculum. Residents in neurology should undergo elective rotation at the departments of rehabilitation medicine to enhance their understanding of the rehabilitation protocols for a stroke patient. Success stories of early acute care and coordinated post stroke rehabilitation should be documented and shared with the media and general press to improve the public awareness of stroke care.

We hope that these proposed steps with a focus on close coordination and collaboration among all stakeholders can bring a positive paradigm shift in the management and rehabilitation of stroke patients. This will reduce the mortality, post stroke disability and allow better community re-integration of patients with stroke.

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