

Young patients push stroke rehabilitation to new frontier

'Before 1995, when clot-busting drugs were introduced, there was absolutely no treatment for stroke'

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Smita Amin had just come home from a long day at work and was making dinner when she began to feel dizzy. The 39-year-old Toronto dermatologist thought she was a bit hungry. Then, her right arm began to tingle and went numb.

Dr. Amin was having a stroke; a blood vessel in her brain had burst. "I'm lucky I wasn't driving or asleep. I was able to call 9-1-1."

When she arrived at the hospital 20 minutes later, her right side was completely paralyzed.

Once thought of as an affliction of the elderly, stroke is increasingly hitting younger people and baby boomers. Age-specific data was not collected until recently, but anecdotal evidence suggests that soaring rates of hypertension and high cholesterol are placing far more people at risk of stroke at a younger age.

Physicians say the best protection is to ensure that your blood pressure and cholesterol levels are kept at healthy levels. Even so, these younger patients are pushing scientists to come up with new methods of prevention, treatment and rehabilitation.

"Before 1995, when clot-busting drugs were introduced, there was absolutely no treatment for stroke," Heart and Stroke Foundation of Canada spokeswoman Sandra Black said. "In recent years, there have been some tremendous advances, but they are more than offset by the aging of the population, which means a lot more people are having strokes."

To deal with the new demands, the Heart and Stroke Foundation has created the Ontario Centre for Stroke Recovery. The virtual institution (shared by three hospitals) is designed to streamline research, stroke care and recovery.

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Dr. Black, who is also head of neurology at Sunnybrook and Women's College Health Sciences Centre in Toronto, said the recovery centre is working on a number of exciting projects, including developing new scanning tools to map brain activity in the aftermath of stroke, which should allow individualized, tailor-made treatment.

Researchers are also using biofeedback and virtual-reality games to help patients regain lost capabilities, and testing whether drugs such as amphetamines can actually help the brain repair itself.

"This is the new frontier of stroke care: optimizing rehabilitation and facilitating brain recovery," Dr. Black said.

For Dr. Amin, a quick recovery and return to normal life was essential. She spent a week in intensive care, then a month in a rehabilitation hospital, followed by months of intense outpatient physiotherapy.

Eight months after her stroke, Dr. Amin figures she is "about 80 per cent." She still lacks some sensation on her right side and occasionally struggles for words, but she is a far cry from the image of a stroke survivor, as a person with debilitating paralysis and trouble speaking.

Dr. Amin is being treated for hypertension, which was likely the underlying cause of her stroke. Other risk factors for stroke include high cholesterol, smoking, excessive alcohol consumption, inactivity and family history.

But as a non-smoking vegetarian who exercised regularly, Dr. Amin is an example of how unpredictable strokes can be.

About 50,000 people a year suffer from strokes and an estimated 300,000 people are living with the effects in Canada, according to the Heart and Stroke Foundation.

There are two principal sorts: Blood clots that block an artery causing ischemic strokes (the most common type), and ruptured blood vessels causing hemorrhagic stroke. Strokes are dangerous and devastating because they prevent the brain from getting blood and oxygen.

Strokes are the fourth-leading cause of death in Canada, claiming 16,000 lives annually. They are also costly, because they can result in long hospital stays and require extensive rehabilitation for patients. Last year in Canada there were 137,553 stroke-related hospitalizations, of which 17,648 were in people aged 30 to 59.

Dr. Black said the secondary impact of stroke is also significant because family members, and women in particular, are called upon to be caregivers. As the population ages, the number of people living with stroke will invariably rise quickly. After 55, the risk of stroke doubles every 10 years.

"As the boomers age, we're going to see the numbers rise exponentially," Dr. said.

Sandra Hurst Boyd, a 34-year-old Toronto lawyer, was one of the lucky ones. She was felled by a stroke during an aerobics class, an experience she describes as surreal.

"I just knew something strange was happening . . . but I couldn't understand what it was," she said. "I didn't have any pain. I just remember not being able to talk, and was a strange sensation."

Ms. Boyd was treated with a clot-busting drug and spent six days in hospital. She has done rehabilitation on her own, a combination of physical exercise and crossword puzzles to stimulate her brain, and recovered almost fully within six months.

"I was so lucky," Ms. Boyd said.

She is also, researchers hope, a model for what stroke treatment will be in the near future: Swift, painless and remarkably effective.



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