Challenging age-old ideas about stroke

Stroke has traditionally been regarded as a disease of old age. But evidence is emerging from the USA that, while the incidence of stroke is falling in elderly people, there is a shift towards an earlier age at stroke onset and that incidence of stroke is rising in young adults. Stroke in young people has an enormous effect on the overall burden of stroke because of greater loss of productivity and higher health-care expenses over time; thus, urgent action is needed to address this alarming trend.

According to the recent Greater Cincinnati/Northern Kentucky Stroke Study—a population-based study of stroke trends among a community of over 1·3 million people—the average age of patients who had a first-ever stroke decreased from 71 years in 1993–94 to 69 years in 2005, and the proportion of strokes occurring in people aged 20–54 years increased from 13% to 19% during the same time period. And in 2011, another report showed that the rate of hospital admissions due to ischaemic stroke increased by about a third in all age groups less than 45 years in the USA between 1995–96 and 2007–08.

What are the underlying reasons for this disturbing shift? The period of study coincides with an era during which use of MRI became more widespread; therefore, improved detection could be partly responsible. Indeed, imaging rates increased from 18% in 1993–94 to 58% in 2005, with MRI being more common in younger patients. And greater awareness of stroke thanks to intense publicity campaigns might have prompted more people to seek help for mild strokes. But these factors probably account for only a minor proportion of the increase.

A more likely explanation is a change in the demographics of causal risk factors for stroke: increasing obesity in children and young adults caused by sedentary lifestyles and unhealthy diets could translate into premature vascular disease, including stroke, through raised blood pressure and diabetes. According to the National Health and Nutritional Health Survey, prevalence of stroke risk factors has almost doubled in recent years among adults aged 20–54 in the USA: prevalence of diabetes increased from 2% in 1988–94 to 4% in 2005–06; high cholesterol from 11% to 21%; and obesity from 19% to 34%. Increased cigarette smoking and use of recreational drugs, and decreased access to health care among those at highest risk, such as ethnic minorities and poorly educated individuals, might also play a part.

So far, the increase in stroke in young adults has been observed only in the USA. However, given that the USA is leading the way in the global obesity epidemic, it is perhaps unsurprising that the first reports of rising stroke incidence in young people have emerged from this country. More research is needed to determine whether these findings can be replicated in other countries. Funding for population-based studies of temporal trends in stroke incidence, including aetiological subtypes, and risk factor prevalence is essential to help guide preventive strategies.

Despite best efforts, awareness of stroke among the public is still very low and further work is needed to improve knowledge and tackle the mistaken belief that stroke is purely a disease of old people. Two initiatives should help in this regard. This year’s World Stroke Day (Oct 29, 2012) aims to dispel the myth that stroke happens only later in life. By distributing information stating the facts—that up to a quarter of all strokes occur below age 65 years and that 40% of all moderate-to-severe disability occurs in people younger than 55 years—the World Stroke Organisation hopes to address this misconception. And the American Academy of Neurology has set up a task force on stroke in young adults and adolescents to directly address this issue. Comprising seven experts including adult and paediatric stroke neurologists, an emergency physician, and an internist, the group aims to produce a statement to raise awareness, improve diagnosis, and develop prevention and treatment strategies specifically targeting young people.

If such initiatives are to succeed, they will need government-level support through population-wide strategies to address causal risk factors across all ages, such as regulating salt levels in food, limiting numbers of fast-food outlets, subsidising healthy foods, improving food labelling, and creating better facilities for exercise. Specific targeting in younger people should involve promoting a healthy diet, increasing activity levels, and encouraging cessation of smoking and recreational drug use, with messages reinforced in schools, community groups, and shopping centres. Only through such coordinated efforts will we be able to prevent the increased rates of stroke in young people from overshadowing the decline in overall incidence of stroke seen in recent years. ■ The Lancet Neurology