Alzheimer’s Disease is Not a Normal Part of Aging

By Jack Diamond, MD, PhD

One hundred years ago, Dr. Alois Alzheimer described to an audience of pathologists and clinicians the plaques and tangles he had observed in the brain of his recently deceased patient. Although his proposal was accepted that these pathological appearances were responsible for the patient’s dementia, and despite this particular dementia being later distinguished from other dementias by bearing his name, most clinicians, including Alzheimer, continued to refer to the disease as pre-senile dementia or, in older people, senile dementia.

This unfortunate fact is almost certainly one explanation for the long-standing belief, which (surprisingly to this writer) some still hold, that Alzheimer’s disease (AD) is an inevitable consequence of aging.

There is an argument that everybody would get AD if they lived long enough, including very elderly people who appear to have escaped it. This is a spurious argument deriving from purely statistical reasoning. It puts AD in the same category as dying! It assumes an inevitability based on the mathematical extrapolation of the curve relating age and incidence of AD. It does not allow, first, for the existence of aged people destined not to get AD; nor, second, for the possibility that the disease can be cured.

Nobody doubts that the biggest risk factor in AD is aging. Even in the five to seven percent of those who have the familial form of AD (FAD), the presence of the genes, that are unambiguously known to precipitate the condition, are not enough on their own; a minimum degree of aging has to have occurred as well (people carrying the suspect genes do not get AD when they are 15 years old!).

There have been a number of recent findings that appear to complicate the situation. First of all, numerous plaques (and to a lesser extent tangles) are a common occurrence in the brains of elderly people who die without ever having shown any signs of dementia whatsoever. Furthermore, AD, and in particular a condition thought by many to be a precursor of AD—Mild Cognitive Impairment—is now being diagnosed in younger people. As well, despite its increasing incidence, the majority of elderly people do not get AD.

Can these findings be reconciled? The inevitable conclusion has to be that AD cannot be a simple consequence of aging. Indeed, AD is only one among a number of clinical conditions whose occurrence is very much a function of aging. Here one thinks of bone fracture after falls, stroke, diabetes, cancer, and other age-related diseases. But these are not thought of simply as inevitable consequences of aging, any more than mumps, chicken pox and measles are inevitable consequences of being a child! It may be belabouring the point, but it has to be said that the expression “diseases of aging” is as informative and correct as the expressions “diseases of women” or “diseases of children.”
What should be solved now, and indeed has the attention of many medical scientists, is the mystery of the missing pieces that must be added to Alzheimer’s plaques and tangles in order to understand AD in its entirety: for example, to understand the exact links between the well-recognized risk factors (aging being the most important one), the observed brain pathology, and the observed dementia. One much-supported activity is the search for still-to-be-identified risk factors for the disease, which could be genetic or environmental, for example.

All the known risk factors for AD increase with age (such as diabetes, obesity, high blood pressure, high cholesterol, episodes of depression, even the chances of random falls with concussion) and, unfortunately, all of the intrinsic repair mechanisms in the brain (indeed, in all of the body’s organs) capable of withstanding these and other risk factors become less and less effective with age.

Many diseases, of which AD is but one, appear to take hold when the risk factors (which often include invading organisms or environmental or metabolic toxins) overcome the body’s innate defense mechanisms. Age is a risk factor for a number of disorders as already mentioned. While aging is indeed inevitable, AD is not. AD is a disease and to deny this fact is to discourage the drive to search not only for a means of ameliorating it, but to cure it.

This year, the Alzheimer Society is recognizing the 100th anniversary of Dr. Alois Alzheimer’s identification of the disease named in his honour. Throughout 2006, the Alzheimer Society will be reminding Canadians of this important anniversary and educating them about AD. To learn how the Society is commemorating the anniversary, please visit www.alzheimer.ca/english/newsevents/awareness.htm.

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2006 National Conference

The Alzheimer Society of Canada is a not-for-profit health organization dedicated to helping people affected by Alzheimer’s disease. The Society provides support and educational programs for people with Alzheimer’s disease and their caregivers. The Society also funds research into finding the causes and cure of the disease, and into improved methods of caregiving. The Society consists of a national office, 10 provincial organizations and more than 140 local groups across the country.

For more information on Alzheimer’s disease and related dementias, Alzheimer Society programs and services, and how you can help, contact your local Alzheimer Society or visit the Society’s website at www.alzheimer.ca or call 1-800-616-8816.