

OVERVIEW OF DEMENTIA – WHAT IS IT?

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ABSTRACT

Dementia is a syndrome and not a disease. A commonly used definition of dementia is: ‘evidence of a decline in memory and thinking which is of a degree sufficient to impair functioning in daily living, present for six months or more’. The age of onset may be from 45 years, but usually not before 65. Singapore is one of the most rapidly ageing countries and the prevalence of dementia has increased to 6%, from 2-4% previously. The deficits in memory and thinking may also be accompanied by a decline in emotional control, social behaviour, motivation and/or higher cortical functions. Dementia is irreversible when caused by neurogenerative disease or injury but may be potentially reversible when caused by drugs, alcohol abuse, hormone or vitamin imbalances, depression or benign tumours. There are now effective and safe treatments available to alleviate symptoms and enhance quality of life in the common dementias such as Alzheimer’s disease and vascular dementia. There are also behavioural therapies, counselling and education to improve care for patients with dementia and their families. Major breakthroughs in the search for effective treatments and prevention strategies are needed if we are to cope with the anticipated epidemic of dementia.

INTRODUCTION

Dementia is not a disease itself, but rather a syndrome, namely, a set of symptoms that occur together and suggests the presence of certain diseases and conditions, or an increased chance of developing these diseases. A commonly used definition of dementia is: ‘evidence of a decline in memory and thinking which is of a degree sufficient to impair functioning in daily living, present for six months or more’. The deficits in memory and thinking may also be accompanied by a decline in emotional control, social behaviour, motivation and/or higher cortical functions. The age of onset may be from 45 years, but usually not before 65. The astute reader will realise that dementia remains essentially a clinical diagnosis but one which does require a certain degree of experience in cognitive assessment and interacting with the elderly. It is therefore recommended that individuals who arouse the clinician’s suspicion that the patient may have dementia should be taken seriously and steps should be taken to assess the patient accordingly.

Dementia occurs because there is damage to the brain and degeneration of neuronal function, which eventually affects social or occupational activities (e.g. work, hobbies, shopping,

cooking, dressing, eating, bathing, and toileting) to such an extent that it interferes with the patient’s daily functioning. Dementia is irreversible when caused by neurogenerative disease or injury but may be potentially reversible when caused by drugs, alcohol abuse, hormone or vitamin imbalances, depression or benign tumours. Moreover, there are now effective and safe treatments available to alleviate symptoms and enhance quality of life in the common dementias such as Alzheimer’s disease and vascular dementia. Apart from medications, there are also behavioural therapies, counselling and education to improve care for patients with dementia and their families. Furthermore, patients may also benefit from advice on appropriate care facilities and legal issues.

Patients with dementia commonly complain of memory loss, impaired judgment or thinking or reasoning, disorientation and behavioural, mood or personality changes. Since such symptoms are common, especially in the elderly, it is often suggested that dementia is an inevitable part of ageing and therefore untreatable and not worth diagnosing. Dementia is definitely *not* part of normal ageing, although the elderly are more susceptible, as they are to many other diseases. Perhaps we should reflect that a generation ago, when such notable researchers such as the late Sir Richard Doll were embarking on their important work on cancer, it was also perceived that cancer was a consequence of ageing. This misconception has been dispelled by our understanding of the molecular events which underlie carcinogenesis and the treatments which have been developed from this huge expansion of knowledge.

THE EPIDEMIOLOGY OF DEMENTIA IN ASIA

The number of elderly, older than 65 years, in Asia is projected to increase by more than 300%, to 857 million, by 2050. Southeast Asia will have the largest percentage growth of a ‘greying’ population of more than 400%, while East and South Asia will experience the largest absolute increase in the elderly. Singapore is one of the most rapidly ageing countries and as a consequence, the National Mental Health Survey in 2003 showed an increase in the prevalence of dementia to 6%¹, from 2-4% previously²⁻³. Another recent community based study has shown that the prevalence of cognitive impairment suggestive of dementia was as high as 13.2% in elderly Chinese Singaporeans⁴. Thus it is very likely that we shall require a great deal more resources to effectively manage the rising burden of dementia in our community.

The pattern of dementia in Asia has also undergone a transition over the past decades. Earlier studies showed a predominance of vascular dementia over AD in Japan and China. However, more recent studies have found that AD is becoming more prevalent in East Asia⁵. A recent study from China found that the AD prevalence in the population older than 65 years

was 3.5% compared with 1.1% for vascular dementia⁶.

Nevertheless, these prevalence figures are low when compared with the prevalence rates in developed countries. Indeed, a cross-cultural comparative study found a significantly lower incidence of AD in India than in US populations⁷. Factors proposed to account for the difference in prevalence rate between Asian and Western populations include cultural issues, such as protective family attitudes, differences in risk factors, validity of cognitive instruments and methodological problems.

The current lower prevalence of AD and dementia in Asia does not translate into a similarly low burden of disease. Wimo et al.⁸ estimated that in the year 2000, almost half of all demented patients worldwide resided in Asia. As Asia undergoes an epidemiological transition in disease patterns, with a shift from nutritional and infectious diseases to chronic conditions, this proportion will surely increase.

RISK FACTORS FOR DEMENTIA

It was not so long ago that only age and family history could be regarded as risk factors for dementia with any degree of certainty. However, recent research has identified many other potential risk factors for dementia⁹ which opens up possibilities for preventative strategies. These factors include education, cognitive and leisure activities, physical activity, cholesterol and statins, inflammation and NSAIDs, head trauma and cardiovascular risk factors such as hypertension. Hypotheses generated from observational studies need to be tested in well designed interventional studies but these may be difficult to design and conduct given the long latency period of the disease process.

FUTURE PROSPECTS FOR DIAGNOSIS AND TREATMENT

The remarkable advances made in the past 30 years in the diagnosis, treatment and understanding of dementia, particularly Alzheimer's disease raise hope that the future will bring more improvements. It should be remembered that Alzheimer's disease was once regarded as a hopelessly untreatable condition and dementia attracted little interest and research support. We

now possess validated diagnostic criteria, standard assessment instruments, multi-disciplinary clinics to manage dementia patients, family support groups, patient advocacy groups and some moderately effective treatments¹⁰⁻¹². There has been an explosion in our knowledge of the neurobiology and genetics of the disease and intensive research efforts continue to bring these insights into clinical practice.

Thus, there is reason to believe that we are on the brink of major breakthroughs in the search for effective treatments and prevention strategies – and these will be needed if we are to cope with the anticipated epidemic of dementia.

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LEARNING POINTS

- o Dementia is not a disease itself, but rather a syndrome.
- o Dementia is definitely *not* part of normal ageing, although the elderly are more susceptible, as they are to many other diseases.
- o It is very likely that we shall require a great deal more resources to effectively manage the rising burden of dementia in our community.
- o We now possess validated diagnostic criteria, standard assessment instruments, multi-disciplinary clinics to manage dementia patients, family support groups patient advocacy groups and some moderately effective treatments.
- o Major breakthroughs in the search for effective treatments and prevention strategies are needed if we are to cope with the anticipated epidemic of dementia.