

Breakthroughs in Alzheimer's Research: News You Can Use

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Testimony

The rapidly growing older adult population has resulted in dramatic increases in age-associated illnesses, most notably the dementing disorders. Dementia affects 10% of all individuals 65 years or older, and its prevalence rises exponentially to approach 50% by age 85. Dementia is costly, both in terms of public health burden (\$100 billion annually in the U.S.) and in the personal toll extracted from patients and their families. As U.S. society continues to age, the already major impact of dementia soon will become overwhelming unless effective interventions become available.

There have been remarkable clinical and research advances in dementia in the past two decades. It is now appreciated that dementia is not part of normal aging but instead represents a disease process. Although a diagnostic test or biomarker is lacking for most dementing disorders, clinical diagnosis can be surprisingly accurate. Most importantly, effective therapeutic options are now available for Alzheimer disease (AD), by far the most common cause of dementia--AD now is a treatable disorder! The availability of treatments has led to improved detection of dementia in its earliest stages and stimulated great interest in prodromal conditions, such as mild cognitive impairment.

Currently approved drugs provide symptomatic benefit for AD. Although the effect size is modest, their benefit is appreciated by physicians and families and can be demonstrated for periods extending beyond one year. Many other agents are being tested in clinical trials. Recent drug development efforts are directed toward disease-modifying strategies. Should one or more of these approaches prove safe and effective, it may become possible to arrest the progression of AD or even to prevent its occurrence.

The optimal time to initiate prevention strategies is in the latent or preclinical stages of AD, prior to the occurrence of any symptoms. It is possible that Alzheimer's begins in the brain years or even decades before sufficient damage occurs to allow dementia symptoms to be expressed. Because the diagnosis of AD currently depends on these symptoms, detection of the preclinical stages is not possible at present. However, highly promising new strategies, including identifying Alzheimer brain changes with imaging techniques in asymptomatic persons, now are under investigation. A very reasonable prediction is that, in the not too distant future, persons at risk for developing AD because of family history or other factors can be assessed before symptoms appear. If they have suggestive brain changes, ideally they would be offered therapies that prevent the development of dementia!

This is a propitious time to pursue the tremendous opportunities for the effective treatment, prevention, and even cure of AD. The appropriate infrastructure is in place with ample numbers of patients, investigators, and assessment tools to test the many

promising therapeutic agents now being developed. The only limiting factor is a lack of funds to carry out these innovative research studies that hold potentially enormous consequences for patients and for society.

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