Alzheimer’s Disease: New Horizons

Latest Advances for early intervention in dementia

There is a growing body of evidence to support early detection and intervention in Alzheimer’s disease – as delegates at the third annual Alzheimer’s disease: New Horizons meeting, initiated and funded by Nutricia Advanced Medical Nutrition, heard recently. The audience was challenged to think differently in relation to management of patients who present early in the disease spectrum, and urged to consider the evidence supporting options available today.

To move the early detection and management of dementia forward, Professor Craig Ritchie, Centre for Clinical Brain Sciences, University of Edinburgh, suggested the current concepts of aetiology and diagnosis need to change dramatically. New management paradigms are required which take account of the multifactorial and complex nature of dementia.

A model that takes account of function, biomarkers, risk factors such as comorbid conditions, age, sex, etc. and individual characteristics is needed to better predict a person’s risk, their likely prognosis and help inform a multifaceted approach to management Professor Ritchie explained.

Optimising dementia services in the UK

Professor Sube Banerjee of the Centre for Dementia Studies, Brighton and Sussex Medical School argued that dementia is one of the most common and serious disorders we face with around 850,000 affected in the UK, costing £26.3 billion annually. This equates to £31,000 per person with the King’s Fund projecting that the financial cost of dementia in England will increase by 135 per cent by 2026.

The negative impacts on those with dementia and their families are profound. It causes irreversible decline in global intellectual, social and physical functioning; behavioural and psychological disturbances are common.

References

in later years, Dr Emer MacSweeney, CEO and Co-Founder of Cognition Health explained. So encouraging early detection of symptoms of mild cognitive impairment (MCI) is important. Early MCI is often accompanied by changes in mood and behaviour which makes the diagnosis difficult. Classically, definitive AD diagnosis was thought possible only at post-mortem, recently, a pathological continuum is emerging in which AD is considered as a clinical-biological entity ranging from normal cognition to severe dementia and biomarkers that correlate with pathology indicating where on that continuum an individual patient sits. Episodic memory disorders are the keystone of the clinical AD syndrome and decreased ability to recall recent events, despite prompting, is probably the most highly predictive for AD even at a prodromal stage.

What clinicians really need to determine when someone presents with MCI is whether he or she is at high or low risk of progressing to dementia, Dr MacSweeney said. Generally, the risk of progression rises with an increasing number of markers, around 25% of cognitively healthy elderly have amyloid deposition in their brain. So diagnosis and assessment must be done in the context of the clinical picture. People with amyloid deposition and cognitive impairment have an 85% chance of progressing to dementia in the following two to three years.

MCI and risk of dementia

MCI is a syndrome defined by clinical, cognitive and functional criteria. Prevalence of MCI is estimated at 10–20% of adults over 65 years of age and those with the condition have an increased rate of progression to dementia, 5–15% over one year. There is no clear cut-off point between normal cognition, MCI and dementia - it’s a continuum. Comorbid neuropsychiatric symptoms are predictive of progression to dementia and diet, specifically a Mediterranean diet, influences progression from MCI to AD. However, it’s an amalgamation of risk factors that will determine whether a person progresses to dementia. Many of these, such as diabetes, depression, stroke and atrial fibrillation can be modified or managed to help people enter old age with a healthier brain which is less likely to develop dementia, Dr Bernadette McGuinness and Professor Peter Passmore, Queens University, Belfast explained.

Souvenaid, a realistic proposition in Mild Alzheimer’s disease

Synapse loss starts early in the course of the disease before the onset of clinical symptoms, so by the time someone is diagnosed with AD they have typically lost over 40% of their synapses. Indeed synapse loss may be the closest pathological correlate with memory loss – more so than amyloid plaques, neurofibrillary tangles or neurotransmitter loss. Synapses are supported by neuronal membrane, which is generated via the Kennedy pathway. Nutrients required for the pathway to function include uridine, phosphatidylcholine and omega-3 fatty acids, as well as nutritional cofactors (B vitamins and antioxidants). Souvenaid, a food for special medical purposes for the dietary management of early AD has shown statistically significant improvements in cognitive function in particular memory performance, in clinical trials commented Dr Roger Bullock, Kingshill Research Centre. The unique combination of nutrients in Souvenaid has been designed to support synapse formation in people living with early AD. Souvenin I, a randomised, controlled, double-blind trial involving 259 drug-naïve patients across centres in 6 European countries in which subjects, MMSE >20, were randomised to take either Souvenaid (n=130) or an isocaloric control drink (n=129). Over 24 weeks, those taking Souvenaid showed significantly improved predefined primary endpoint measures of episodic memory (memory domain score of a neuropsychological test battery) compared with the control group.

Amyloid is not the answer

Clinicians do not treat Alzheimer’s disease per se, they diagnose a clinical syndrome of dementia and whether Alzheimer’s pathology is behind or not is in some ways irrelevant to how patients are managed, Dr David Wilkinson, University of Southampton, told the meeting.

Souvenaid – Key Points

- Souvenaid significantly improves memory in early Alzheimer’s disease over 12, 24 and 48 weeks.
- Excellent tolerability and lack of significant adverse events.
- Offers a realistic proposition to support patients diagnosed with mild AD.
- Souvenin II: Memory was significantly improved over 24 weeks.
- Souvenin II Open Label Extension: Memory continues to improve up to 48 weeks.

The search for a cure and the obsession with amyloid has lead to debate over what is a good treatment. Even though available drugs offer symptomatic treatment, not a cure, they can still make a profound difference to individual patients. Indeed the most effective drugs so far have been focussed on neurotransmitters rather than being disease modifying. The latest of these are the 5HT6 antagonists, which facilitate cholinergic, glutamatergic and probably monoaminergic signalling in brain regions relevant for cognition.

So perhaps the time has come to be a bit more systematic in examining and advising on these risk factors, which can be modified, Dr Wilkinson suggested.

Pain management

Around 45–80% of care home patients experience pain, Dr Simon Manchip, Avon & Wiltshire MH Partnership Trust said. Treating pain can have benefits beyond symptom relief. For example, it can reduce agitation and aggression in people with dementia.

The degree of pain being experienced can be gauged with any of the available pain scales although it is best to avoid those that use ‘smiley faces’ because people with dementia have difficulty interpreting them. Management using a stepwise approach as suggested by W.H.O. includes regular paracetamol as the starting point, possibly supplemented with a topical NSAID formulation, followed by the addition of a weak opioid and then moving to strong opioid analgesia. Constipation is a problem with opioids and the aim is to pre-empt it before it comes. An anti-emetic can be offered to those who experience nausea.

Summary

Delegates were given a fascinating insight from the panel of speakers into the burden, early detection and management of dementia. They were urged not to wait until definitive, scientific research or guidance was forthcoming but to actively consider the needs of people presenting with early stage disease and the management options currently available.