

Feeding problems in dementia

Problems with feeding and malnutrition are common in dementia; the consequences are often serious and worsen with disease progression. Patients can be uncooperative and/or simply unable to eat without time spent and attention given. **Drs Victoria Watts, Beth Turnpenny and Alex Brown** discuss the issues around malnutrition and dementia, and suggest techniques for its management.

Nutritional problems frequently occur in dementing illness¹. In 1906, the German physician Alois Alzheimer described both feeding difficulties and weight loss in the syndrome that bears his name. Of the dementias, Alzheimer's disease (AD) is the most prevalent, followed by multi-infarct dementia, Lewy body disease and Pick's disease. The incidence increases with age. Feeding difficulties and nutritional problems are common to all. Malnutrition is associated with impaired immunity and susceptibility to infection, pressure sores and delayed wound healing^{2,3}. Reduced muscle bulk and strength predisposes patients to falls and injury. There is prolonged hospital stay, greater use of institutional care and increased mortality. For carers, a greater time commitment to the act of feeding and increasing emotional strain at mealtimes can become problematic.

Malnutrition and progression

An unwillingness to eat or drink adequately is not necessarily due to disease progression. It may be secondary to another, often reversible, reason such as concurrent illness (eg, depression or infection, overuse of sedatives, pain and poor oral health such as dental caries). Ill-fitting or absent dentures may also be a cause. Full and detailed assessment to exclude a reversible or modifiable cause is essential when feeding difficulties arise. The incidence of malnutrition increases with the severity of disease.

The reasons for this are multifactorial and include both social and functional decline. They can be considered in early, moderate and severe disease.

Early disease

Early dementia is characterised by memory impairment and disorientation. The prevalence of under-nutrition in this group is difficult to estimate and may mimic that of ordinary elderly people living independently. Most sufferers will be living at home, often on their own or with informal carers. They may not be known either to social or medical services. Problems arise because of relative poverty; patients are often dependent on state benefits, socially isolated and lack transport or the physical independence to get to the shops. Additionally, they may lack the ability to plan and prepare meals. Co-morbidities may hinder the preparation of food and prescribed drugs may affect appetite (*Table 1, overleaf*). These factors are common to many elderly people, especially those with a chronic condition, but the effects are exaggerated in dementia. Thorough and appropriate assessment by the multidisciplinary team is necessary to optimise meal provision to avoid nutritional problems.

Moderate stage disease

At this stage individuals may be in institutional care. Disease progression is characterised by increasing

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Table 1. Examples of potential nutritional toxicity of some common groups of drugs

Drug	Potential disturbance to nutrition
Selective serotonin re-uptake inhibitors (SSRIs)	Gastrointestinal disturbance
Acetylcholinesterase inhibitors	Nausea, vomiting and anorexia
Diuretics	Gastrointestinal disturbance, dehydration
NSAIDs	Gastrointestinal toxicity
Bisphosphonates	Gastrointestinal disturbance, dysphagia
Proton pump inhibitors	Nausea, vomiting, abdominal pain, diarrhoea, constipation

confusion, worsening memory, occasional agitation, lack of concentration, spacial and co-ordination difficulties, as well as insomnia. These factors further limit the ability to eat and result in additional weight loss; added to this is increasing frailty and co-morbidity. Consequently nutritional problems go beyond the day-to-day practicalities of preparation and planning of meals and enter the more complex process of the act of feeding itself.

Several small observational studies have identified interventions to improve oral intake:

- > *Use of familiar foods* — patients are more likely to eat if given a diet to which they are accustomed. Nutritional supplements can be prescribed as a sole source of nutrition or as a dietary supplement, and may be of benefit if individuals are willing to consume them. However this is often not the case⁴
- > *Appropriate food consistency* — finger foods can be well tolerated and increase oral intake⁵. For those with problems swallowing a well presented soft diet, reconstituted with the use of food shaped moulds, looks more appealing than the liquidised ‘mush’ traditionally offered
- > *Adequate time for feeding* — mealtimes can be rushed to fit in with an institution’s routine. Consequently individuals who can feed themselves, albeit slowly, may have insufficient time. Those needing assistance can not be hurried⁶
- > *Skilful and adequate numbers of carers* — in a recent report, Age Concern highlighted the problems of understaffing and lack of resources with regard to feeding in the hospital setting⁷. A skilful, patient and persistent carer can encourage feeding. Helpful techniques include spoon feeding, stroking the neck and chin to elicit a swallow reflex or gentle pressure on the nostrils⁸
- > *Timing of meals and the feeding environment* — hallmarks of disease progression are a lack of concentration and being easily distracted. Disturbance should be minimised and, if

necessary, feeding postponed until the individual is co-operative. In patients with symptoms such as sun-downing (worsening cognition and confusion in the evening) intake may be optimised by capitalising on earlier meals. For individuals with day/night reversible, flexible meal provision is essential.

Late or end-stage disease

In late stage disease the patient is likely to be dependent for all activities of daily living, possibly bed bound and mute. They may refuse to open their mouth when food is presented, may pocket or spit food, and have problems with dysphagia. Subsequent weight loss and dehydration may precipitate hospital admission. For those unable to maintain an adequate oral intake, two options apply: continue to feed orally in the knowledge that intake is insufficient and aspiration possible; and enterally feed, usually via a percutaneous endoscopic gastrostomy tube (PEG).

The decision of what to do is fraught with difficulties and must be sensitively handled within a multidisciplinary team in conjunction with both formal and informal carers, taking into account the patient’s wishes and ethical beliefs if known. On deciding the appropriate action, it is necessary to determine the goal of treatment. Is it to simply prolong life? Or to provide quality and comfort in terminal decline?

Oral feeding

Does it prolong life?

Continued oral feeding may not meet nutritional needs with deterioration inevitable, although there is limited evidence to suggest it may be as effective as enteral feeding⁹. Oral feeding is time consuming and resource heavy with the risk of aspiration.

Comfort and quality of life

Very little is known about the ability of severely demented people to experience thirst or hunger. Palliative care research in people dying of cancer suggest it is not a significant symptom in terminal disease¹⁰. But maintaining oral feeding allows the emotional and social interaction between care giver and patient to continue. This bond may be lost if nutrition is provided by a feeding pump and tube.

PEG feeding***Does it prolong life?***

The placement of a PEG tube is not without complication such as infection, bleeding and gastric or oesophageal perforation with a one to two per cent procedure-related morbidity, often as a consequence of aspiration pneumonia. Enteral feeding does not prevent aspiration, nor necessarily prolong life. One-month mortality has been reported as high as 54 per cent and one-year mortality at 90 per cent¹¹. A more recent study¹² has shown better outcomes with one-month mortality at 20 per cent and one-year mortality at 46 per cent in demented female nursing home

residents over the age of 80 years. This improved outcome is probably a reflection of earlier tube placement within the illness. Enteral feeding has been shown to improve outcomes when the primary cause of dysphagia is stroke¹³, rather than progression of a dementia syndrome. The National Confidential Enquiry into Perioperative Deaths reported in 2005 found that 19 per cent of PEG placements were inappropriate¹⁴. Aspiration pneumonia remains a common cause of death in PEG fed patients.

Comfort and quality of life

In an uncooperative patient enteral feeding may necessitate the use of restraints, either pharmacological (sedation) or physical, which can do little for comfort or quality of life. There is no evidence to support improvement in functional status following PEG insertions and tube complications such as cellulitis, leakage or tube dislodgement may add to co-morbidity and the burden of life. Conversely for individuals who require routine medications for symptoms such as pain or epilepsy, tube placement guarantees a route of drug administration enabling easier amelioration of potentially distressing symptoms.

Key points

- Nutritional problems are common in people with dementia.
- Full assessment is necessary to exclude a reversible cause of deteriorating nutrition.
- PEG feeding is unlikely to improve outcomes in dementia.
- Multidisciplinary assessment is key to anticipation of feeding difficulties and improved patient care.

Conclusion

Nutritional problems in dementia are common and often predictable. Early recognition, assessment of reversible causes and intervention by a multidisciplinary team is essential in all stages of disease when feeding difficulties occur. In late stage disease a pragmatic and holistic approach to terminal decline will ensure the best interests of the patient and their carers.

Conflict of interest: none declared.

References

1. Alzheimer's Society. Food for thought. London: Alzheimer's Society; 2000
2. Fiatarone MA, Evans WJ. The aetiology and reversibility of muscular dysfunction in the Aged. *J Ger* 1993; **48**: 77–83
3. Roebothan BU, Chadra RK. Relationship between nutritional status and immune function of elderly people. *Age and Ageing* 1994; **23**: 49–53
4. Ross F. An audit of nutritional supplement distribution and consumption on a care of the elderly ward. *Journal of Human Nutrition and Dietetics* 1999; **12**(5): 445–52
5. Biernacki C, Barratt J. Improving the nutritional status of people with dementia. *British Journal of Nursing* 2001; **10**(17): 1104–14
6. Suski NS, Nielsen CC. Factors affecting food intake of women with Alzheimers type dementia in long-term care. *J Am Diet Assoc* 1989; **89**: 1770–73
7. Hungry to be Heard. Age Concern. London 2006
8. Watson R. Under nutrition, weight loss and feeding difficulty in elderly patients with dementia: a nursing perspective. *Reviews in Clinical Gerontology* 1997; **7**: 317–26
9. Mitchell S, Buchanan J, Littlehale S, Hamel M. Tube feeding versus hand feeding nursing home residents with advanced dementia: a cost comparison. *JAMDA* 1994; **5**(2): 523–29
10. McCann RM, Hall WJ, Goth-Juncker A. Comfort care for terminally ill patients. The appropriate use of nutrition and hydration. *JAMDA* 1995; **272**(16): 1263–66
11. Sanders DS, Carter MJ, D'Silva J, et al. Survival analysis in percutaneous endoscopic Gastrostomy feeding: work outcome in patient with dementia. *American Journal of Gastroenterology* 2000; **95**(6): 1472–75
12. Rixon E, Kagansky N, Shmuel L. Percutaneous endoscopic gastrostomy: evidence of different prognosis in various patient subgroups. *Age and Ageing* 2005; **34**: 353–57
13. Food Trial Collaboration. Effect of timing and method of enteral tube feeding for dysphagic stroke patients (FOOD): a multi-centred randomised controlled trial. *Lancet* 2005; **365**: 764–72
14. The 2004 report of the National Confidential Enquiry into Patient Outcome and Death. Scoping our practice. London 2004