The term dysphagia is used to describe difficulties swallowing resulting from neurological or physical impairment of the oral, pharyngeal or oesophageal mechanisms. Dysphagia is associated with increased morbidity and mortality and decreased quality of life due to increased risk of aspiration, chest infections, pneumonia, choking, asphyxia, dehydration and malnutrition.

Dysphagia affects 99 million people worldwide, i.e. approximately eight per cent of the global population. Dysphagia can occur at all ages but infants and the elderly are most affected. In the over 65 year-olds 10-30 per cent may have dysphagia, along with 50-75 per cent of nursing home residents and 10 per cent of acute hospitalised elderly patients. This article will concentrate on dysphagia in adults and one management approach, using texture-modified foods and/or thickened fluids.

Management of Dysphagia with Texture-modified Foods and Thickened Fluid

Emma Sherrington RD D.Phil., Acute Care Dietitian, Central Middlesex Hospital, London North West NHS Trust

Assessment of dysphagia

Dysphagia is identified using bedside swallow assessments and instrumental investigations (e.g. barium swallow, videofluoroscopy and fibre-optic endoscopic evaluation [FEES]) to visualise some or all three of the swallow stages. The National Institute for Health and Care Excellence (NICE) guidelines recommend all patients with acute stroke have their swallow function screened by a suitable trained healthcare professional (HCP) before being given anything to eat or drink. NICE advises that those who show signs of dysphagia should have a specialist assessment within 24-72 hours of admission. Usually, speech and language Therapists (SLT) conduct specialist assessments. Bedside assessments are relatively quick, easy to perform and safe for patients, and are often completed by appropriately trained nurses. However, silent aspiration may be missed. FEES only visualise the pharyngeal stage but all instrumental assessments can be used to assess the effectiveness of different management strategies, such as compensatory swallow techniques and variations in food and fluid consistency.
Considering the regular movement of HCPs across national borders, consistent usage of terms is becoming more pertinent to safe practice.

Managing dysphagia with texture-modified foods and thickened fluids

Texture-modified foods and thickened fluids may be given to reduce the risk of choking and aspiration. Choking is defined as the inability to breathe because an airway is blocked, constricted or swollen shut. Thus, supplying foods of a texture that are more easily chewed and swallowed may avoid choking. Aspiration is the breathing in of a foreign object into the airway. Thickened fluids that flow more slowly, thereby allowing better-controlled swallowing, may reduce aspiration of fluid into the lungs.

Cichero et al. highlight the need for internationally agreed terminology and descriptors of texture-modified foods and fluids. There are reports that confusion amongst staff in care settings over food textures has been a contributing factor in patient deaths and that foreign body asphyxiation is a preventable cause of death in the elderly.

Cichero et al. comments that even within countries there can be a huge variety of terms that describe foods of different textures. In 2011, in the UK, the National Patient Safety Agency (NPSA), in conjunction with the Royal College of Speech and Language Therapist (RCSLT), British Dietetics Association (BDA), Hospital Caterers Association (HCA) and National Nurses Nutrition Group (NNNG), published Dysphagia Diet Food Descriptors (see Table One). This was an update of the BDA and RCSLT National Descriptors for Texture Modification in Adults (2002). The NPSA Descriptors are for food and we still await the NPSA recommended review of fluid descriptors (see Table Two).

Stage 1-3 thickened fluids are achieved by adding increasing quantities of commercially available thickeners, as specified by the manufacturer and vary from brand to brand. To illustrate the need for clarification of fluid descriptors in the UK, the author is aware that in some hospital trusts an intermediate stage between naturally thin fluids and Stage 1, sometimes referred to as ‘Stage 0’ or ‘mildly thick’, is also employed. In the US, terms such as ‘nectar’, ‘honey’ and ‘pudding’ are used to describe thickened fluids. The Dietitians Association of Australia and Speech Pathology Association of Australia (2007) agreed terms are ‘Mildly Thick Level 150’, ‘Moderately Thick Level 400’ and ‘Extremely Thick Level 900’, with the numbers referring to a measure of their viscosity. Products available in the UK may use international descriptors on packaging.
Providing texture-modified food and/or thickened fluids to patients in the acute and community setting

So what are the challenges of providing texture-modified food and/or thickened fluids to patients in the acute and community setting? Food needs to be nutritious, appealing, satisfying and safe – texture modification can provide challenges in meeting all of these criteria. The nutritional content of texture-modified foods, especially puree, may be lower than standard foods. Thus, patients with dysphagia may struggle to meet their nutritional requirements putting them at risk of malnutrition. A study of hospital patients receiving texture-modified foods compared to normal diet found that none of the texture-modified group met their energy requirements compared with nearly half in the normal diet group, and 93 per cent failed to meet their protein requirements as compared to 40 per cent failing in the normal diet group.11

Hartwell et al.11 found that temperature and texture modification are important factors in patient satisfaction with hospital meal services. Thus, patients' compliance with texture-modified diets may be compromised by poor palatability. In addition, it is crucial that foods are of the correct consistency and do not contain high-risk foods such as skins, husks, hard lumps or crusts forming an unpalatable result. Thus, for some patients, texture-modified foods can result in reduced fluid intake leading to dehydration.22

Acute

In hospitals, ensuring patients with dysphagia receive the correct food and fluid to meet their requirements and maintain safety requires effective team working. Nurses, healthcare assistants, dietitians, speech and language therapists, catering and, potentially occupational therapists to provide specialist crockery or cutlery to aid feeding, all contribute. Hospital caterers need to provide suitable menu options that meet the four descriptors, with a minimum provision of Texture-C and -E. This allows for Texture-C puree to be made into Texture-B by adding sauce or gravy before serving and Texture-D for Texture-C puree to be made into Texture-B by adding sauce or gravy before serving and Texture-E for Texture-D puree to be made into Texture-B by adding sauce or gravy before serving.23

In the acute hospital setting, the nutrition and swallowing needs of patients admitted with chest infections following acute stroke should be weighed up against the need for early mobility and ambulation.24

Texture-D and -E purees can be made into Texture-B puree by adding sauce or gravy before serving and Texture-C puree to be made into Texture-B by adding sauce or gravy before serving and Texture-D puree to be made into Texture-B by adding sauce or gravy before serving.23

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In recent years, Meals-on-Wheels services have changed. For example, Brent Council announced in 2013 that it was discontinuing providing Meals-on-Wheels services via a single large caterer and allowing residents to choose from a variety of small suppliers.25 This allows for the opportunity for local social enterprises (SE) to provide services that meet specific community needs, e.g. ethnic dysphagic meals. However, while large suppliers can have sophisticated quality and safety control in place this may be more challenging for a SE.

The provision of thickened fluids can be equally problematic for patients in both acute and community settings. Sura et al.26 state that despite being a frequently used method of managing dysphagia there is very little evidence that it results in good clinical outcomes such as reduced incidence of aspiration pneumonia.27 Thickened fluids are frequently disliked by patients and can result in reduced fluid intake leading to dehydration.22

Despite dysphagia being a common condition its management in the acute and community setting remains challenging. Recent updates in guidance and standardisation of terminology should contribute to improved care for patients requiring texture-modified foods and thickened fluids. Developing products and services that ensure patients meet their nutritional and hydration needs is an ongoing requirement.

Conclusion

References: