Identifying and managing dysphagia in the community

Rosie Thompson

Dysphagia is a swallowing condition that mainly affects older adults and which can be a short- or long-term issue. Dysphagia can have an enormous impact on patients and their carers and for community nurses, early identification is key to managing the condition successfully. Similarly, by familiarising themselves with the signs and symptoms of the condition, nurses can ensure prompt referral to a speech and language therapist who can formulate an individualised plan of care. Managing dysphagia requires a multidisciplinary approach, with the aim of helping patients to maintain an adequate and safe oral intake.

KEYWORDS:
Nutrition ■ Dysphagia ■ Aspiration ■ Malnutrition ■ Swallowing

Dysphagia is a debilitating condition where the individual has difficulty with some or all of the swallowing process. Dysphagia can be either a long- or short-term issue and is a symptom of other conditions rather than a standalone diagnosis. Prevalence in community settings has been estimated at approximately 15% (Barczi et al, 2002), while a recent European study demonstrated 40% of nursing home residents were affected by dysphagia in some way (Nogueira and Reis, 2013).

Older adults are at greater risk of developing dysphagia due to the way the swallowing mechanism changes with age (Sura et al, 2012), however, dysphagia is always abnormal and requires investigation (Smithard, 2015). As well as the significant impact on an individual’s health and quality of life, dysphagia also contributes to the rising cost of health care (Lancaster, 2015). One US study of 3,200 stroke patients found that the cost of care was $4,510 higher one year after a health event for those with dysphagia, representing a 23% increase in costs and a 30% longer hospital stay (Bonilha et al, 2014). Patients suffering from dysphagia are also twice as likely to be discharged to nursing homes compared to those without the condition (Royal College of Speech and Language Therapists [RCSLT], 2009).

THE SWALLOWING PROCESS

To fully understand dysphagia, it is necessary to look at the swallowing process. Swallowing is the reflex action of moving a bolus of food or fluid safely from the mouth into the oesophagus, and comprises four stages (RCSLT, 2009; Lancaster, 2015):

› Oral preparatory: chewing to mix the food with saliva ready to be swallowed
› Oral propulsion: moving the bolus of food or fluid to the back of the mouth and into the pharynx
› Oropharyngeal: a series of processes that pass the bolus down the pharynx and into the oesophagus
› Oesophageal: the bolus passes down the oesophagus and into the stomach.

A problem can occur at any one of these stages, resulting in the patient developing dysphagia; the specific term used to describe problems in stages 1–3 is oropharyngeal dysphagia (Lancaster, 2015).

One common sign of food or fluid not descending below the vocal cords is the patient starting to cough in an attempt to clear the airway. If the coughing is not successful and the bolus does enter the patient’s lungs, this is termed ‘aspiration’ (Fletcher, 2015), and can lead to a chest infection termed ‘aspiration pneumonia’, potential hospitalisation, and even death. ‘Silent aspiration’ can also occur, which is defined as aspiration with the absence of a cough (Miles, 2015). Patients who silently aspirate have a much higher risk of developing complications, as it is not immediately obvious that aspiration has occurred.

CAUSES OF DYSPHAGIA

The causes of dysphagia can be broadly divided into three categories; neurological, muscular, and obstructive (Table 1), however, there can be other contributing factors such as medication and infection, which can adversely affect the patient’s ability to swallow safely (Lancaster, 2015). Community nurses must be aware of patient groups at high risk of...
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developing swallowing problems, as the sooner a problem is identified the sooner it can be addressed.

IDENTIFYING PATIENTS WITH DYSPHAGIA

The presentation of dysphagia will depend on the context in which it occurs; for example, when observing patients with dysphagia at mealtimes, they may cough or choke, have difficulty chewing, spit out food, or have a ‘wet’-sounding voice. Alternatively, when community nurses are visiting patients in their own homes, they should be alert for signs such as weight loss (i.e. loose-fitting clothes or jewellery), uneaten food, and any concerns patients or carers may raise.

Dysphagia is frequently under-recognised until the patient is losing weight as questions regarding swallowing rarely form part of a holistic assessment (Lancaster, 2015). The National Institute for Health and Care Excellence (NICE, 2006) and the National Patient Safety Agency (NPSA, 2007) have identified common indicators, which can be used by community nurses to identify patients who may be at risk of developing dysphagia (Table 2).

Community nurses commonly identify swallowing problems as they spend the most time with patients and are ideally placed to recognise any changes in their swallowing ability. A bedside assessment tool such as the Standardised Swallowing Assessment (SSA) can be used to screen patients. This involves an initial assessment of the patient to ensure they are capable of participating in the test (they need to be awake and able to sit up), before their swallow ability is tested by sipping water from a spoon, then, if they are able, drinking water from a glass (Heart and Stroke Foundation of Ontario, 2008).

If the patient exhibits absent swallow, coughing, delayed coughing or changes to their voice, they would be placed on ‘nil by month’ and referred to a speech and language therapist for further assessment (Scottish Intercollegiate Guidelines Network [SIGN], 2010). One systematic review identified the SSA as a reliable and sensitive way to identify the risk and severity of dysphagia in nursing home residents (Park et al, 2015).

HOW CAN NURSES HELP?

Currently, there is no standardised national protocol for dysphagia screening (Daniels et al, 2012) and community nurses should follow their local trust guidelines when assessing patients with suspected dysphagia (Malhi, 2016), potentially resulting in referral to a speech and language therapist. Local trust guidelines might include guidance on the following:

- Which bedside swallowing test to use
- At what point it is to be used, e.g. acute trusts often aim to assess stroke patients’ swallow within four hours of admission
- Who can perform the swallowing test (e.g. qualified nurses, assistant practitioners, speech and language assistants).

However, if no screening tool is available and there are concerns that a patient may be experiencing dysphagia, the community nurse should consider onward referral for further assessment.

In the meantime, there are several actions nurses and carers can take to support the patient while they await specialist review (Thompson, 2016):

- Identification: using visual cues for staff and carers/relatives that the patient requires assistance, i.e. acute hospitals use signs above the bed or a ‘red tray system’ (where patients identified as requiring extra attention when eating, or who require foods with a modified texture, are given meals on a red tray as a visual reminder to staff)
- Communication: in the patient’s home, community nurses can help to ensure the patient and their family/carers are aware of any help the patient needs
- Positioning: the patient should be sat out in a chair if possible, or upright in bed, when eating
- Presentation: community nurses can advise carers/relatives to cut up the patient’s food into manageable pieces to make it easier to eat
- Company: sitting with patients and encouraging them to eat can be helpful and community nurses should involve family members if they are happy to participate
- Keeping the patient’s mouth clean: poor oral hygiene is linked to the development of pneumonia and can affect the patient’s ability to taste and manage their diet.

### Table 1: Causes of dysphagia (Malhi, 2016)

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<td>Poor control of food in the mouth</td>
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Swallowing assessment
By assessing the patient’s anatomy and the functionality of their swallow mechanism, speech and language therapists have a key role in the diagnosis and management of dysphagia (SIGN, 2010).

A clinical swallow examination is carried out at the patient’s bedside, which involves taking a medical history and an assessment of the patient’s alertness and ability to participate in the test. The therapist examines the patient’s mouth, including muscle tone, sensation, gag reflex, and ability to swallow saliva. They will then assess the patient’s swallow with a drink of water, feeling the patient’s throat and observing for any signs of an ‘unsafe’ swallow, such as coughing, delayed coughing, oral residue, a ‘gurgly’/wet voice, reduced laryngeal elevation, or the patient requiring multiple swallows to clear the bolus.

If silent aspiration is suspected, the patient is then referred on for an instrumental assessment. A videofluroscopic swallow study (VFSS) provides a moving image of the patient swallowing various consistencies of food mixed with a radio-opaque dye; all parts of the swallow can be visualised, including whether or not the patient is silently aspirating (Miles et al., 2014). Alternatively, a fiberoptic endoscopic evaluation of swallowing (FEES) uses a small camera passed through the nose and into the throat to directly visualise the anatomy of the pharynx and larynx; this is useful when structural abnormalities are suspected.

TheVFSS is considered the ‘gold standard’ for dysphagia of neurological origin such as strokes or multiple sclerosis, however, the FEES has also been effective in identifying aspiration in this patient group (Miles et al, 2014).

Managing dysphagia
Following assessment by a speech and language therapist, an individualised plan of care can be formulated for the patient, thus enabling them to receive food, fluids, and medicines in the safest and most enjoyable way possible (Miles, 2015).

However, management of dysphagia requires a multidisciplinary approach involving doctors, nurses, dieticians and carers and the Royal College of Physicians (RCP, 2010) recommended that a team of healthcare professionals should be available to work with patients and their families when feeding difficulties occur. The aims of dysphagia management will vary from patient to patient according to individual circumstances, and the Department of Health (DH, 2010) recommended that patients and their carers should be involved throughout the decision-making process.

Management strategies commonly take the form of dietary modifications such as textured foods and thickened fluids, making the food easier to control in the mouth and thickening of food. Commonly these consistencies include:

- D: pre-mashed — soft and tender, can be mashed with a fork before serving
- C: thick puree — smooth, no ‘bits’, requires some chewing
- B: thin puree — smooth, no ‘bits’, requires very little chewing
- A: liquid — can be eaten without using a fork

As dysphagia varies in severity from patient to patient, food can be prepared in a variety of different consistencies to meet the patient’s needs. A speech and language therapist will prescribe a diet for the patient according to one of the criteria below (NPSA, 2011):

- B: thin puree — smooth, no ‘bits’, does not require chewing, cannot be eaten with a fork
- C: thick puree — smooth, no ‘bits’, does not require chewing, can be eaten with a fork
- D: pre-mashed — soft and tender, mashed with a fork before serving, no loose liquid, requires very little chewing
- E: fork-mashable — soft and tender, can be mashed with a fork, requires some chewing

Fluids can also be modified to decrease risk of aspiration. These are not discussed in the NPSA document, however, there are other resources offering clear guidance on how to thicken drinks appropriately. Fluids should only be thickened following assessment by a speech and language therapist and Nutrition and Dietetics Resources (2014) described the three stages of fluid-thickening:

- Stage 1: can be drunk through a
straw: leaves a thin coat on the back of a spoon
- Stage 2: cannot be drunk from a straw but can be drunk from a cup: leaves a thick coat on the back of a spoon
- Stage 3: must be taken from a spoon as too thick to take from a cup or a straw.

Ensuring dietary recommendations are clearly communicated to the patient, their family and carers, and emphasising why they are so important, is key to the successful management of dysphagia. Carers may require education and training on appropriate dysphagia-friendly meals and snacks, how to thicken fluids, or on safe positioning of the patient at mealtimes.

Communicating a positive approach towards any dietary modifications can also have an impact on the success of any measures, as the attitudes of nurses and carers have been shown to influence patients’ oral intake (Garcia and Chambers, 2010).

Providing a safe and nutritious, yet visually appealing, texture-modified diet can be a challenge, as the more altered the consistency of the food, the less attractive it becomes (Brook and Erwin, 2015). Table 3 lists strategies that can be used to improve the nutritional content and appearance of altered textured meals, with the aim to improve enjoyment for those requiring a dysphagia diet.

### Nutritional supplements

Dietary modifications can make it difficult for patients to meet their nutritional requirements, so the involvement of a dietician is essential to ensure assessment of the patient’s nutritional needs (Fletcher, 2015). Food fortification through adding powdered milk to foods and using high fat and high calorie fluids when pureeing meals, can increase the calorific content of meals without adding volume, making them an ideal choice if the patient has a smaller appetite or struggles to eat a larger meal.

Sometimes, patients may require more than food fortification to meet their needs. Oral nutritional supplements (ONS) come in both drink and ‘pudding’ form, and are available in a variety of flavours to suit different tastes. A typical ONS drink (volume between 125–300mls) contains approximately 300kcal (kilocalories), 12g of protein and a full range of vitamins and minerals (Malnutrition Pathway, 2012).

Smaller volume, higher density supplements are useful for patients who are unable to tolerate a high fluid volume, either due to fatigue or fluid restrictions such as those with renal failure. Adding an ONS to a patient’s diet can provide a valuable source of nutrition, particularly for those patients who are only able to consume small amounts.

### Enteral feeding

If, despite the interventions above, the patient is unable to meet their dietary needs orally, or if dysphagia is likely to be a long-term issue, enteral feeding can be considered (Thompson, 2016). Enteral feeding is when a liquid feed is delivered through a tube into the stomach or first part of the small bowel, bypassing the swallowing process altogether.

The most common method used in a community setting is the percutaneous endoscopic gastrostomy (PEG) tube, which passes directly into the stomach through the abdominal wall. Enteral feeding can be used to supplement oral intake, or to provide complete nutrition if the patient is unable to take anything orally at all. However, the Royal College of Physicians only recommended ‘nil by mouth’ as a last resort, even when the patient’s swallow is judged to be unsafe (Royal College of Physicians, 2010).

Discussion regarding placement of a feeding tube should involve the patient, their family, and the wider healthcare team, and should address the ‘pros and cons’ of this method of feeding for the patient concerned. For example, PEG is a safe secure route of nutrition and hydration and is easy to look after; patients can also be taught to self-manage their tubes and feeding regimens can be adapted to suit the patient’s preferences. Tube feeding can also improve quality and duration of life.

However, the patient has to be fit enough to undergo the procedure, with post-PEG mortality estimated between 9 and 17% (NPSA, 2010). Complications such as leakage and infection can also develop post-insertion, and the social aspect of being tube-fed such as no longer being able to participate in meals can be upsetting and isolating.

A small study of patients undergoing PEG feeding found that although the majority felt the insertion of a gastrostomy had been life-saving, enteral feeding had started to dominate their lives and was a significant burden (Jordan et al, 2006).

### IMPACT OF DYSPHAGIA

Dysphagia can have a huge impact on patients and their families and carers; a European study found that dysphagia made life less enjoyable for 55% of those surveyed (Ekberg et al, 2002). For the patient, it can lead to social isolation and embarrassment. Food and mealtimes are social events and being unable to participate, either due to being nil by mouth or having a meal that is very...
obviously different can be deeply distressing (Brook and Erwin, 2015). This can lead to problems with compliance or patients simply not eating enough; one-third of those surveyed by Ekberg et al (2002) stopped eating at mealtimes even if they were still hungry. Similarly, in patients with dementia, refusing food is often part of the disease progression, and in these cases families will need support and understanding from their community nursing team.

Carers are also affected, as dysphagia disrupts daily life for all the family, and they may often make subtle changes to help the patient feel more ‘normal’, such as adjusting their own meals (Nund et al, 2014; Smithard, 2015). Expectations and the reality of life with dysphagia can be very different for both patients and carers, and this is where community nurses can provide valuable support as patients come to terms with the change in their lives.

From a nursing perspective, initiatives such as increased staffing around mealtimes, using trained volunteers/family members, and providing assistance when required, have been shown to improve nutritional status in this group of patients (Wright et al, 2008; Green et al, 2011). However, due to staffing levels this can be challenging, and not always achievable.

CONCLUSION

Dysphagia can be a short- or long-term condition, which has an enormous impact on patients and their carers; both physically and psychologically. Early identification is key to managing the condition, and by being aware of the signs and symptoms, nurses can ensure prompt referral to speech and language therapists who can formulate an individualised plan of care.

Managing dysphagia requires a multidisciplinary approach, with the aim being for the patient to maintain an adequate oral intake, safely and in the most plausible way possible.

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