Medicines and Dysphagia Pathway

Issues around medicines in patients with dysphagia

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Case study

- 86 male patient with vascular dementia admitted to hospital with LRTI.
- On admission, daughter informs that patient has difficulty swallowing medication and is referred to SLT.
- On discharge, patient on Stage 1 fluid and puree diet.
- What would you advise?
Medication on discharge as follows:

- Ramipril capsules 1.25mg daily - crush and disperse in water
- Dipyridamole 200mg four times a day - crush and disperse in water
- Aspirin 75mg daily - crush and disperse in water
- Ferrous fumerate 140mg/5ml liquid - 210mg daily
- Lansoprazole fastabs- 30mg daily
- Clarithromycin 125mg/5ml liquid - 500mg (20ml) twice a day 5/7
- Co-amoxiclav 250 and 62mg/5ml liquid - 10ml three x a day 5/7
- Simvastatin tablets 40mg at night - hold until Abx completed
- Paracetamol 500mg/5ml liquid - 1000mg four times a day
What are the challenges?

- What type of swallow has the patient?
- What does the SLT recommendations mean?
- What input does the pharmacist have?
- How to amend the medication formulations to allow for the safe and effective administration to the patient.
OBJECTIVES

- Role of the pharmacist’s understanding of dysphagia
- To highlight medication delivery issues in those who are dysphagic
- Using the Pathway
- Legal implications of unlicensed administration
- MDT management of dysphagia. How we work as an MDT
What is Dysphagia?

Dysphagia is the term used to describe a swallowing disorder usually resulting from a neurological or physical impairment of the oral (mouth), pharyngeal (upper throat) or oesophageal (lower throat) mechanisms.
Why is it a problem?

- common complication of stroke, occurring in up to two thirds of patients suffering stroke
- Up to two thirds of patients with dementia,
- Up to a quarter of patients with Chronic Obstructive Pulmonary Disease
- associated with **aspiration pneumonia** and this can lead to **poor functional outcomes**, such as dehydration, malnutrition, increased length of hospital stay, and **death**
Patients with dysphagia are unable to take some oral formulations of medication.

Medication administration errors have been found more than three times as frequently in patients with dysphagia than in those without.
Pharmacist’s role in Dysphagia

- Review the patient’s dysphagia treatment plan
- Review the patient’s medication
- Determine how the patient swallowed food and medication prior to admission
- Suggest alternative methods of administration, dosage forms, or therapeutic agents
- Prepare instructions on the medication administration that guide the patient, family member or inpatient nurse
- Document recommendations in patients notes
Swallowing difficulties present a management challenge since:

- Therapeutic outcomes are affected due to nonadherence.
- Tablets or capsules can cause choking with consequent risk to the airway.
- Possible increased risk of a tablet or capsule becoming lodged in the patient’s throat causing oesophageal damage.
- Altering the formulation of a medicine has important **medical** and **legal** implications.
Who is the resource for?

- support pharmacists and those who are involved in administering medication to patients with dysphagia
- used in the community to support GPs, SLTs and those who help others with administration of medication to ensure safe selection and administration of appropriate formulations
- In hospital, the resource is designed to help pharmacists who are part of the multidisciplinary team, which includes dieticians, doctors, nurses, and speech and language therapists, focussing on management of swallowing safely, as well as nutrition, hydration and pharmaceutical needs.
In Hospital

- Look above patient’s bed for leaflet from SLT indicating the patient’s swallowing recommendations!!!
- Pharmacists must then manipulate the patient’s medication as per the SLT recommendations to ensure safe and effective administration of medication
Section A
Flow chart for managing medicines in patients with dysphagia

1 General Principles
Swallowing difficulty identified:
Liaise with Speech and Language Department

2 SLT recommend
Modified diet and fluids

3 SLT recommend
Water protocol WITH ORAL DIET

4 SLT recommend
Water protocol only or Nil By Mouth

This flow chart provides a simple method of determining the stage of swallowing for individual patients and for the corresponding manipulation of formulation to allow for the safe and most effective administration of medication.

1. General Principles

- Consider the following when prescribing medication for a patient with dysphagia:
  - Is this medication still indicated and required? Perform a medication review.
  - Can this tablet/capsule be swallowed whole with yogurt (check compatibility with yogurt - check drug-food interaction) e.g. levothyroxine, bisoprolol, ramipril?
  - Can the tablet be crushed or the capsule opened and administered with for administration with thickened fluid or yoghurt.
  - Check compatibility with yogurt or pureed food must be checked for drug-food interaction. Remember to check SLT recommendations re. diet stages and fluid consistency.
- Can the tablet be **swallowed whole** when mixed with **appropriate consistency of food/fluid**? Check the size of the tablet which is comfortable for the patient to swallow. Small tablets, such as those less than 4mm including bisoprolol, levothyroxine, may be suitable.

- Does the person administering/nurse know how to prepare and administer this medication.

- Annotate discharge letter to GP and communicate with community pharmacist on the patient’s medication administration and swallow (see Appendix 1 and Appendix 2 for information and communication sheet examples).
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2. Modified fluids and diet

While pharmacists commonly encounter solid and liquid medication, SLTs have classified food and fluid consistencies to meet swallowing needs. These can be used to support safe oral administration of medicines where simple liquid or solid medication may not be safe.
Knowledge of food textures can allow some tablets or capsules to be administered whole, rather than crushed tablets or opened capsules, within a particular texture of food. This is always preferable from both legal, pharmaceutical and administration perspective.
Texture B ‘Thin blended diet’ cannot be eaten with a fork. e.g. tinned tomato soup, runny yoghurt (thin - not set), thin custard - pours from a spoon rather than drops in a lump.

Texture C ‘Thick blended diet’ can be moulded, layered and piped. It will hold its own shape and can be eaten with a fork. No chewing required. e.g. blancmange, smooth fromage frais, mousse, whipped double cream. IT SHOULD BE SMOOTH - NO LUMPS

Texture D Mashed Diet - Food that requires very little chewing

Texture E Soft Diet) - Foods made up of solids and thick sauces e.g. sponge pudding, fish in sauce, banana, macaroni cheese, potato, cooked carrots, bread with soft filling, tinned fruit
Fluid consistencies

- Be aware of **FLUID** consistencies which are manipulated using thickeners.
- Various brands of thickener. With **OWN** formulae to mix

**Hormel’s ‘Thick and Easy Powder’:**

- **Stage 1:** 1 level scoop ‘Thick and Easy’ powder per 100mls fluid : **SYRUP CONSISTENCY**
- **Stage 2:** 1.5 level scoops ‘Thick and Easy’ powder per 100mls fluid : **CUSTARD CONSISTENCY**
- **Stage 3:** 2 level scoops ‘Thick and Easy’ powder per 100mls fluid : **PUDDING CONSISTENCY**

- MIX WITH A FORK AND LEAVE TO STAND FOR 1 MINUTE
A stepwise approach:

**STEP 1**

Use a licensed medicine in a suitable formulation.

In order to use a licensed medicine, consider switching to a different agent in the same class, or to a different route of administration.
Consider the patient’s method of feeding:

- Patients on liquid feeds may take oral liquid medicines, dispersible tablets or solid preparations dispersed in water prior to administration.
- For patients on thickened fluids, liquid medicines can be mixed with products like Thick and Easy®. –Check for ability to thicken-e.g Movicol® does not thicken-change to magnesium hydroxide with quarter scoop of Thick and Easy-feed with spoon.

In some cases, patient’s may swallow small whole tablets with a teaspoon of soft puree or yogurt.

Patients on soft-food diets may be able to swallow crushed tablets or the contents of capsules given with food (unlicensed).

- Patients with enteral feeding tubes may have oral medicines given by this route.
STEP 2
Use a licensed medicine in an unlicensed manner

e.g. crushing/dispersing tablets in water or by opening capsules:

- Ramipril capsules can be opened and the contents mixed with water.
- Bendroflumethiazide tablets can be dispersed in water. Both the above examples are suitable for administration orally or via a feeding tube.

Not all medicines are suitable for administration in this way and check resources (NEWT Guidelines, Handbook of Enteral Feeding)

As before, consider switching to a different agent or route of administration in order to use a licensed product.
STEP 3
Where there is no licensed option, consider a ‘special’.

Special-order (‘special’) liquid medicines are unlicensed and expensive. They should only be used if there is no licensed medicine that meets the patient’s needs e.g. ethambutol liquid 500mg/5ml, demeclocycline liquid 300mg/5ml cost £315/150ml (short expiry date and very, very expensive)
Section A
Flow chart for managing medicines in patients with dysphagia

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   Liaise with Speech and Language Department

2. SLT recommend Modified diet and fluids
3. SLT recommend Water protocol WITH ORAL DIET
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3. Water Protocol with oral diet

Medications **NOT** to be taken with water.

**PHARMACY** to advise on medication administration

- Check food texture being given with SLT as medication may be given with food
- No water to be given at mealtimes or for 30 minutes after eating
- No other fluids to be given i.e. tea, orange juice. **WATER ONLY.**
- No thin food textures i.e. soup, ice cream, cereal and milk
- Do not give thickened fluids – even if coughing
- Regular mouth care to keep the mouth clean, especially after mealtimes
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4. Water Protocol with No Oral diet

Tips for managing patients on Water Protocol with NO ORAL DIET

- Medications cannot be taken orally in any form
- Is an enteral feeding tube to be inserted? If yes, discuss with PHARMACY to amend and advise on most appropriate formulations (see NEWT Guidelines and Handbook of Drug Administration via enteral feeding tubes)
- Only water to be sipped when required.
- No other fluids to be given i.e. tea, orange juice. WATER ONLY.
- Regular mouth care to keep the mouth clean, especially after mealtime
Nil by mouth

- Some patients require an enteral feeding tube (nasogastric tube (NG tube-short term solution) and later Percutaneous endoscopic gastrostomy (PEG) or Radiologically Inserted Gastrostomy (RIG)

**Tips for managing patients with enteral feeding tubes:**
- Does this patient have a patent enteral feeding tube? **YES,**
- Refer to NEWT guideline/ Handbook of Drug Administration via enteral feeding tubes
- Review cost and availability of medication of licensed liquid/dispersible tablet. Try to avoid unlicensed crushing of tablets/opening capsules or unlicensed special liquid formulation.
- Regular mouth care to keep the mouth clean
- Annotate discharge letter to GP and communicate with community pharmacist on the patient’s medication administration, rationale for choice and length of therapy.
Legal implications of altering a solid-dose oral formulation

- To protect patients, the law requires that the:
  - Right medicine is given to the
  - Right person, at the
  - Right time, using the
  - Right dose, in the
  - Right form
- Products should be prescribed in accordance with their **manufacturing authorization** whenever possible.
- When products are used outside their licence (e.g. crushing non-crushable tablets) a **greater liability rests with the individual prescriber, dispenser and/or person responsible for the provision or administration of the medication**.
- **Liability** can be **minimized** by:
  - **Clear documentation** of the reason for altering the medicine.
  - Following evidence-based, safe, effective practice.
  - Obtaining consent from the patient (in England and Wales, doctors may act in a patient’s best interest if the patient is incapable of providing consent [in accordance with the Mental Capacity Act 2005]; in Scotland, doctors must act according to requirements of Part 5 of the Adults with Incapacity [Scotland] Act 2000).
Unlicensed medicines & the law

- Under the Medicines Act, all prescribers (doctors, dentists, independent and supplementary) are allowed to prescribe medicines outside of their license either for unlicensed patient groups (off-label) or medicines with no license e.g. medicines with a non-EU license (unlicensed).

- By prescribing either an off-label or unlicensed medicine the liability rests with the prescriber. It may also rest with the administrator and supplier if they are aware of the unlicensed or off-label use and were in a position to intervene.
Alternatives to oral administration

- Transdermal e.g. HRT patches, fentanyl patches
- Parenteral/injectable e.g. digoxin injection (F iv ≠ F oral)
- Buccal e.g. midazolam, prochlorperazine
- Rectal e.g. aspirin, paracetamol
- Intranasal e.g. Miacalcin® calcitonin-salmon Nasal Spray
- Sublingual e.g. lorazepam 1mg tab (unlicensed)
Variation in the amount of drug reaching the system due to formulation change may impact efficacy and the potential for side effects, particularly in drugs with a small therapeutic window including:

- **Phenytoin** - 100mg caps/tab = 90mg liquid
- **Digoxin** – 125mcg tablet = 100mcg liquid
- **Carbamazepine** - 100mg tablet/liquid = 125mg suppository
MDT management of dysphagia.
How we work as an MDT

- Nurses initially assess swallow and informs pharmacist
- If swallow fails or is questionable, referred to SLT.
- SLT liaises with pharmacist to ensure medication is appropriately amended.
- Medication formulation regularly reviewed
- Modification of formulations clearly documented
- Discharge planning with clear directions on medication administration.
Medication amended as follows:

- **Ramipril capsules 1.25mg daily** – open capsule, mix contents with puree food/yogurt
- **Dipyridamole 200mg four times a day** - administer tablet whole with yogurt/puree food or crush and administer
- **Aspirin 75mg daily** - administer tablet whole with yogurt/puree food or crush and administer
- **Ferrous fumerate 210mg tablet** - administer tablet whole with yogurt/puree food or crush and administer
- **Lansoprazole fast tablet 30mg daily** - administer with puree
- **Clarithromycin 125mg/5ml liquid** - 500mg (20ml) twice a day 5/7 - add thickener and feed
- **Co-amoxiclav 250 and 62mg/5ml liquid** - 10ml three x a day 5/7 - add thickener or crush tablet and administer with puree
- **Simvastatin tablets 40mg at night** - hold until Abx completed (give with puree/yogurt)
- **Paracetamol 500mg/5ml liquid** - 1000mg four times a day—thick cough syrup consistence or crush tablet and give with yogurt
Resources

- Consensus guideline on the medication management of adults with swallowing difficulties
- Choosing medicines for patients unable to take solid oral dosage forms (UKMi)
- Sign- management of patients with stroke: identification and management of dysphagia (June 2010) http://www.sign.ac.uk/guidelines/fulltext/119/index.html
- RPS Guidance on Pharmaceutical Issues when Crushing, Opening or Splitting Oral Dosage Forms June 2011


Thank you 😊

Questions??