Medication and Dysphagia
To crush or not to crush?

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OBJECTIVES

- Role of the pharmacist’s understanding of dysphagia
- To highlight medication delivery issues in those who are dysphagia
- Alternatives to oral administration
- Legal implications of unlicensed administration
- MDT management of dysphagia. How we work as an MDT
Pharmacist’s role in Dysphagia

- Review the patient’s dysphagia treatment plan
- Review the patient’s medication
- Determine how the patient swallowed 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.
Choosing medicines for patients unable to take solid oral dosage forms

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Selecting suitable formulations for patients with swallowing difficulties or feeding tubes.
A stepwise approach:
STEP 1
Use a licensed medicine in a suitable formulation.

For example:
- Licensed liquid preparation e.g. folic acid liquid 2.5mg/5ml
- Soluble tablets e.g. paracetamol soluble tablets/lansoprazole F/t
- Powders or granules for suspension e.g. Cafovit D3 sachets, metformin sachets

In order to use a licensed medicine, consider switching to a different agent in the same class, or to a different route of administration.

For example, consider:
- Fluoxetine liquid (licensed preparation) as an alternative to sertraline tablets.
- Aspirin dispersible tablets instead of clopidogrel tablets.
- HRT patches instead of tablets.
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®.

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)
# Medication administration orders for tablets and capsules in dysphagia

<table>
<thead>
<tr>
<th>Standard Phrases*</th>
<th>Typical Diet Order</th>
<th>Interpretation of Standard Phrases</th>
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<tbody>
<tr>
<td>Crush tablets finely/open capsules and mix into a small amount of pureed food</td>
<td>Pureed†</td>
<td>Requires a uniform smooth texture (no lumps, no hard bits)</td>
</tr>
<tr>
<td>Crush tablets/open capsules and mix into a small amount of pureed food</td>
<td>Minced, pureed†</td>
<td>Can tolerate some variation in pureed texture</td>
</tr>
<tr>
<td>Give tablets/capsules whole in a small amount of pureed food</td>
<td>No mixed consistencies, minced, chopped</td>
<td>Cannot swallow tablets/capsules with water (i.e., medication with water represents a mixed consistency)</td>
</tr>
<tr>
<td>Dispense smallest tablet/capsule possible</td>
<td>Chopped, dental soft, regular</td>
<td>Preference for a small tablet/capsule size</td>
</tr>
<tr>
<td>Halve large tablets</td>
<td>Chopped, dental soft, regular</td>
<td>Difficulty swallowing large tablets or capsules</td>
</tr>
<tr>
<td>Give tablets/capsules one at a time</td>
<td>Chopped, dental soft, regular</td>
<td>Difficulty swallowing several tablets or capsules at once</td>
</tr>
</tbody>
</table>

*Exact wording of standard phrases appears in the “comments” section on the MAR. †Pureed food = applesauce, yogurt, pudding or other pureed food. When mixing in pureed food, put medication in a small portion of food (in case patient does not consume all of the mixture.)
Drugs in solid-dose oral form that should never be altered (i.e. through crushing, chewing or opening) without authorization

<table>
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<tr>
<th>Type of formulation</th>
<th>Common terms and abbreviations</th>
<th>Reasons for the formulation</th>
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| Enteric-coated        | Delayed-release, EC: enteric-coated | Designed to pass through the stomach intact and deliver the drug for release in the intestines. The formulation  
• prevents destruction of the drug by gastric acid  
• prevents irritation of the stomach  
• delays onset of action |
• multiple-layered tablets that release the drug as each layer is dissolved  
• mixed-release pellets that dissolve at different intervals  
• special matrixes that are inert but allow slow release of the drug |
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, which governs all medicine usage in the UK, 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 = 125mg suppository
MDT management of dysphagia. How we work as an MDT

- Nurses initially assess swallowing 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.
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??