

Managing Usual Medication in Unusual Situations



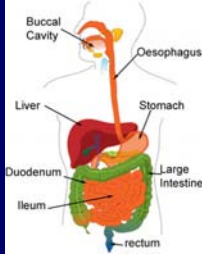

Dr. Ben Chua
Senior Staff Specialist Geriatrician
Aged care and Rehabilitation Services
Manly Hospital

Touching On

- Routes of medication administration
- Situations where solid oral dosing is problematic
- Alternate approaches
- Religious and cultural considerations with medications

Routes of medication Administration

- Oral
- Sublingual
- Inhalation
- Topical
- Transdermal
- Rectal – suppository
- Subcutaneous
- Intramuscular
- Intravenous
- Drops installation – ears, eyes, nose
- Through feeding tubes – NG tube, gastrostomy tube
- Others – implants, intra-articular



Solid Oral Medications

- Most convenient
- Cheapest formulation
- Stability
- Accurate dosing
- Accurate delivery at desired site



Situations where solid oral dosing are problematic

- Medical – difficult or unable to swallow e.g.
 - Stroke
 - Degenerative neurological disease
 - Local pathology
 - Nil-by-mouth
 - Vomiting
 - Palliative care situation
- Unconscious patients
- Dislike of taking oral medications
- Uncooperative patients
 - Dementia
 - Delerium
 - Mental Health – paranoia
- Religious, cultural and ethical considerations

Alternate Approaches

- Depends on individual circumstances
- Different formulations of the same medication
- Different routes of administration

A Word on Crushing Tablets

Potential risk

Increase toxicity or side effects

Formulation

Controlled or sustained release
Drugs designed to protect upper GI



A Word on Crushing Tablets

Potential risk

Reduced efficacy

Formulation

Drugs designed to protect from acid environment

Designed to protect from light and air

Designed to release active ingredient at specific site

Drug with narrow therapeutic window

Crushed drug mixed with "mixer" when meant to be taken on "empty stomach"



A Word on Crushing Tablets

Potential risk

Health hazard

Formulation

Cytotoxic or teratogenic drugs

Legal implications

Alter medication – deemed unlicensed



Ref: L. Nissen et al. Journal of Pharmacy Practice and Research Vol 93, No 2 2009

Religious, Cultural and Ethical Considerations

- Islam
- Judaism
- Hinduism
- Buddhism



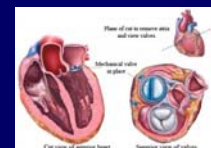
Patient and Physician awareness of religiously forbidden ingredients in Medications

- Over 1000 medications contain pork and/or beef derived gelatin and stearic acid as inert ingredients
- 100 patients and 100 physicians were surveyed – 84% patients unaware, 74% physicians unaware

Ref: SP Satter et al Ann Pharmacotherapy 2004 Nov 38 (11): 1830-5

Medications and Products with religiously prohibited ingredients

- Medicines – gelatin, stearic acid
- Surgical implants e.g. porcine valve



Gelatin

- Source – protein from collagen derived from animal skin, bones, connective tissues, organs and intestines.
- Alternate – from fish, seaweed, pectin
- Uses - pharmaceuticals (capsules, bone void filler)
 - Food additives
 - Cosmetics
 - Photography
 - Glue



Stearic Acid

- Source – A saturated fatty acid derived mainly from animal fat. Also found in vegetable fat, cocoa and shea butter.
- Uses – Pharmaceutical (film coating and binder)
 - Cosmetics, shampoos, soaps
 - Plastics
 - Candles and oil pastels
 - Lubricants and barrier films

Ramadan

- 9th month of the Islamic calendar
- Importance – Qur'an was first revealed in this month and the gates of heaven are opened
- The gates of hell are closed and the devils are chained up in hell.
- Muslims believe that good deeds bring greater rewards during this month. Its easier to do good deeds because the devils are chained up.
- Abstinence from food and drink- an exercise in self control



The Sick and Ramadan

- The healthy are obliged to fast
- The sick are exempt but some still fast
- Minor ailments- medications may be suspended
- Reduce dosing frequency- controlled or sustained released formation
- Alternative route of administration
- Alternative drug with longer action

Diabetics during Ramadan

- Discuss implications and risks
- Discuss with family/guardian/religious leaders
- Know hypoglycaemic symptoms. End fasting. Have action plan
- Monitor blood sugar levels more frequently
- Dose adjustments of oral medications/insulin – doctor



Summary

- Case by case assessment/management
- Suspend medication- minor ailments
- Same drug- alternative formulations
- Same drug – alternative route of administration
- Alternative drug
- Enlist help from family/guardian and religious leaders
- Second opinion from colleagues and pharmacists
- Advice from medical administration (ethics committee)
- Consider court application in urgent and life threatening situations

Thankyou

□ General Discussion

