Pharmacy Compounding for Hospice Patients
Meeting unique patient needs

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Goals
• Define compounding
• Reasons for compounding
• Dosage forms available
• Application in hospice care

What is Compounding?
• Compounding is the method of preparing customized medications to help meet unique physician and patient needs.
• In WA, all compounded medications require a prescription.

THE TRIAD

PATIENT
RELATIONSHIPS
PHYSICIAN PHARMacist

Improve Therapeutic Outcomes...
...by solving medication problems:
• Dosage form easier to administer
• Palatable liquid medications
• Medication not commercially available
• Avoidance of dyes, preservatives, fillers
• Avoidance of side effects
• Combination or sustained-release
• Cost effective therapy
• Unique dosage forms

Dosage Forms
Providing Endless Possibilities

• Capsules
• Solutions/Suspensions
• Troches
• Sublingual drops
• Lotions
• Creams
• Gels
• Ointments
• Sprays
• Suppositories

• Lip balms
• Lollipops
• Rapid dissolve tablets
• Paint-on
• Insufflators
• Roll-on/Sponge tops
• Gummies
• Effervescents
• Nasal sprays
• Washes/Rinses

Meeting Unique Needs in Hospice

• Alternative routes of administration
• Individualized pain management
• Neuropathic pain
• Nausea & vomiting
• Anxiety
• Oral hygiene
• Ducubitis ulcers
• Skin care
• Wound care
• Seizures, Thrush, Dyspnea, Excess Salivation, etc...

Transdermal Drug Delivery

• Provides drug penetration across the layers of the skin and obtains access to blood vessels and circulation.

• Advantages:
  – Avoid GI side effects
  – Avoid 1st pass metabolism
  – Skin largest organ
  – Improved compliance
  – Local action
  – Easy titration
  – Non-invasive
  – Patient not awake

• Disadvantages:
  – Local irritation possible
  – Systemic toxicity
  – Requires time for drug diffusion

• Lipoderm®
  – Proprietary liposomal components
  – Increases permeation of medications
  – Smooth & creamy
  – More stable (less separation)

Transdermal Drug Delivery Guidelines:

• Apply to clean, non-irritated skin
• Apply to area with least amount of hair as possible for systemic effect
• Rotate site of application
• Moisten skin with warm water if necessary to increase penetration

Drug Classes Used in Transdermals

• Muscle relaxants
• Antinausea agents
• Antiviral agents
• Anti-inflammatory agents
• Anesthetics
• Anti-anxiety agents
• Antidepressants/Anti-psychotic agents
• Antihistamines
• Anti-infective agents
• Opioids

Meeting Unique Needs
Pain

- Alternative dosage forms
  - Solutions, suspensions, suppositories, transdermals, capsules, troches, lollipops
- Customized strengths
- Slow release capsules

- Morphine & Oxycodone 20mg/mL soln.
  - Manufacturer unavailable
- Morphine 20mg/mL Lipoderm
  - Alternative dosage form
- Hydrocodone 5mg/mL soln.
  - Avoid allergies/sensitivities
  - No APAP
- Morphine 1mg/mL susp.
  - Customized dosing for titration and avoiding sensitivities

Neuropathic Pain

- Transdermals
- Topical treatment at the site of pain or injury
- Often use combination of medications
  - Ketamine
  - Amitriptyline
  - Baclofen
  - Gabapentin
  - Lidocaine
  - Ketoprofen
  - Clonidine
  - Morphine

Neuropathic Pain

- Ketoprofen 10%, Ketamine 10%, Gabapentin 6% in Lipoderm

  - Apply 1gm to affected area 2-3 times daily.
  - Rub in VERY well. Wash hands (wear gloves).

Nausea and Vomiting

- Transdermals
- Suppositories
- Suspensions
- Individualized agents

Nausea and Vomiting

- ABHR (lorazepam 1mg, diphenhydramine 12.5mg, haloperidol 2mg, metoclopramide 20mg)
- BDR+/−H (diphenhydramine 25mg, dexamethasone 10mg, metoclopramide 10mg, +/- haloperidol)
  - Suppositories or transdermal
- Promethazine 125mg/mL Lipoderm
  - Apply 0.2ml to inner wrist every 6 hours if needed
- Ondansetron suppository, transdermal, lollipop
Anxiety

- Can antidepressants and antipsychotics be compounded as a transdermal dosage form?
  - Yes, for the most part.
  - Suggest using similar dose as oral dose.
  - Monitor for side effects and/or withdrawal.

- Haloperidol 1mg/mL Lipoderm
  - Apply 0.5ml topically every hour until patient is calm/sleeping. Add up total amount and use that dose every 4 hours as needed for anxiety.
- Chlorpromazine 25-50mg oral soln.
  - Give twice daily and titrate to effect
  - Also for intractable hiccups

Wound Care

- Poly-Ox bandage (oozing wounds)
  - Metronidazole 20%, Lidocaine 1%
  - Moisten area with sterile water. Lightly coat the area with the bandage material from the puffer. Wet the area. Repeat for a total of 3 layers.
- Pluronic 30% base (tunneling wounds)
- Emollient Cream (dry wounds)

- Phenytoin
  - Stimulates fibroblast proliferation
  - Enhances tissue granulation
  - Inhibits collagenase activity
  - Promotes collagen deposition
  - Decreases bacterial contamination
  - Reduces wound exudates production
  - Useful for many types of wounds
    - Traumatic wounds, Burns, Diabetic ulcers, Venous stasis ulcers, Abscesses, Periodontal lesions, Chronic wounds

Wound Type | Medication | Base Choices – pick the best base
---|---|---
No odor – no pain | Misoprostol 0.0024% | Emollient Cream or Pluronic Gel
  | Phenytoin 5% | Good for most decubitus wounds
  | Metronidazole 2% | Very hydrating
Odor – no pain | Misoprostol 0.0024% | Protective Barrier Ointment (zinc oxide/aquaphor 1:1)
  | Phenytoin 5% | Good for areas with potential for soiling
  | Metronidazole 2% | Good for areas with fistulas and drainage
No odor – pain | Misoprostol 0.0024% | Polyox Bandage
  | Phenytoin 5% | Good for high draining wounds such as breast cancer
  | Lidocaine 4% | Good for oral protection and healing
Odor – pain | Misoprostol 0.0024% | Polyox Bandage
  | Phenytoin 5% | Good for high draining wounds such as breast cancer
  | Lidocaine 4% | Good for oral protection and healing
  | Metronidazole 20% |
Oral Hygiene

- Rinses, troches, gels, sprays, lollipops, adhesives
- Dry mouth
  - Pilocarpine 10mg/mL oral spray
- Excessive salivation
  - Glycopyrrolate 0.1mg/0.25mL Lipoderm

Skin Care

- Pastes, ointments, creams, lotions
- “Diaper” rash
  - Peripaste (nystatin, calamine, zinc oxide)
  - Boston Butt Cream (nystatin, lidocaine, zinc)
  - Cholestyramine in Aquaphor

Seizures

- Suppositories
- Phenobarbital 60-90mg suppository
- Phenytoin 100mg+ suppository
  - Usually use 3x oral dose

Summary

- Think out side of the box.
- Call your local compounding pharmacist.
- No problem is too big (or little).