



NORTHWEST AIDS EDUCATION AND TRAINING CENTER

Interactions with Over the Counter Medications and Herbals

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Objectives

- Recognize the complexity of OTC products and herbal ingredients
- Discuss the limited data surrounding OTC/herbal interactions, specifically with antiretroviral (ARV) medications
- Identify major drug interactions that may cause ARV failure or toxicity

OTCs and Herbals

- Expanding the OTC market
 - 10,000 prescription drugs on the market and 300,000 OTC medications available
 - High use of OTC medications among the adult population
 - Complications with name brand extension
 - Acetaminophen
 - Pepto
 - Aspirin
 - Cough and cold products
 - Rx-to-OTC



OTC and Herbals

- Herbals and 'Natural Meds'
 - 50% of people aged 35-49 have tried alternative medicines
- FDA has not evaluated scientific data concerning the safety or benefits of most dietary supplements
 - Many have been pulled from the market
- Concerns with low health literacy



Drug Interaction Data

- Different regulatory pathways for OTC products to become approved
 - Do not require extensive drug-drug interaction studies as compared to prescription products
- Drug interaction data may be made available from either (1) Rx-to-OTC data or (2) independent pharmacokinetic data
- Herbals have even less regulation as they are considered to be 'dietary supplements' and are not intended to 'diagnose or treat'

OTC and Herbal Interactions

Proton Pump Inhibitors

- Omeprazole (*Prilosec OTC*) and Lansoprazole (*Prevacid*)
- Rilpivirine (RPV)
 - PPIs are contraindicated due to decrease absorption/bioavailability of the rilpivirine
- Atazanavir (ATV)
 - Requires an acidic environment to absorb
 - Not recommended to give unboosted ATV with a PPI
 - If boosting (in naive patients):
 - PPI dose should not exceed more than 20 mg of omeprazole (or equivalent)
 - Should be given 12 hours apart
 - PPIs are not recommended in PI experienced patients on ATV

H2 Receptor Antagonists

- RPV
 - Give H2-receptor antagonists at least 12 hours before or at least 4 hours after RPV
- ATV
 - H2 receptor antagonist single dose should not exceed a dose equivalent of famotidine 20 mg or total daily dose equivalent of famotidine 20 mg BID in ART-naïve patients
 - Give ATV at least 2 hours before and at least 10 hours after the H2RA
 - If boosted, dose should not exceed a dose equivalent to famotidine 40 mg BID in ART-naïve patients, or 20 mg BID in ART-experienced patients
 - Consider dosing ATV/r along with H2RA or more than 10 hours after
 - Consider increasing dose of ATV/r to 400/100 in experienced patients or patients on TDF

Antacids

- Antacids comprise a wide array of products, most common include:
 - Kaopectate, Maalox, Mylanta, and Pepto
- RPV
 - Give antacids 2 hours before or at least 4 hours after RPV
- ATV
 - Give ATV at least 2 hours before or 1 hour after antacids regardless if it is boosted or unboosted, or the patient is ART-naïve or experienced

...other options should they need treatment for GERD/PUD?

St. Johns Wort

- Commonly used as a natural ‘antidepressant’, it is thought to have mixed mechanism activity, but is well known to *induce* cytochrome P450 3A4
- Markedly accelerates the metabolism of nearly all the protease inhibitors and NNRTIs, rendering them useless
 - Also elvitegravir and cobicistat

...Other options for mood control should they require it?

Crofelemer (Fulyzaq™)

- The 2nd botanical to EVER be FDA approved
- Prescription only product indicated for ‘the symptomatic relief of non-infectious diarrhea in adults with HIV/AIDS on ARVs’
- Locally acting, minimally absorbed drug has dual action inhibiting the cystic fibrosis transcription protein and calcium activated chloride channel
- Decreased frequency of diarrhea with minimal side effects
 - Respiratory tract infections, bronchitis, cough, flatulence, and increased bilirubin
- No identified drug interactions that were identifiable

Others

- Grapefruit juice
 - Considered a CYP 450 3A4 inhibitor
- BTC products
 - Morning after pill
- Online / Canadian Pharmacies
 - Patients may be purchasing medications that you are unaware of that contains some of the mentioned ingredients or other drugs with major interactions (i.e. ED drugs)

...ask about use of these agents.

Summary

- OTC and 'natural' medicines constitute a large portion of self-treatment in the general population which medical providers may be unaware of
- OTC and 'natural' medicine interactions have not been fully studied
- Well identified interactions include ATV and RPV with acid suppressing agents as well as St. Johns Wort and ALL PI's and NNRTIs
- Know what your patients are taking!!