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FAST FACTS AND CONCEPTS #50

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Introduction

There are over 50 different opioid combination products, available in a range of tablet strengths and liquids. Opioid combination products are typically used for moderate pain that is episodic (e.g. breakthrough pain) on a PRN basis. These products contain either acetaminophen, aspirin or ibuprofen, with an opioid: codeine (e.g. Tylenol #2-4), hydrocodone (e.g. Lorcet, Lortab, Vicodin, Vicoprofen), oxycodone (e.g. Percocet, Percodan, Tylox, Roxicet) or propoxyphene (e.g. Darvocet, Wygesic). Other formulations also may contain caffeine and/or a barbiturate. This Fast Fact will review information for rationally choosing among the various products.

Intrinsic Analgesic Potency

Milligram for milligram, oxycodone and hydrocodone are the most potent opioids in this group; they are roughly equianalgesic to each other. Codeine is less potent and propoxyphene the least potent of the group; propoxyphene products are probably no more potent than aspirin or acetaminophen alone.

Toxicity

The dose limiting property of all the combination products is the aspirin, acetaminophen or ibuprofen, not the opioid (see below). Patients receiving any of the four opioids may experience classic opioid side effects: nausea, constipation, pruritus or sedation, along with the potential for tolerance and physical dependence with chronic use. Differences in side effect severity among the different opioids is largely idiosyncratic. There is anecdotal experience that codeine is the most, and hydrocodone the least, emetogenic among the four opioids. Propoxyphene's major metabolite is a CNS stimulant, increasing the likelihood of seizures in an overdose situation. It is also cardiotoxic, with lidocaine-like effects. Because of limited efficacy and increased toxicity, propoxyphene is not recommended, especially in the elderly (1). Multiple countries have banned propoxyphene; as of 2009 this is under consideration in the US.

Cost

Generic products are readily available and typically less expensive.

Range of available doses

- Codeine products: 15-60 mg codeine/tablet
- Oxycodone or hydrocodone: 2.5-10 mg opioid/tablet
- Propoxyphene: 50-100 mg propoxyphene/tablet
- Acetaminophen doses range from 325-750 mg/tablet

Recommendations for use

1. Propoxyphene should rarely, if ever, be prescribed; it should not be used in the elderly.
2. Prescribe generic products whenever possible.
3. Prescribe only one combination product at any given time. Avoid writing orders that include multiple products (e.g. "X" for mild pain, "Y" for moderate pain, etc). Rather, prescribe only one product, assess efficacy and

toxicity, and modify accordingly.

4. Prescribe codeine, oxycodone and hydrocodone products at a q4h interval; not q 4-6 or q6h (see Fast Fact #18) (2).
5. Pay very close attention to the total daily dose of acetaminophen/aspirin/ibuprofen. Note: the dose of acetaminophen per tablet can range from 325-750 mg. Thus, with a recommended limit of < 4 grams per day, this equals 12 tablets @ 325 mg or 5 tablets @ 750 mg tablet. Patients with renal or liver dysfunction are at higher risk for adverse effects from the non-opioid (3).

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