



Drug Information Office / Jordan University of Science and Technology

New study finds that Hydrocodone/Acetaminophen Not Superior to Codeine/Acetaminophen for Acute Pain

Hydrocodone/Acetaminophen (**Vicodin**[®]) is not only the most commonly prescribed opioid in the United States but also the most common prescription medication written in America.¹

Codeine/Acetaminophen (**Tylenol #3**[®]) is used to relieve mild to moderate pain.²

According to a new study **Vicodin**[®] was not superior to **Tylenol #3**[®] in acute pain relief reported by patients 24 hours after being discharged from the emergency department.³

For this double-blind study, Dr. Chang and his colleagues randomly assigned nonelderly, opiate-naive emergency department patients who had presented with acute traumatic extremity pain to a 3-day supply of **Vicodin**[®] (5/500 mg; n = 88) or **Tylenol #3**[®] (30/300 mg; n = 93).³

The researchers contacted the patients a median of 26 hours after discharge and asked for their 0 to 10 numeric rating scale pain scores just before and 2 hours following the most recent ingestion of the drug.³

They found that the pain score before the most recent dose of pain medication was the same for both groups: 7.6. A high pain score was expected as that would prompt patients to take the prescribed pain medication. Patients reported the mean decrease in the pain scores 2 hours after pain medications to be 3.9 in the **Vicodin**[®] group and 3.5 in the **Tylenol #3**[®] group, for a between-group difference of only 0.4.³

"It's important to be aware that there are codeine hyper - metabolizers — for example, up to 30% of African/Ethiopians, who rapidly metabolize codeine to morphine and hence can develop respiratory depression and even death, at the same time there are some patients who cannot metabolize codeine at all, and hence receive no analgesic effect." Dr. Chang said.³

The authors noted that they found just 1 other trial, from the University of Pittsburgh, Pennsylvania, comparing the 2 drugs in an emergency setting. That study also showed **no significant difference** in the mean or median pain scores between 2 groups of patients taking either of the medications over 48 hours following ED discharge for acute musculoskeletal pain.³

In conclusion , there was no significant difference in side effects and the results showed that **Vicodin**[®] failed to provide superior pain relief compared to **Tylenol #3**[®] .

Prepared by: Pharm.D : Eshraq Al-abweeny

18/3/2014

References:

- 1- Singla A, Sloan P. Pharmacokinetic evaluation of hydrocodone/acetaminophen for pain management. 2013 Jan-Feb; 9(1):71-80. doi: 10.5055/jom.2013.0149.
- 2- Acetaminophen And Codeine (Oral Route), Dec. 01, 2013.<http://www.mayoclinic.org/drugs-supplements/acetaminophen-and-codeine-oral-route/description/drg-20074117>
- 3- Hydrocodone/Acetaminophen Not Superior to Codeine/Acetaminophen for Acute Pain, March 13, 2014 .
http://www.medscape.com/viewarticle/821940?nlid=51463_2743&src=wnl_edit_dail&uac=199960
SN