Journal Club Synopsis

Block 13, June 2014

Discussion Leader: Justin Warix, DO and Alex Keller, MD.

Host: Dr. Marco.

Clinical Scenario:

You are working on Colorado and a 45 yo female with metastatic breast cancer presents with intractable nausea and vomiting. She has received 16 mg of zofran and 25 mg of phenergan before she attains any relief. She mentions that marijuana is the only thing she has found that treats her symptoms. She is concerned about getting arrested having to buy her medicine from street level unregulated pharmaceutical reps. She asks if you would write a prescription so she can go to one of the regulated medical marijuana dispensaries. How would you proceed?

Introduction:

We were looking for something off the beaten path for a final Journal club of the year. Having lived in Nevada where marijuana was rampant, and heading to Alaska where medical marijuana is legal, we thought it would be a fun topic to explore. ACEP has been looking at formal statements regarding the position of the college in regard to emergency physicians and medical marijuana as well.

We looked at several databases to see what was really out there in the literature, and we corresponded with Sanjay Gupta, MD, since he has recently come to the front of the news media as a medical correspondent in support of medical marijuana. We chose two articles from almost 30 years apart to show some of the differences in research protocols and data collection. The first article was from 1979 and looked specifically at the differences between oral and smoked marijuana to control nausea and vomiting in chemotherapy patients. The second article was from the UK looking at marijuana use amongst HIV positive personnel by questionnaire.

We included the Executive summary from the 1999 Institute of Medicine report assessing the science behind medical marijuana as background reading.

Article 1:

Chang AE, Shiling DJ, Stillman RC, Goldberg NH, Seipp CA, Barfosky I, Simon RM, Rosenburg SA. Delta-9-tetrahydrocannabinol as an antiemetic in cancer patients receiving high-dose methotrexate. A prospective, randomized evaluation. Annals of Internal Medicine. 1979 Dec;91(6):819-24

This study looked at 15 patients receiving high dose methotrexate chemotherapy for osteogenic sarcoma after primary resection of the tumor. They used both oral and smoked THC versus placebo in a blinded study with each patient serving as their own control. The oral and smoked THC treatments were standardized for dosing and time intervals. There was significant improvement in nausea and vomiting episodes and subjective sensation of nausea related to the blood levels of THC.

The majority of the group discussion revolved around the fact that it was a small trial in regard to numbers of participants and power of the study, but it was commented upon by faculty that it looked at lot like a phase one drug study. There was also significant discussion about variable absorption of the oral version in patients that are actively vomiting and already nauseated. Smoking in this study was standardized for inhalation rate and breath-hold durations. Certainly each person will vary in their manner of smoking outside of the research setting making dose delivery via this method less standardized. Also delivery of the medicine by smoking is less optimal due to the health risks associated with the smoking alone.

Article 2:

Woolridge E, Barton S, Samuel J, Osorio J, Dougherty A, Holdcroft A. Cannabis use in HIV for pain and other medical symptoms. J Pain Symptom Manage. 2005 Apr;29(4):358-67. PubMed PMID: 15857739.

Discussion of the Woolridge article discussing marijuana use in symptom control of HIV focused on the nature of the article's structure. There were points made from the positive aspects of the article in that nearly every one reported improvement in their symptoms in nearly every category surveyed. Of note was the near universal response rate (93%) to the survey by the clinic's population, which was quite impressive. Given the format of the article there were serious concerns about the validity of the survey. The anonymity of the respondents was brought into question, but the consensus was that as their use of marijuana was strictly prohibited in their country (the United Kingdom), there was really no other way to perform this kind of study without fear of legal retribution, and to provide the opportunity for the respondents to answer truthfully. Others were concerned that the patients may have been looking for reasons to validate their illicit drug use on a recreational basis by reporting such great improvement of their serious and valid medical symptoms. Despite the study's inherent limitations, the group did feel that the results were quite positive and that there likely was an improvement in the quality of life of those suffering from HIV related symptoms as well as the symptoms resulting from treatment of HIV. As the article notes, this has great ramifications for treating a disease with significant side effects and effects of treatment that are far from benign and affect 40 million people globally. The group did feel that more study is needed however to better delineate these benefits and any risks that may exist such as memory loss.

Bottom Line:

The topic of medical marijuana is currently more political than medical. Many states have instituted medical marijuana laws that are in direct opposition to the federal laws which still list marijuana as a Schedule 1 drug. Among the states that have legalized marijuana for medical purposes there remains a wide range of "legal" quantities that may be possessed by an individual ranging from 2-24 ounces. The Department of Justice issued a memorandum in 2009 stating that they would not actively pursue prosecution of patients who possess and use marijuana in accordance with their state laws. This remains a grey area for physicians since writing a prescription for marijuana could still put your federal DEA license at risk. Research on medical marijuana has been hampered in the United States by the simple fact that it remains a Schedule 1 drug. Reclassification to a Schedule 2 drug would greatly ease the regulatory burden in regard to medical research on this naturally occurring plant.

Politics aside, neither of the two articles is a practice changing entity. They both suggest that marijuana has been helpful in a specific subset of patients who already have essentially a terminal diagnosis. Other current studies have suggested that marijuana may have a role in treating intractable seizures and other conditions. We expect the medical community will catch up in the research arena once the regulatory burden eases.