Background

• There has been a lot of recent interest in the use of cannabinoids by patients with cancer.

• There are currently two cannabinoid products FDA approved for cancer patients, one with orphan drug status, and one currently in Phase III clinical trials in the US.

Objectives

• The purpose of the study was to identify current uses of cannabinoid medications and possible interactions with chemotherapies.

Study Design

• Data has been collected from a primary literature and drug database search.

• Primary Outcome Measure - To identify uses of cannabinoid medications and the potential interactions between cannabinoid drugs and major drug transporters and metabolizing enzymes of chemotherapeutic agents.

Methods

Data Collection:

• Uses and classes of cannabinoid products were obtained through a PubMed literature search and Micromedex

• Interactions with drug transporters and metabolic pathways were obtained by a PubMed literature search

Data Analysis

• Cannabinoid medications were tabulated based on indication.

• Interactions with common chemotherapeutic were tabulated based on inhibition of important Cytochrome P450 enzymes and drug transporter proteins.

Discussion

• Figure 1 shows the number of FDA regulated cannabinoid drugs per oncology related indication.

• Figure 2 shows the inhibition of major transporters and CYP enzymes involved in the ADME of chemotherapy drugs.

• Figure 3 shows the cannabinoid classifications of FDA regulated oncology associated cannabinoid drugs.

Conclusion

• Limitations of this study include interactions between cannabinoid drugs and chemotherapeutic agents have not been proven in clinical trials. These interactions can only be speculated.

• There is the possibility of interactions between cannabinoids and chemotherapy. These interactions could cause chemotherapy toxicity or cause a poor response to a chemotherapy depending on if the chemotherapy is a prodrug. Providers should use professional judgement to determine if the cannabinoid product is necessary.

References


