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Kimberly is an RN with 26 years of nursing experience. She has worked in Perianesthesia since 1994 at CarolinaEast Medical Center in New Bern, North Carolina. She has always had an interest in complementary alternative medicine and completed her Masters’ in CAM in 2017.

Potential interactions of herbal medicines during perianesthesia

- Brief history of herbal medicine
- Brief history of anesthesia
- Role and responsibilities of the anesthesia provider
- Some popular herbal medications and how they interact during perianesthesia
- How to talk to your patient about herbal medicines, and why it is important to do so.

Goals and objectives

- To promote understanding among healthcare providers about herbal medicines during perianesthesia
- To encourage open communication between healthcare providers and patients about herbal medicines
- To present a list of commonly used herbal medications and their possible interactions during perianesthesia
- To equip healthcare providers with the tools to educate their patients about herbal medicine use

Literature Review

- High quality studies about herbal medicine are often difficult to find due to funding issues or poor study design
- Literature review included a general internet search, Google, Google Scholar, Library and Informational Resources Network (LIRN), Centers for Disease Control (CDC) and National Institutes of Health (NIH) websites.
- Inclusion criteria included: articles written during or after the year 2000, and articles that included herbal medications that had potential adverse effects during perianesthesia
Findings

Herbal Medicine

- Herbal medicine has been in use since before written records existed and traditional herbal medicine was often passed down from generation to generation.
- Herbal medicine fell out of favor once science found a way to extract the active constituents from herbs and later to create them in the laboratory.
- About 50% of Americans use some form of herbal medicine or supplement.
- Many of those who use supplements and herbal medicine are well-educated and have an above average income (Gregory, 2013).
- Seventy percent of those using herbal medicines do not share that information with their anesthesia provider (Rudra et al, 2008).

Findings

Anesthesia

- Modern anesthesia has been in existence since its first successful use in a dental surgery in 1846. Since that time many advances have been made.
- Anesthesia may be provided by an Anesthesiologist (MD or DO), Certified Registered Nurse Anesthetists (CRNA) or Anesthesia Assistants (AA). Each of these positions has a different level of training.
- Anesthesia providers are responsible for the vital functions of the patient, while the surgeon provides surgical intervention.
- The anesthesia provider is responsible for maintaining ventilation, blood pressure, blood glucose levels, and blood and fluid balance (Joyner, nd).

Findings

Herbal Medicine and Anesthesia

- Areas of concern during perianesthesia with patients using herbal medicines:
  - Adverse cardiac effects
  - Increased potential for bleeding
  - Prolonged effects or interference with anesthetic agents
  - Possible renal or hepatic issues
  - Possible disturbances in glucose regulation
  - Abnormal thyroid function (Rudra et al, 2008).
Herbal Medicine and Anesthesia (cont.)

- Commonly used herbal medicines and their potential interactions with anesthesia:
- St. John's wort (*Hypericum perforatum*)—St. John's wort is used to treat mild to moderate depression. This herb may decrease the effectiveness of other drugs metabolized by the liver. During perianesthesia St. John's wort may cause delayed emergence with Sevoflurane, Propofol and Fentanyl. St. John's wort should be discontinued 5 days preoperatively (Batra and Rajeev, 2007).

Garlic (*Allium sativum*) - Garlic is a very popular herbal medication. Garlic can be used fresh, dried or in powder form. Garlic has a very strong and pungent aroma. This causes many patients to use it in capsule form.
- Garlic can increase the effects of warfarin, heparin and NSAIDS, leading to increased bleeding times and increased risk of perioperative bleeding (Rudra et al, 2008).

Kava (Piper methysticum) - Kava has traditional use in the South Pacific Islands as a ceremonial drink. In modern herbal medicine it is used for the treatment of anxiety, insomnia and to relieve stress (Rudra et al, 2008).
- Kavapyrones, the active constituent, have anticonvulsant and muscle relaxation properties.
- In 2001, twenty-nine cases of liver failure were reported in Germany. The German government removed Kava from the market in Switzerland and Germany (Rudra et al, 2008). Later reports from Australia found that the processing of Kava in the Western world was the likely cause of the problem (Whitton et al, 2003).
- Kava can cause excessive sedation when used with barbiturates and benzodiazepines (Rudra et al, 2008).

Cranberry (*Baccinium macrocarpon*) - Cranberry is most often associated with urinary tract health. It helps regulate urinary pH thus reducing chronic urinary tract infections (UTI).
- Cranberry can increase INR, which may lead to increased bleeding in patients taking warfarin (Mayo Clinic, 2013).
- Cranberry may also potentiate the effects of Midazolam (Versed) (Mediherb, 2016).
Talking to patients about herbal medicine

- Up to 50% of the population of the United States use herbal medicines or supplements. Up to 70% of these patients do not disclose this information to their anesthesia provider (Rudra et al, 2008).
- With the many drug-herb interactions that are possible, it is important for the anesthesia provider and other healthcare providers to actively inquire about herbal medicine use (Ang-Lee et al, 2001).
- Many patients believe that natural equals safe and that there are no herb-herb or herb-drug interactions. Just the brief listing of herbal medicines discussed today shows that this is not accurate.

Healthcare providers need to remember that the patient has the ability to choose from traditional and complementary therapies as well as modern allopathic medicine.

This choice belongs to the patient. It is the responsibility of the healthcare team to provide the patient with accurate information so that they may make their own choices. The days of healthcare providers, including physicians, deciding for the patient what is right for them are coming to an end.

Patients want to collaborate with their healthcare team, and have the right-the responsibility to find a healthcare provider who will collaborate with them on their journey to wellness.

References


References