

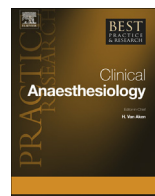


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Perioperative analgesia and the effects of dietary supplements



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With over 50,000 dietary supplements available, resurgence in consumer interest over the past few decades has resulted in an explosion of use of these agents worldwide. Disillusionment with current medications and belief in “natural medicines” has resulted in a multibillion dollar industry. Active ingredients in a number of herbs are being tested for therapeutic potential, and some are

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kava kava
St. John's wort
valerian

efficacious, so herbal medicines cannot be dismissed. The prevalence of herbology is further encouraged by a relatively relaxed policy of the FDA regarding these compounds, which they consider foods. As herbal products are included in the “supplement” category, there is no existing protocol for standardization of these products. There are numerous examples of herbals that can adversely affect patient recovery and outcomes in anesthesia. The prudent anesthesia provider will make sure to obtain correct information as to accurate herbal usage of each patient and attempt to discontinue these products two to three weeks prior to the delivery of an anesthetic. Postoperative analgesia, bleeding, and level of sedation can be negatively impacted related to herbal products and herbal–drug interactions. Over 90 herbal products are associated with bleeding and this can be a specific problem intraoperatively or when considering placement of a regional anesthetic for postoperative pain management.

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Practice points

- Owing to a number of factors, the use of herbal products has become common place worldwide in recent years.
- A number of these agents have important effects with regard to bleeding, to sedation, and herbal–drug interactions.
- A prudent anesthesia provider will obtain a good history of herbal product use and attempt to discontinue these agents two to three weeks prior to the induction of anesthesia.

Research agenda

- Standardization of herbal products and more effective preparation of these agents are critical for consumers.
- Improved education with regard to impact from herbals in surgery and in anesthesia at the level of medical and nursing schools is desperately needed.
- Randomized clinical trials comparing the effectiveness of different herbal products are needed.

Introduction

Dietary supplements, which include vitamins, minerals, fiber, fatty acids, or amino acids intended to provide nutrients that may otherwise not be consumed in sufficient quantities, are defined as foods, while others classify these agents as drugs or other products.

There are more than 50,000 dietary supplements available. Though there is little testing, often unsubstantiated therapeutic claims, and most of the time, lack of standardization, the use of dietary supplements in the United States and worldwide has remained consistently high over the past two decades [1]. In 2007, Americans spent \$33.9 billion out-of-pocket dollars, which accounted for over 11% of total out-of-pocket expenses [2]. With over 55 million adults in the United States (U.S.) taking a dietary supplement as least once in their life, this multi-billion dollar dietary supplement industry will continue to be prevalent in the health care of patients [3,4]. As defined by the Dietary Supplement Health and Education Act (DHSEA) of 1994 by the U.S. Food and Drug Administration (FDA), a dietary supplement is any product which is taken by mouth and contains a dietary ingredient, such as a

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