CAM in Pain Management in the Elderly

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Objectives

• At the conclusion of this knowledge-based activity, the participant should be able to:
  • Define complementary and alternative medicine (CAM).
  • Describe characteristics, preferences, and practices of older adults using CAM for pain management.
  • Identify potential adverse outcomes associated with drug-drug and drug-disease interactions, specifically those related to CAM for pain management in older adults.

Terminology

• “Complementary” generally refers to using a non-mainstream approach together with conventional medicine.
• “Alternative” refers to using a non-mainstream approach in place of conventional medicine.
• Integrative Medicine
National Health Interview Survey (NHIS) 2012

- Fish oil was the top natural product (adults and children)
- Adults’ use of fish oil, probiotics or prebiotics, and melatonin increased between 2007 and 2012.
- Adults’ use of glucosamine/chondroitin, echinacea, and garlic decreased between 2007 and 2012.
- Melatonin was the second most used natural product by children in 2012. Its use increased substantially from 2007 to 2012.
How Common is CAM Use Among Elders?

- Elderly are more frequent users of CAMs than the general population—up to 80% have reported using at least one CAM on a regular basis in the past year.
- <50% of older patients disclose CAM use to their doctor or pharmacist.

Why Elderly Patients May Prefer CAM

- Disillusionment with conventional medicine when that offers no firm answers;
- Dissatisfaction with conventional practitioners who may exhibit poor communication, lack of empathy, and have limited time

Why Elderly Patients May Prefer CAM

- Desire for simplicity as CAMs are perceived to be ‘simple’ without complex directions, warnings and labels
- Perception that natural medicines are more ‘compatible with health’ and promote ‘optimum health’
- Ready access via Internet, health food shops, freecall hot-lines, mail-order, free home-delivery, party-plan and multi-level marketing
Why Elderly Patients May Prefer CAM

- Desire for autonomy over healthcare decisions.
- Enticing advertising that encourages a trial of CAMs.
- Peer pressure—fashion, alternative lifestyles and ‘keep fighting the disease’;
- Postpone age-related deterioration and mortality

Predictors of CAM Use in the Elderly

- Similar to those found in younger populations
- Female gender, higher education and higher income

Assessment Question 1

- Elderly patients use CAM ________ the general population?
  
  A. More than
  B. Less than
  C. About the same as
Spinal manipulation

- Chiropractors, osteopathic physicians, naturopathic physicians, physical therapists, and some medical doctors.
- Use their hands or a device to apply a controlled force to a joint of the spine. The amount of force applied depends on the form of manipulation used.

Spinal manipulation

- A technique performed by trained practitioners that involves using their hands or a device to apply a controlled force to a joint of the spine.
- Side effects can include physical discomfort in the parts of the body that were treated, temporary headaches, or tiredness.
- There have been rare reports of more serious problems

Spinal Manipulation and Stroke in the Elderly

- Previous observational research found an association between visits to a health care practitioner and subsequent stroke.
- Medicare claims, 1.1 million people aged 66-99 who visited a chiropractor or primary care physician to treat neck pain.
- Outcomes: Occurrence of first stroke after the office visit and hazard of stroke within 30 days for two groups: patients visiting chiropractors and those visiting primary care physicians.
- Conclusion: Cervical spine manipulation is unlikely to cause stroke.
Tai chi and qi gong

- Practices from *traditional Chinese medicine* that combine specific movements or postures, coordinated breathing, and mental focus.

Mindfulness Meditation

- Involves nonjudgmental attention to experiences in the present moment
- Helps regulate emotions
- Improves participants’ ability to cope with pain.
- Patients with a history of depression may respond better than others to mindfulness meditation.
Acupuncture

- Technique in which practitioners stimulate specific points on the body—most often by inserting thin needles through the skin.
- Studies suggest acupuncture may help ease some types of chronic pain such as low-back, neck, and osteoarthritis/knee pain.
- May help reduce the frequency of tension headaches and prevent migraine headaches.

- Relatively few complications other than those that result from nonsterile needles and improper delivery of treatments.
- When not delivered properly, acupuncture can cause serious adverse effects, including infections, punctured organs, collapsed lungs, and injury to the central nervous system.
Acupuncture Regulation

• FDA regulates acupuncture needles as medical devices.
• Can only be used by licensed practitioners
• Requires that needles be manufactured and labeled according to certain standards.
• FDA requires that needles be sterile, nontoxic, and labeled for single use by qualified practitioners only.

Acupuncturist Credentials

• Most states require a license, certification, or registration to practice acupuncture; however, education and training standards and requirements for obtaining these vary from state to state.
• Most states require a diploma from the National Certification Commission for Acupuncture and Oriental Medicine for licensing.

Acupuncture Practitioners

• Some conventional medical practitioners—including physicians and dentists—practice acupuncture.
• In addition, national acupuncture organizations may provide referrals to acupuncturists.
• Some insurance companies may cover the costs of acupuncture, while others may not.
CAM for Headache: Mind and Body Approaches

- *Acupuncture (possibly effective)*
  Benefit may be due to nonspecific factors including expectation, beliefs, and placebo responses rather than specific effects of needling.
- Biofeedback (possibly effective)
- Massage, relaxation techniques, spinal manipulation, tai chi (evidence is too limited or inconsistent for conclusions)

CAM in Migraine Prevention: Dietary Supplements

- American Academy of Neurology and the American Headache Society Guidelines
  - Butterbur (effective)
  - Feverfew, Mg, riboflavin (probably effective)
  - Coenzyme Q10 (possibly effective)
  preventing migraines.


Butterbur (AKA Petasites or Purple Butterbur)

- Several patented standardized extract forms EX: Petadolex.
- Leaves, rhizomes (underground stems), and roots used to make solid extracts used in tablets or topically.
Butterbur

- Used historically for health issues such as pain, headache, anxiety, cough, fever, and gastrointestinal and urinary tract conditions. Used topically to improve wound healing.
- Today, traditional or folk uses include nasal allergies, allergic skin reactions, asthma, and migraine headache.

Butterbur

- In a clinical trial of 125 participants, butterbur was as effective as an oral antihistamine for allergy symptoms such as itchy eyes.
- There is evidence to support the effectiveness of butterbur for the treatment of migraines.
- There is some evidence that butterbur extract can decrease the symptoms associated with nasal allergies.

Butterbur

- Insufficient evidence to show efficacy and safety for allergic skin reactions and asthma.
- Can cause belching, headache, itchy eyes, gastrointestinal issues, asthma, fatigue, and drowsiness.
- Allergic reactions in people who are sensitive to plants such as ragweed, chrysanthemums, marigolds, and daisies.
- If improperly processed can cause liver failure.
Feverfew

Feverfew: Adverse Effects

- Canker sores, swelling and irritation of the lips and tongue, and loss of taste.
- Less common side effects include nausea, digestive problems, and bloating.
- Withdrawal syndrome of difficulty sleeping, headaches, joint pain, nervousness, and stiff muscles.

Feverfew: Adverse Effects

- May cause the uterus to contract, increasing the risk of miscarriage or premature delivery.
- Patients who are allergic to other members of the daisy family (which includes ragweed and chrysanthemums) are more likely to be allergic to feverfew.
Assessment Question 2

• Which of the following CAM products can be used in patients with ragweed allergy?

A. Feverfew
B. Buterbur
C. Riboflavin

CAM in Back Pain

• American College of Physicians and the American Pain Society Guidelines
• Nondrug approaches should be considered in patients who do not improve with self-care.
• Exercise & cognitive-behavioral therapy (conventional)
• Acupuncture, massage therapy, spinal manipulation, & progressive relaxation (complementary)


CAM in Osteoarthritis

• American College of Rheumatology Guidelines
• Tai chi (possibly effective)
• Glucosamine and chondroitin (not recommended)

Glucosamine and chondroitin

- Animal studies indicate that high doses of glucosamine might harm the kidneys. Studies in people indicate that glucosamine or chondroitin may harm kidneys.
- May interact with warfarin.

CAM in Rheumatoid Arthritis

- Acupuncture: little research specific to RA, conflicting evidence
- Mindfulness meditation, biofeedback, and relaxation training: some evidence that these techniques may be helpful, but research results are mixed.
- Tai chi has not been shown to be effective for joint pain, swelling, and tenderness, although improvements in mood, quality of life, and overall physical function have been reported.

CAM in RA: Yoga

- May improve physical function and decrease the number of tender and swollen joints.
- Perform with caution in people who have limited mobility or spinal problems.
- RA patients may need assistance in modifying some yoga postures to minimize joint stress and may need to use props to help with balance.
Thunder god vine

- Perennial vine native to China, Japan, and Korea.
- Extracts are prepared from the skinned root of thunder god vine.

Thunder god vine

- Has been used in China for health purposes for more than 400 years for conditions involving inflammation or overactivity of the immune system.
- Currently is used for excessive menstrual periods and autoimmune diseases, such as rheumatoid arthritis, multiple sclerosis, and lupus.

Thunder god vine: Evidence

- Laboratory findings: May fight inflammation, suppress the immune system, and have anti-cancer effects.
- A large study funded by the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS), found superior results with TGV compared to sulfasalazine in RA.
- Insufficient evidence to assess thunder god vine’s use for other health conditions.
TGV: Adverse Effects

- Can cause severe side effects not carefully extracted from the skinned root. Leaves, flowers, and skin of the root are highly poisonous and can cause death.
- Many participants in NIAMS study experienced GI effects such as diarrhea, indigestion, and nausea, as well as upper respiratory tract infections. (The rate of adverse effects was similar in the thunder god vine and sulfasalazine groups.)

TGV Adverse Effects

- Can cause hair loss, headache, menstrual changes, and skin rash.
- Decreases bone mineral density in women who take the herb for 5 years or longer.
- Thunder god vine contains chemicals that might decrease male fertility by changing sperm.

Thunder God Vine

- No consistent, high-quality thunder god vine products being manufactured in the United States. Foreign sources are available.
Assessment Question 3

- Which of the following CAM products may impair fertility?
  - Thunder God Vine
  - Magnesium
  - CoEnzyme Q10

Fibromyalgia

- Acupuncture (evidence unclear)
- Tai chi (small amount of positive evidence)
- Meditation (positive but not high quality evidence)
- Natural products (insufficient evidence)
- Homeopathy (Failed to demonstrate beneficial effect)

Other Complementary Tactics

- Vitamin D - Small amount of poor quality research on this topic
- Music - Research indicates a small effect on pain relief and decreased need for pain meds
- Reiki – Lacks high-quality research to definitively evaluate
- Static magnets - evidence does not support their use.
Magnets

- Scientific evidence does not support the use of magnets for pain relief.
- Magnets may interfere with the functioning medical device such as insulin pumps and pacemakers.
- Otherwise, magnets are generally considered safe when applied to the skin.

Safety Concerns for Dietary Supplements

- Drug interactions
- Product contamination—supplements have been found to contain hidden prescription drugs or other compounds, particularly in dietary supplements marketed for weight loss, sexual health including erectile dysfunction, and athletic performance or body-building.

Dietary Supplements in Elderly Patients: Safety

- Often taking a combination of supplements and prescription products or using supplements as substitutes.
- Supplements can have unwanted effects before, during, and after surgery. Some may need to be held 2-3 weeks ahead of the procedure.
- More likely to think that if a little is good, taking a lot is even better.
How to Spot False Claims

• “Cure-all” statements such as "Extremely beneficial in treatment of rheumatism, arthritis, infections, prostate problems, ulcers, cancer, heart trouble, hardening of the arteries, and more."

• Treat or cure statements such as "shrinks tumors" or "cures impotency."

How to Spot False Claims

• Claims like "totally safe," "all natural," or has "definitely no side effects."

• Promotions that use words like "scientific breakthrough," "miraculous cure," "exclusive product," "secret ingredient," or "ancient remedy." For example: "A scientific breakthrough formulated by using proven principles of natural health-based medical science."

How to Spot False Claims

• Overly impressive-sounding terms such as "hunger stimulation point" and "thermogenesis."

• Personal testimonials by consumers or doctors claiming amazing results. "My husband has Alzheimer's. He began eating a teaspoonful of this product each day. And now in just 22 days, he mowed the grass, cleaned out the garage, and weeded the flower beds; we take our morning walk together again."
How to Spot False Claims

• Limited availability and advance payment required. For example: "Hurry. This offer will not last. Send us a check now to reserve your supply."

• Promises of no-risk "money-back guarantees." For example: "If after 30 days you have not lost at least 4 pounds each week, your uncashed check will be returned to you."