You may raise an eyebrow upon hearing about the use of complementary alternative medicines (CAMs) in the OR. You may ask, “What are some CAMs that have been used in the OR?” or “How can a practitioner who performs CAMs be permitted in the OR, when in the past only the surgical team involved in the procedure was permitted in the OR?”

There’s a common misconception that “CAM” and “alternative medicine” are the same; in fact, you may hear the terms used synonymously. According to the National Center for Complementary and Alternative Medicine, however, CAMs are therapies used together with conventional medicine. For example, music therapy delivered through earphones to lessen a patient’s discomfort during and following surgery.

Alternative medicine is used in place of conventional medicine. For example, a special diet to treat cancer rather than undergoing surgery, radiation, or chemotherapy.¹

**Various CAMs**

CAMs include a long list of therapies or modalities, such as acupuncture, aromatherapy, guided imagery, herbalism, homeopathy, hypnosis, massage, music, Qigong, Reiki, and therapeutic touch (TT). Many CAMs are natural modalities that were commonly used for hundreds of years but were discontinued with the development of antibiotics and other medications.²

**Acupuncture**

Originating in China more than 2,000 years ago, acupuncture is one of the oldest, most commonly used therapies in the world. Acupuncture uses thin needles to stimulate anatomical points on the body. The practitioner inserts the needles and either a manual or electrical technique is used in key areas. Key areas are often determined according to symptoms described by the patient.³

**Aromatherapy**

Aromatherapy is the practice of using volatile plant oils, including essential oils, for psychological and physical well-being. Essential oils are the pure essence of a plant, not to be confused with perfumed oils,
and have been found to provide both psychological and physical benefits when used correctly. (See Essential oils and effects.)

**Guided imagery**

Guided imagery is an effective visualization technique sometimes referred to as a focused daydream. This method helps patients to focus on positive images to heal their bodies. Guided imagery practitioners instruct patients in general relaxation exercises and help patients create detailed images in their minds. A commonly used method of guided imagery is the Simonton Method, developed by oncologist Dr. O. Carl Simon-ton. The Simonton Method was devised to help patients undergoing cancer treatments to imagine their immune system eating up and destroying cancer cells during treatment, thus freeing them of cancer.

**Herbalism**

Herbalism is the practice of prescribing or making herbs for certain medical conditions, such as recommending black cohosh for the treatment of hot flashes. Many herbalists revert only to herbs for the treatment of all conditions. Some caution must be used as individuals may misuse and overdose or have sensitivities to an herb or compound.

**Homeopathy**

A German physician in the late 18th century, Samuel Hahnemann, is the founder of homeopathy. Hahnemann worked on the premise of treating “like with like.” He studied patient symptoms and determined that symptoms were the body’s way of fighting disease. Homeopathy practitioners encourage the symptoms seen and prescribe a remedy in small doses that in larger doses would produce the same symptoms displayed in the patient. According to homeopathy, this method stimulates the immune system to help cure the illness.
**Hypnosis**
Clinical hypnosis is a technique used by a qualified health professional or therapist who give patients carefully worded instructions intended to guide the patient into a state of deep relaxation. In this relaxed state, the patient is aware of everything that’s occurring but, at the same time, becomes increasingly absorbed in using her imagination as directed by the clinician. The clinician monitors the patient throughout the session and is able to reverse the hypnotic state.  

**Massage**
Massage is the manipulation of connective tissues and muscles to stimulate circulation and enhance the function of those tissues to promote relaxation and well-being. Massage therapy can be highly effective for reducing the symptoms of arthritis, back pain, carpal tunnel syndrome, and other disorders of the muscles and nervous system.

**Music therapy**
According to the American Music Therapy Association, “Music therapy is the clinical and evidence-based use of music interventions to accomplish individualized goals within a therapeutic relationship by a credentialed professional who has completed an approved music therapy program.” Music therapy is designed to uplift physical and emotional health through the use of music. It’s often used in stress management programs or in conjunction with exercise. Music therapy is used in a variety of healthcare settings with positive results in both short-term and more serious long-term conditions.

**Qigong**
Qigong, similar to Tai Chi is an energy-producing Chinese movement technique that many healthcare providers now recommend for relaxation, stress reduction, and an overall feeling of well-being. Qigong combines focused concentration with movements and balanced breathing in a controlled way. The movements are simple, making the technique easy to learn and easy to perform for most patients. Many patients who practice this technique preoperatively report a decrease in stress and pain postoperatively.

**Reiki**
Reiki is based on the belief that when energy is channeled through a Reiki practitioner, the patient’s spirit is healed, which in turn heals the body and contributes to an overall feeling of well-being. Reiki is practiced by placing the hands on or above the patient in various positions. A state of deep relaxation and a general feeling of well-being is usually one of the most immediate effects of the treatment. Reiki practice is based on the concept that an unseen life force energy flows through all people. If one’s life force energy is low, that person is more likely to get sick or feel stress; if the life force energy is high, that person is more capable of being happy and healthy. 

**Therapeutic touch**
Reiki and TT are often confused, but in essence work on the same principles. TT is a relatively modern therapy with origins in ancient healing practices, and is a technique used to balance and restore the flow of human energy. TT was developed in the early 1970s by Dora Kunz, a natural healer, and Dolores Krieger, RN, PhD, Professor Emerita of Nursing at New York University and author of several books on the topic.

**CAMs at work in the OR**
Some anesthesia providers use aromatherapy in the form of essential oils in the OR to promote relaxation (lavender) and reduce nausea or perceptions of smell (peppermint).

Dr. Mehmet Oz, in his book Healing from the Heart, discussed his belief in the value of aromatherapy. He stated that when patients were given a whiff of a flowery scent, their pain was lessened compared with when they sniffed spices, which made the patient more sensitive to pain. Dr. Oz also suspected that aromatherapy could be used to help surgical patients by inducing a relaxation response. Dr. Oz stated that aromatherapy is very appealing because the emotional center of the brain is profoundly affected by smell.
Hypnosis has been used for some time in the preoperative area and has now extended into the OR. Mind-body methods for surgical application date back to ancient Egypt. Noteworthy is the use of hypnosis in the 1840s by the Scottish surgeon, Dr. James Esdaile, who practiced in India and used hypnosis as the anesthetic for eye surgery to limb amputations. During Dr. Esdaile’s era, standard surgical mortality was 40% while Dr. Esdaile’s surgical mortality was 5%.16

While under hypnosis, patients can be taught to alter psychophysiological functions. Research has shown that hypnosis is beneficial in reducing anxiety, decreasing blood loss and postoperative nausea and vomiting, lowering the perception of pain, accelerating wound healing, lowering complication rates, and shortening hospital length of stay.16 The patient benefits and cost savings make hypnosis both an accessible and feasible option for patients who want to use CAM methods to increase their healing and satisfaction with the overall perioperative experience. Hypnosis can be used with or without an experienced professional.16

It would be difficult to perform massage therapy during a surgical procedure, but there are benefits of massage in the preoperative and postoperative areas. Dr. Phil Barr of Longmont, Colorado, is an advocate of bodywork and prescribes massage for all of his hospitalized patients. Longmont United Hospital is based on the Planetree model, which provides a humanized and personalized atmosphere that attends to the heart and spirit of the patient. Many preoperative and postoperative patients at this facility are offered massage for relaxation and to reduce anxiety before and after their procedures. Studies indicate that this trend is catching on throughout the United States.17

Music therapy in the OR has been used to decrease postoperative pain and anxiety. It’s well-known that high levels of postoperative pain can lead to adverse reactions, including extended hospitalization and longer recovery times.

A study by Tse et al. of postoperative pain perceptions found that there were significant decreases in the intensity of pain in patients who experienced music therapy during procedures compared with those who didn’t. The patients in this study had lower systolic BP and heart rate readings and took fewer oral analgesics for pain.18 In another study by Cooke et al., patients who listened to music during their preoperative period had significantly lower levels of anxiety than patients who received routine care without music.19

Finally, a study on the effects of music therapy on the physiologic and psychological outcomes in patients who underwent cardiac surgery showed evidence that patients who listened to music during surgery had a significant reduction in pain and anxiety postoperatively.20 Reiki has been used successfully as an adjunct to surgery.21

Reiki practitioners can be in the OR at the patient’s request as long as the risks are reviewed with the patient and practitioner and both sign the required waivers. Reiki induces relaxation, relieves stress, and can lower the patient’s BP and heart rate. Because Reiki is noninvasive, it’s often referred to as a hands-on healing technique. Acting through the autonomic nervous system to lower BP and heart rate, it can relieve anxiety and stress. It’s believed that this technique encourages a feeling of well-being, assisting the immune system in defending against bacteria and viruses. This feeling of well-being stimulates the production of endorphins in the brain, thereby decreasing the brain’s perception of pain.21

Operatively, the Reiki practitioner stands at the head of the OR table, or wherever appropriate, and uses light touch to channel energy to the patient. This is coordinated with the circulating nurse, anesthesia provider, and surgeon before the case begins to avoid any confusion or stressful situation in the OR. Some patients request a Reiki session with their practitioner immediately before surgery, which reportedly has the same benefits as stated above for patients during and after surgery.22

TT can be used in the preoperative and postoperative areas. The practitioner uses her hands to facilitate the healing process by the exchange of energy. TT
repatterns the body’s energy field so that the patient’s own natural healing can begin. Hartford Hospital in Connecticut provides patients with TT to help the healing process. TT has been reported to create a relaxation response, alleviate anxiety and tension, alter the perception of pain and discomfort, and noticeably enhance the body’s natural healing process. It may also help accelerate healing of wounds, fractures, and infections.

**Future research**

Future research may explore other CAMs that can be used in the OR to benefit the patient without compromising the integrity of the sterile field or surgical site.

CAMs have been identified as the third way to cut healthcare costs; the first two are cutting benefits and raising taxes. Ruggie stated that alternative medicine promises an inclusive, innovative, and fiscally responsible solution to helping cut healthcare costs. It’s incumbent upon surgeons and perioperative nurses to familiarize themselves with the psychological and physiologic effects of surgery on the patient and with the literature on CAMs. This information is useful in modifying the adverse reactions of surgery, as well as improving outcome measures to offer patients the maximum benefit from surgery.

Improvement in surgical outcomes measures using CAMs, including monitoring anxiety, blood loss, postoperative pain levels, pain medication requirements, postoperative nausea and vomiting, recovery of bowel function, length of hospital stay, cost of care, and patient satisfaction, have been documented in various studies. CAMs have been noted to be highly beneficial in improving preoperative, intraoperative, and postoperative patient outcomes. Although there are studies available, there’s a need for further research and documentation by and for perioperative nurses.

As more is learned about the effects of CAM therapies, these specific effects can be integrated into and used with other more traditional pain treatments as a means to maximize overall efficacy of pain treatment and perception. In this way, nurses can seek to ensure that the greatest number of patients obtain the greatest benefit from the care offered.

**REFERENCES**


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