

# *Evidence Based Complementary and Alternative Medicine. Do we Need to Integrate it with Mainstream Pediatric Otorhinolaryngology?*

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## **Abstract**

The evidence based movement has swept the world. The use of complementary and alternative medicine (CAM) is rapidly increasing worldwide and quality evidence is also being published for CAM. This article explores the need to integrate CAM with mainstream Pediatric Otorhinolaryngology (PED ORL) taking into consideration safety, legal and ethics. A literature review for CAM therapies with highest level of evidence and recommendation was performed and some e.g is mentioned in the article.

The recommendations for integrating CAM with mainstream PED ORL include; given the growing numbers of CAM users, mainstream otolaryngologists need to be able to provide balanced evidence based recommendation and information to their patients.

If evidence supports both efficacy and efficiency of a CAM Therapy the otolaryngologist can support the therapy, but the child should be monitored conventionally for effectiveness and safety. If parents of children seek advice on some CAM therapy, for which insufficient evidence is present this should be informed to the parent. If there is evidence of ineffectiveness or if evidence indicates either serious risk the parents should be discouraged from pursuing such course of treatment. Evidence based integrated information regarding CAM will not only fulfill the parents emotional needs but also improve the therapeutic relationship between patients and their treating physicians. A framework of treatment plans should be formulated and monitored integrating CAM. Lastly policy developments for CAM are needed, for everyone involved; health care providers, institutions, policy makers, and parents.

## **Introduction**

Evidence based movement in medicine has swept the world, and currently has become well established. Evidence Based Medicine (EBM) is the integration of best research evidence, with clinical expertise and patient values. When these three elements are integrated, clinicians and patients form a therapeutic alliance, which optimizes clinical outcomes and quality of life.<sup>1</sup>

Decision makers in health care are increasingly interested in using high quality scientific evidence to support clinical and health policy choices; however the quality of available scientific evidence often found is inadequate. Reliable evidence is essential to improve health care quality and to support efficient use of limited resources.

The widespread gaps in evidence based knowledge suggests that systematic flaws exist in the production of scientific evidence.<sup>2</sup>

Currently both adults and children use CAM Therapies and its use is wide spread. CAM use refers to a broad set of health care practices that are not part of a countries own tradition and not integrated into the dominant health care system. Other terms sometimes used to describe these health care practices include ‘natural medicine’ ‘non- conventional; medicine and ‘holistic medicine’.<sup>3</sup>

To understand the many divergent CAM therapies the US National Center for Complementary and Alternative Medicine (NCCAM) has classified CAM and created five categories:<sup>4</sup>

1. Alternative medical systems: Naturopathic medicine, homeopathic medicine, traditional Chinese medicine and Ayurveda.
2. Mind- body interventions: Interventions designed to enhance the minds capacity to affect bodily functions and symptoms .eg. Yoga Meditation, prayer, mental healing music and dance therapy.
3. Biologically – based therapies: these use substances found in nature such as herbs, foods vitamins e.g dietary supplements and herbal products.
4. Manipulative and body- based methods: in this group the methods employed include movement of body parts. Some e.g. are chiropractics, osteopathic manipulation and massage.
5. Energy therapies: using energy fields, like Yoga, qigong, Reki, and therapeutic touch, electromagnetic fields pulse fields.<sup>4</sup>

To complicate matters at one end we practice mainstream medicine with often practices based on low levels of evidence with widespread gaps in evidence based knowledge, at the other end evidence is being published by CAM practitioners. This evidence is available to the patients on the internet.

Some of the reason why people use CAM are: mainly dissatisfaction with conventional medicine, desperation, philosophical congruence, increases well being and good relationship with therapist.<sup>5</sup>

Integrated health care is the new buzzword, the term has two definitions. Firstly, it describes a health care system ‘that selectively incorporates elements of CAM into treatment plans. Secondly it stands for ‘health and healing rather than disease and treatment. It views patients as whole people with minds and spirits as well as bodies.<sup>6</sup>

## **Discussion**

### **Why Otolaryngologists need to be aware of Integrative Medicine and CAM?**

With the increasing popularity of CAM, there is a growing need to educate doctors about it. If those opposed to integrating CAM into the already packed curriculum are to be convinced CAM education needs to be evidence- based, aimed at teaching openness rather than dogmatic belief systems.<sup>7-8</sup>

The ethical and legal issues of CAM research and practice are complex. In principle they are not different from those in other areas of medicine.<sup>5</sup>

The use of CAM in children is complicated: firstly parents do not volunteer information about their child using CAM to their doctors and the use of CAM is rarely entered into a child's medical records. Secondly children usually are not

the decision makers in their treatment, but are vulnerable. Thirdly an important motivation for parents choosing CAM is they incorrectly presume that CAM is risk free.

Safety is an important consideration for CAM use in children. Children differ from adults in the mechanisms of how substances are absorbed, used and eliminated by their immature tissues. Their immature metabolism, immune and central nervous system might respond in a different way than adults. So in practice for any form of oral therapy the same principles of safety as those of conventional pediatric pharmacological medical therapy should apply.

In a recent survey<sup>9</sup> the reasons CAM use disclosed to doctors included: nearly all used (98.8%) CAM as Natural Herbal Products to improve quality of life (QOL), 98.5 % of Mind body therapy used it "to be good to myself" and only 68% disclosed treatment to their physicians. In this study patients felt and reported that physicians used verbal and non verbal cues to express negatively regarding CAM saying "nothing has been proven" or they would ignore the patients question completely. To quote a patient that asked his physician questions regarding CAM, the doctor replied that "I have only 5 seconds left for you". The patient commented "if you cannot ask your doctor who can you ask?"

In the same survey patients thought that a session held by a physician who practices CAM would be worth attending "someone who feels comfortable between the two."

### **Some results of a literature review on CAM**

Some examples of grade 1 a level of evidence CAM therapy showing benefit.

1. Aromatherapy (the medicinal use of plant essence ) a systematic up-to-date Cochrane review where aromatherapy has been found to be beneficial for cancer palliation as it improves psychological wellbeing and improves quality of life.<sup>10</sup>
2. Music therapy has been found to be beneficial by two systematic reviews in children with developmental disorders and schizophrenia.<sup>11, 12</sup>
3. Systematic reviews: where probiotics have been found to be beneficial for diarrhea associated with antibiotic treatment in pediatric population, but also beneficial in no-antibiotic treatment for diarrhea and non-travelers diarrhea.<sup>13</sup>

Some examples of evidence of harm:

1. Shark cartilage believed to be antiangiogenic and used in cancer patients. Current evidence suggests no effectiveness for cancer, several serious side effects are on record, the risk – benefit balance that is clearly negative. So the evidence based recommendation is: shark cartilage use should be discouraged.
2. Mistletoe believed to have pharmacological actions: cytotoxic and stimulation of the immune defense. Some reported adverse effects reported include bradycardia, dehydration, delirium, hepatitis, fever, leukocytosis, seizures and vomiting. A systematic review concluded: considerable risks of mistletoe does not have proven effectiveness for cancer which can be treated more effectively by conventional health care.<sup>14</sup>

### **Clinical conduct that is clinically responsible, ethically appropriate and legally defensible;**

Non judicious use of CAM therapies may cause either direct harm or indirect harm by unwarranted financial and emotional burden.

When advising there are 2 major risks: Medical malpractice and professional indiscipline to avoid these following questions can be asked.

1. Do parents elect to abandon effective care when the child's condition is serious or life threatening?
2. Will the use of the CAM otherwise divert child from imminent necessary conventional treatment?
3. Are the therapies known to be unsafe /ineffective?
4. Have parties consented to use CAM?
5. Is the risk benefit ratio acceptable and is there at least a minority support in literature?<sup>15-16</sup>

### **Revisiting the definition of EBM and applying it to integrated medicine;**

Evidence Based Medicine (EBM)<sup>7</sup> is the integration of **best research evidence**, with **clinical expertise** and **patient values**. When these three elements are integrated, clinicians and patients form a therapeutic alliance, which optimizes clinical outcomes and quality of life.<sup>2</sup>

If there is supporting **best research evidence** of benefit or harm of a CAM therapy, and the **parents of the child value** it, the therapy can be instituted and child monitored. Mainstream otolaryngologist should try to increase their **clinical expertise** by care fully studying the clinical outcomes of CAM therapies.

If there are any situations where remarkable benefit or harm is observed it should be published to generate evidence and bridge knowledge gaps. Since parents often value and prefer CAM therapies a improved therapeutic alliance can be developed by integrating Evidence Based CAM with mainstream in Pediatric Otolaryngology.

### **Conclusions**

In this chapter we have explored the need to integrate Evidence based integrative Complementary and Alternative Medicine (CAM) with main stream Medicine.

Based on the current evidence our recommendations are the following:

1. Given the growing numbers of CAM users, mainstream otolaryngologists including Pediatric Otolaryngologists need to be able to provide evidence based recommendation and information to their patients.
2. Evidence based Integrated Information regarding CAM will not only fulfill the patients emotional needs but also improve the therapeutic relationship between patients and their treating physicians.
3. If evidence supports both efficacy and efficiency of a CAM Therapy the otolaryngologist should support the therapy and offer it to patients.
4. If the therapy is instituted the child should be monitored conventionally for effectiveness and safety.

5. If parents of children seek advice on some CAM Therapy, for which insufficient evidence is present this should be informed to the parent.
6. If there is evidence of ineffectiveness or if evidence indicates either serious risk the parents should be discouraged from pursuing such course of treatment.
7. A framework of treatment plans should be formulated and monitored integrating CAM
8. Lastly policy developments for CAM are needed, for everyone involved, health care providers, institutions, policy makers, parents.

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