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Review

Complementary and integrative medicine for breast cancer patients – Evidence based practical recommendations

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ABSTRACT

On average half of the breast cancer patients' population uses complementary and integrative medicine (CIM) therapies and many of them would like to receive information on CIM from their conventional treatment team. However, often they don't feel comfortable in discussing CIM related questions, with their conventional treatment team, because they think they don't have enough expertise and available time to deal with this topic. Furthermore, information on the evidence of CIM is not easily accessible and the available information is not always reliable.

The purpose of the current paper is to provide: 1) an overview about the CIM interventions that have shown positive effects in breast cancer patients and might be useful in supportive cancer care, 2) practical guidance on how to choose and find a qualified referral to a CIM treatment: 3) recommendations on how these interventions could be integrated into Breast Cancer Centers and which factors should be taken into consideration in this setting.

This paper takes available CIM practice guidelines for cancer patients and previous research on CIM implementation models into account. There are CIM interventions that have shown a potential to reduce symptoms of cancer or cancer treatments in breast cancer patients and the vast majority uses a non-pharmacological approach and have a good potential for implementation. Nevertheless, further and more rigorous research is still needed.

Introduction

While there is still a lot of miscommunication between conventional and complementary medicine it is an undeniable fact that cancer patients and in particular breast cancer patients have been demonstrating an increasing interest and use of complementary therapies [1]. Physicians are often confronted with patients that wish to improve their overall wellbeing and want to restrict the use of pharmaceutical drugs to a minimum. The use of complementary therapies alongside conventional treatments is often referred in publications by the acronym "CAM" for "Complementary and Alternative Medicine". Although widely used this acronym unfortunately fails to differentiate between the two types of therapies. While the word "complementary" refers to therapies used to complement conventional treatment, the word "alternative" refers to therapies that are used instead of well-known and evidence based conventional modalities [2]. The terms integrative therapy and integrative medicine are progressively more used, and the acronym "CIM" for "Complementary and Integrative Medicine" that represents more accurately the use of complementary treatments side by side with conventional approaches in a proper therapeutic environment [3]. We will use the term CIM throughout the paper.

On average 50% of cancer patients use CIM therapies in their treatment journey and the number has been seen rising in the last decades. The use is more frequent in North America than in Europe. Within Europe, the use of CIM treatments varies, with Italy having the lowest and Denmark and Germany the highest use of CIM [1]. Overall, users tend to be younger, more educated, of higher socio-economic status and female [4].

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Since the European Society of Mastology (EUSOMA) publication in 2006 [5] recommended the use of complementary therapies in breast cancer patients in an integrative medicine model several further papers have been published providing new, evidence based, information on the use of CIM therapies for breast cancer patients [1,6].

A few, well structured, CIM practice guidelines for cancer patients have been developed providing a good basis for counseling patients. They supply suggestions for evidence based CIM therapies that have a potential to reduce symptom burden and improving quality of life in breast cancer patients [7,8].

The purpose of the current paper is to provide 1) an overview about the CIM interventions that have shown positive effects in breast cancer patients and might be useful in supportive cancer care, 2) practical guidance on how to choose and find a qualified referral to a CIM treatment, 3) and recommendations on how these interventions could be integrated into Breast Cancer Centers and what should to be taken into account.

Methods

Several authors have provided information on the evidence for CIM interventions for breast cancer patients. The most recent and comprehensive practice guideline has been developed by the Executive Committee and Board Members of the Society for Integrative Oncology and has been published in 2014 in the Journal of the National Cancer Centers Monographs [8]. In addition, the guidelines of the Breast Committee for Breast Cancer Treatment in Germany include recommendations on CIM [9]. The evidence on CIM presented here as well as the grade classification used is mainly based on the guidelines by Greenlee et al. [8] and was substituted by additional recommendations by the AGO Breast Committee [9]. The grading was based on the guidelines of the US Preventive Services Task Force shown in Table 1 [10]. We only displayed interventions that have been graded in one of both above-mentioned guidelines with A–C. In case of different grading in both guidelines we used the more conservative one. References for the evidence of the interventions were based on the references quoted in the guidelines and few additional references were added. Furthermore, we included advice on integration strategies, which is based on our previous research [11–13] and our personal experience on an international level.

The evidence base and how to put it into practice

There are CIM interventions that have shown potential to reduce symptoms of cancer or cancer treatments in breast cancer patients (see Tables 2–4). As a first step, it is important to clarify with the patients the symptoms that are most important for them as well as their CIM treatment preferences. Furthermore, it is important to consider that some CIM interventions take a broader approach, which makes it possible that several symptoms might be addressed with only one intervention. For example, individualized acupuncture might be helpful for chemotherapy induced nausea and vomiting as well as for cancer related fatigue. A Mindfulness Based Stress Reduction (MBSR) Program might positively influence mood (depressive) disorders, perceived stress and quality of life (see Table 2). Following evidence based medicine it make sense to suggest first those interventions with a better grading and the non-pharmacological interventions. Exercise can be seen as a good bridge between conventional supportive cancer treatment and CIM interventions [14]. It is important to inform patients about the positive effects of physical exercise, which has a strong potential to improve physical and mental wellbeing in cancer patients [15,16].

It is also important to keep in mind that for exercise as well as for many of the CIM interventions (e.g. Yoga or meditation), adherence will be a key issue. Recommending fewer CIM interventions, which will have an influence on life style, but working closely with the patient on a plan on how to include those into their daily life can better support treatment success.

Table 3 lists those symptoms of cancer or cancer treatments where CIM interventions have shown a potential for improvement. However, there are still a number of other symptoms of cancer or cancer treatments (anemia, alopecia, cardiomyopathy, cognition, neutropenia/leucopenia, neuropathy) where there is no or not enough evidence for CIM interventions to allow us to provide recommendations for use.

Furthermore, for those readers not familiar with CIM interventions Table 4 tries to contextualize and explain the above mentioned therapies.

Table 1
Grade A–C recommendations of the US Preventive Services Task Force.

Grade	Definition	Suggestions for practice
A	Recommends the service. There is high certainty that the net benefit is substantial.	Offer or provide this service.
B	Recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer or provide this service.
C	Recommends selectively offering or providing this service to individual patients based on professional judgment and patient preferences. There is at least moderate certainty that the net benefit is small.	Offer or provide this service for selected patients depending on individual circumstances.

Offering CIM or referring to CIM

The first and fundamental step to consider if an integrative approach is being considered, is to try to clearly understand its benefit supported by available evidence. There are still many obstacles to the use of CIM treatments alongside conventional cancer treatment. Most Medical Schools don't include information on CIM in their curricula and there is a generalized lack of knowledge and also a dismissive attitude of health care professionals regarding these treatments. As a consequence many physicians who provide cancer care are unable to approach the topic of CIM [7].

When integrating conventional and complementary medical providers, it is very likely that more than two cultures will be brought together. A strategic approach that helps to overcome cultural differences could be helpful. As an example, CIM practitioners often are used to a different clinic environment, don't speak the professional conventional medical language, might have another professional appearance (e.g. dress code), and are not used to the implementation of evidence-based medicine. All these and other differentiating factors must be taken into account [11].

Nowadays major Cancer Centers in US (e.g. MSKCC, MD Anderson) and a number in Northern Europe provide CIM programs for their patients. They also invest in informing patients about the potential harm of unproven alternative therapies. To offer patients a proper CIM service it is important to have an accurate understanding, whether patients are using or intend to use CIM therapies in their cancer journey [3].

There are different models of integration and the most common is a linking of a Breast Cancer Center with a CIM service as, for example, implemented at MD Anderson. A Breast Center could fully