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ORIGINAL ARTICLE

Complementary and Alternative Medicine in Cardiac Surgery: Prevalence and Modality of use

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Background Complementary and alternative medicines are developing at a growing rate but their use in the hospital setting is little known, ignoring risk or benefit in practice. The objectives of the study were to quantify the prevalence of complementary and alternative medicines used by patients admitted to a cardiac surgery department.

Methods Patients and staff at the Cardiac Surgery unit of Angers University Hospital (France) were surveyed regarding their modality of complementary and alternative medicines use, between April 01, 2013, and April 18, 2014, by means of an anonymous questionnaire.

Results Of 154 patients included in the study, 58% used a complementary and alternative medicine at least once in their lifetime, 38% during the preceding year, and 14% between the consultation and surgery. In all, 71% used them as a complement to their conventional medical treatment. Of those who used a complementary and alternative medicine during the year of their surgery procedure, only 29% informed their physicians and paramedical staff about it.

Conclusions Complementary and alternative medicines use among patients admitted to cardiac surgery units is common. Yet there is a real lack of knowledge regarding these health practices among physicians and paramedical staff.

Keywords Complementary therapies • Traditional medicine • Aromatherapy • Phytotherapy • Thoracic Surgery.

Introduction

Complementary and alternative medicines (CAMs) are becoming more and more prevalent in economically developed countries [1]. A European Parliament report of March 16, 1997, revealed that CAMs were used by 20 to 50% of the population, depending on the European Union member country surveyed. In France, the prevalence of CAM use (at least once over the lifetime of the person surveyed) was evaluated to be 42.6% in the general population in 2010 [2], and to be 45.7% in patients on chemotherapy [3]. To date, in France no studies have been conducted on CAM use in patients undergoing heart surgery, however the prevalence was estimated to be 68% across various surgery departments in Scotland [4], and 51% in cardiac surgery in Australia between consultation and surgery [5].

A number of French studies show that healthcare staff are often little aware of CAM use among patients [3,6].

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Mayer-Levy's study was conducted in the general population, and it estimated that less than one patient in two informed their family doctor about using CAM [2]. A report released in January 2010 by the *Direction Générale de la Santé*, the French health directorate, warned of the ignorance regarding the prevalence of CAM use [7]. It is crucial that the other forms of care used by patients be better understood, both for preventing possible interactions and for improving the management and quality of life of patients in the department.

This study's primary objective was to quantify the prevalence of CAM use before surgery by patients of the Cardiac Surgery unit of Angers University Hospital (CHU Angers). Its secondary objectives were to describe CAM use (rationale, length of use, risk evaluation, and prescriber) and to evaluate the knowledge of healthcare professionals in the department regarding such CAMs, along with their interest in them.

Material and Methods

CAM Definition

According to the Word Health Organization definition, complementary and alternative medicines ''refer to a broad set of health care practices that are not part of that country's own tradition and are not integrated into the dominant health care system.'' [8]

In the study, CAMs were presented in six different categories:

- Medical concepts based on a principle other than allopathic medicine, such as homeopathy, naturopathy, and traditional Chinese medicine;
- Nutraceutical therapies (such as dieting, dietary supplements, and biologically based ingredients);
- Phytotherapy and aromatherapy;
- Manipulative practices (such as osteopathy and chiropractic);
- Mind-body intervention (such as yoga, hypnosis, and relaxation);
- Energy therapies (such as therapeutic touch, qigong, and tai ji chuan).

Study Design

The study was observational, cross-disciplinary, single-centre, and descriptive.

Study Population

To meet study objectives, both patients and healthcare professionals of the department were asked to answer a questionnaire.

Patients who were admitted to the Cardiac Surgery department of CHU Angers between April 1, 2013, and April 18, 2014, for a scheduled procedure were deemed eligible if they were adults and able to understand and answer the questions in the questionnaire by themselves. Patients who were emergency admissions, who were unable to understand and answer the questionnaire by themselves, or who had already completed the questionnaire were excluded from the study.

All healthcare professionals of the Cardiac Surgery department of CHU Angers who were in contact with patients for the purposes of treatment, reception or consultation (nurses, nurse's aides, the health service manager, surgeons, physiotherapists, interns, and anaesthetists) and who were present in the department during the months of July and August 2013 were invited to participate in the study.

The study was granted approval by the institutional review board of CHU Angers before being launched.

Endpoints

Questionnaires were developed on the basis of data from the literature [3,4], and after the medical and paramedical teams had been consulted. Each questionnaire was tested on a sample of healthcare professionals and patients.

The patient questionnaire comprised a general section of seven questions concerning CAM use: the type of CAM that patients used over their lifetime, the reasons for not using CAMs if they had not, the interest that patients developed in such practices if any were suggested to them during their hospitalisation, as well as their demographic profile. The patient questionnaire also included a series of five additional questions concerning more specifically any CAMs that patients might have used during the preceding 12 months. These questions were aimed at identifying prescribers, understanding the reasons for using CAMs (as a complement, as an alternative, or as prevention), determining the length of use of CAMs, defining the level of disclosure of the practice to medical staff, and discovering patient satisfaction with their CAM treatment.

The questionnaire for healthcare professionals comprised 10 questions that aimed to assess their knowledge of CAMs and their willingness to steer hospitalised patients toward these practices. Two additional questions aimed at obtaining the healthcare team's estimation of the proportion of patients who had availed themselves of CAMs as well as their readiness to discuss such health practices. Lastly, the final questions sought to evaluate the healthcare team's interest in using CAMs within the department.

Definition of Postoperative Complications

According to general literature we have defined complications as:

- Cardiac and circulatory: supra-ventricular rhythm disorders, low cardiac output, intra-aortic balloon, extracorporeal life support system or extracorporeal membrane oxygenation (ECLS or ECMO), atrioventricular block, need for pacemaker, acute myocardial infarction, cardiac arrest.
- Neurological: confusional state, transient ischaemic attack, stroke, convulsion, peripheral compression, coma more than 24 hours, depression.
- Ventilatory: hypoxia, pneumothorax, reintubation, prolonged ventilation (>24 h).
- Infections: pulmonary, urinary, catheter, deep sternal and mediastinum, lymphangitis, other infections.