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ORIGINAL ARTICLE

Prayer and blessings focused for healing is the most popular complementary intervention in a paediatric oncology unit in Greece

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Summary

Purpose: *Increasing numbers of children with cancer are using complementary and alternative medicine (CAM) therapies. Our aim was to estimate the rate of use, the beliefs of users and non-users and factors related with the use of CAM among Greek families.*

Methods: *A self-reported questionnaire was given to parents of 184 children with cancer. We assessed the rate of use, types of CAM therapies and factors potentially associated with the use of CAM.*

Results: *Based on the 110 questionnaires which were completed (59.8% of the families), 23 families (21%) had used at least one complementary treatment. The most common forms were: spiritual healing/prayer/blessings 18/23 (78%), art therapies 4, dietary supplements 3, massage 3, homeopathy 2, and herbals 2. The reasons given for use included: making the child stronger 17/23 (48%), hope of stopping the cancerous process 11/23 (49%), and coping with side effects 6/23 (26%). Among the reasons given by the parents for not using CAM therapies the most common (84%) was the effective conventional treatment and, therefore, there was no need for CAM use. Another 24% reported that were unaware of these "alternative" and "complementary" therapies and a further 7% had considered using them but finally they didn't. In bivariate analysis, the use of CAM was not associated either with age, sex, nationality, education or occupation of the parents at the time of the survey, or with diagnosis, mode of therapy or age of the child at diagnosis.*

Conclusions: *The use of CAM therapies by Greek families for their children with cancer does not appear to be very popular, although the experiences of those who did use them were generally positive.*

Key words: *cancer, child, complementary and alternative therapies*

Introduction

Diseases with unknown aetiology, high risk of death and uncertain treatment can cause feelings of fear, distress and lead to non-traditional methods of therapy. The unconventional medicine, known also as CAM, is very important and has become increasingly popular. These increasing rates in the use of such "treatments" in the last two decades is attributable to their advertisement in mass media, the possibility of information via the Internet, the wish of families to participate actively in their treatment, the low cost and the dissatisfaction from the conventional medicine. This is related with the inability of conventional medicine to give sufficient treatments in many chronic diseases and their symptoms, such as pain. Over the past decade, the use of CAM in individuals who suffer from cancer in the United States and Europe has shown substantial growth. It appears that the majority uses CAM therapies as supplement of conventional medi-

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cine and not exclusively [1]. Eisenberg et al. [2] defined CAM as different medical systems, interventions and products that up to today are generally not part of conventional medicine and are not taught in medical schools. CAM consists of various techniques with spiritual and/or corporal dimensions such as imagery, relaxation, massage, herbal remedies, or various diets and techniques such as chiropractic and acupuncture. It includes huge numbers of "treatments", from homeopathy to yoga [3] that usually are used for various reasons, from helping to cure cancer to relieving symptoms [4-6]. Since CAM "therapies" for cancer is already a recognized issue in the last 20 years, the international literature has been submerged by studies and reports with user frequencies varying from 22 to 73%, but these results need further interpretation and research [7]. One of the most difficult problems of the studies in patients who used such interventions is the separation of simple "supporting" means (e.g. therapeutic contact, massage, acupuncture, prayer) from nutritional and pharmacologic therapies such as remedies, vitamins, herbs, dietary supplements which aim to the "favorable modification of the pathogenic process, the strengthening of the immune system, or the reduction of treatment toxicity", and consist the most serious and problematic unconventional "treatments" [8]. CAM "therapies" are increasingly used in children and especially in those having parents with high income and education. The percentages for children with chronic and potentially lethal illnesses such as malignant diseases, asthma, rheumatoid arthritis, cystic fibrosis range from 30-70% [9]. Studies of the 1970s and 1980s reported that the use of these "treatments" was less than 20% but more recent and correctly organised studies have shown that 31-84% of children with cancer used some form of CAM [10]. The differences in the rates of users in such studies of the last 20 years are explained by differentiations in study materials, time, and definition of unconventional treatments, the objectives and the planning of studies. The reasons that parents use CAM for their children with cancer vary. The way that parents conceive the therapeutic approach, e.g. the belief "to try everything to cure or help a condition not curable by conventional medicine", plays an important role in their decision. Other reasons include the unfavorable prognosis of illness, previous experience from using such interventions, high educational and economic level, older age, high level of religiousness, and a desire to use more natural methods of healing [4,11]. Since the exceptional results are known concerning survival and cure that have been achieved for the majority of children with cancer, most parents are unlikely to use such treatments, at least initially. On the other hand, despite the favorable outcome of many pediatric malignancies, the diagnosis of cancer is intensely distressing and the conventional treatment is much traumatic,which can lead the parents to use such interventions.

Methods

We conducted a survey in children with cancer treated in our department, in order to evaluate the prevalence of CAM use, types of CAM employed, reasons for using and not using them from parents and to compare our data with those of the relevant international literature. We developed a questionnaire, which included three sections of data, based on a review of the literature. The first section was related to the child (sex, age at diagnosis, type of cancer, type of treatment, i.e. chemotherapy, radiation therapy or surgery, time from diagnosis or from the end of treatment and whether the disease was in remission or not at the completion of the questionnaire) and the family member who completed the questionnaire (sex, age, profession, relation with the child, nationality, and socio-demographic characteristics). In the second section those that used CAM reported its type, the benefits that resulted, the reasons that led them to their use, how they were informed about these "treatments", the starting time and the frequency of CAM use and whether they would recommend the therapy to other parents. Finally how much they felt their chosen therapies had helped their child, using a rating scale from 1 to 10 (with '1' being 'not helpful at all' and '10' being 'very helpful'). In the third section, those who did not use CAM analysed the reasons of their choice. The population of the study included the parents of children who had been diagnosed with cancer during a 3-year period. It was ensured that those children who had died during the study period were removed from the list. One hundred and eighty four questionnaires were mailed to the parents of all these children together with an introductory letter explaining the aims of the study and including a pre-paid self-addressed envelope, asking them to volunteer their participation in the study. The responding letters were collected, and the data were recorded and analysed statistically.

The local institutional research ethics comittee approved the study.

Statistics

For the statistical analysis of data used were the Fisher's exact test, chi-square test and the nonparamet-

ric Mann Whitney U test. A p value<0.005 was concidered statistically significant.

Results

Of the 184 questionnaires distributed to the families of 184 paediatric cancer patients treated at our department 110 (59.8%) completed and returned the questionnaire. According to this survey 23 (21%) of the children used at least one type of CAM. In Table 1 the socio-demographic characteristics of the respondents and patients as well as the disease characteristics and treatment are shown. There were not significant differences regarding the socio-demographic characteristics of the respondents (age, sex, nationality, relationship to child, and profession) between CAM users and non-users. Concerning patients (68 boys and 42 girls), we did not find any difference between users and non-users regarding the gender, age, the treatment phase or the type of treatment. The most common type of cancer in this study was acute lymphoblastic leukaemia (48/110;43.6%) and we did not find any significant difference between users and non-users regarding the kind of disease but this lack of difference could be possibly attributed to the small number of participants. Thirty (27.3%) children were on treatment during the study period. Among the 80 patients who were off therapy during the study we did not find any correlation between the time interval from the end of treatment until the questionnaire was completed (1-45 months, median 15) and the use of CAM. The median time interval between diagnosis and the study process was 28 months (range 1-102) and it was significantly shorter among CAM users (22 vs 30 months, p=0.035). In 95 children (86.4%) the disease was in remission, and in 15 (13.6%) was in relapse or after relapse. No difference was found between the disease status and the use of CAM. The reasons given for the use of CAM included: making the child stronger (17/23;74%); hoping of stopping the cancerous process- *to do everything possible for their child*-(11/23;74%); coping with side effects (4/23;17%); and 2/23;9%) were mainly influenced by other parents' opinions. The most common CAM therapies were spiritual healing/prayer/blessings in 18/23 (78%) children, art therapies in 4 (17%), dietary supplements in 3 (13%), massage in 3 (13%), homeopathy in 2 (9%), herbals in 2 (9%), Chinese medical treatment in 1 (4%), psychological interventions in 1 (4%) and physical exercise in another one (4%) (Table 2). The vast majority of users (21/23;91%) were clearly satisfied and would recommend CAM use to other parents in a comparable situation. Only one of the users did not report any benefit of CAM. The main benefits identified included psychological support (21/23;91%), fewer side effects of conventional treatment (5/23;22%) and improvement of the disease status (5/23;22%). Among the reasons given by the parents for not using CAM therapies, the most common was the child doing well and therefore there was no need for CAM use (68/81;84%). Another 24% (19/81) reported not being aware of these "alternative" and "complementary" therapies, whereas another 6/81 (7.5%) would consider it in case of an unfavorable evolution of the disease.

Discussion

The sample of 110 responded parents is high, although the response rate to the questionnaire was relatively low (110/184;59.8%). Such a response rate is comparable to those obtained in similar published studies but the study populations differed significantly between the surveys. Of the 110 families, 23 (21%) had used or were using some form of unconventional therapy for the cancer of their children. The reported 21% falls within the range of 9 to 46% that had been reported in previous studies of the 1970s and 1980s [12] but it is particularly low and does not agree with more recent studies [6,10,13], except one recent study from Italy [14], the authors of which have reported that 31 (84%) children with cancer used some form of CAM "therapies". These differences could be attributed to inconsistent definitions and types of therapies that were used in these studies, different data collection methods or cultural differences.

Our study has some limitations. First, we did not send questionnaires to the parents of children terminally ill or who died during the study period because of respect for them. We believe that this influenced the number of positive replies but for easily understood ethical reasons we decided not to include this group of parents in the study. Second, differences could be attributed to memory recall difficulties as the study period was much longer (until 3 years) in comparison with 2-12 months in other studies. Finally, the majority of children in our study had favorable outcome for cure so their parents did not use such treatments, at least initially.

Many researchers have also confirmed the fact that CAM is generally used alongside with conventional medical treatment by children rather than as its replacement [5,6,12,14]. In our study

Table 1. Characteristics of respondents and patients

Characteristics	*Total N*	*Alternative therapies N*	*Conventional therapy N*	*p value*
Respondents				
Gender				
Male	33	5	28	
Female	75	17	58	ns
Male & female	2	1	1	
Age, years, median (range)	39 (26-57)	40	39	ns
Relation with child				
Father	33	5	28	
Mother	73	16	57	
Father & mother	2	1	1	ns
Other	2	1	1	
Nationality				
Greek	98	19	79	ns
Foreigner	12	4	8	
Occupation				
Housewives	36	9	27	
Working in the public sector	26	5	21	
Professionals/self-employed	43	8	35	ns
Students	1	1	-	
Unemployed	4	-	4	
Patients				
Gender				
Boys	68	14	54	ns
Girls	42	9	33	
Age, years, median (range)	7 (1-14)	9.5	7	ns
Disease				
Leukemia	48	6	42	
Lymphoma	16	5	11	
Sarcoma	13	6	7	
Nephroblastoma	8	-	8	ns
Neuroblastoma	4	-	4	
CNS tumors	4	3	1	
Other	17	3	14	
Therapy				
Chemotherapy (CT)	51	7	44	
Surgery (S)	7	2	5	
Radiotherapy (RT)	1	-	1	
CT+ S + RT	9	3	6	ns
CT + S	25	6	19	
CT + RT	16	5	11	
No therapy	1	-	1	

Data represent numbers of patients and respondents. ns: non significant

all parents used CAM "therapies" alongside with their children's conventional treatment and the fact that 16/23 (70%) incorporated the CAM use on a daily basis supports these findings.

The CAM most commonly used in our study was that of spiritual healing/prayer/blessings

Table 2. Types of CAM patients have used

	N=23
Faith healing/prayer/blessings	18
Art therapies	4
Dietary supplements	3
Homeopathy	2
Herbal treatments	1
Massage	3
Chinese Medicine	1
Sports/Exercises	1
Spiritualistic/psychological interventions	1

Data represent numbers of patients. CAM: complementary and alternative medicine therapies

(18/23;78%) and this is in agreement with a small number of other studies like Friedman's et al. [4] who reported a ratio of 64% and Yeh's et al. [13] who reported a ratio of 40%. This high rate in our study (78%), although in a small number of parents using such interventions, could be explained not only by the cultural and religious beliefs of the Greek people but also by the excessive and frequent tendency of the Greek society to pray for every serious health problem but this is not considered as an unconventional therapy. However, when prayer and spiritual healing is initiated only for the child with cancer, we consider it to be a CAM intervention. In our study in this category of users we included parents who excessively turned to religion, holy sacraments, and prayers. They often asked for help from famous monasteries, travelling all over the country and placed lots of sacred images, tiny crosses, holy wood not only under the pillow and mattress of the child but also in the medical file dossier of imaging studies waiting for good results.

The mind-body control group ranked second in frequency of CAM use, with an overall prevalence of 39% (9/23) (music/art therapy in 4, massage in 3 & body and mind exercise in 2). This rate is similar to those of Fernadez et al. [6] and Friedman et al. [4]. It has been suggested in the literature that these interventions have a place in the holistic care of cancer patients in a considerable number of oncology centers in Europe and USA. Thirty percent of our patients used herbs/homeopathy/special diets/vitamins. This prevalence (7/23;30%) is significantly lower than what was observed in many studies in the last 20 years and this is mainly due to the fact that in our country only in the last 10 years parents are considering these products and interventions to fight cancer, especially in children [15].

In the present study, most of the families learned CAM from relatives, friends, or health practitioners, whereas very few were informed from media (internet, newspapers, TV) and this is surprising and in contrast with other studies [16]. Reasons for using CAM therapies were: making the child stronger and improving the general health (17/23;78%), hope for stopping or curing the cancer (11/23;48%) and coping with the side effects of therapy and alleviating the symptoms from the disease (6/23;26%). It is interesting that parents in Greece decide to use CAM for their children for similar reasons as in other countries [6,12]. Experiences were generally positive. All, but one, who chose unconventional therapies and interventions expressed satisfaction with them, and more than 80% of the parents were clearly satisfied using 10 in the rating scale from 1 to 10 and 22/23 (96%) said they would use them again, and were willing to recommend them to other parents. As reasons for not using CAM the parents reported: confidence to the medical team and good evolution of the disease (68/81;84%); not being aware of CAM (19/81;24%) whereas 6/81 (7.5%) would consider it in case of an unfavorable evolution of the disease or side effects (relapse, toxicity etc). In bivariate analysis, CAM use was not found to be associated either with age, sex, nationality, education or occupation of the respondents at the time of the survey, or with the diagnosis, mode of therapy or age of the child at diagnosis. A trend was noticed between CAM use and time since diagnosis. Some positive or negative associations found in the literature with regard to the use of CAM are : the socio-cultural pattern [17,18], the socio-economic level of the parents [18], the high parental education [6], the presence of relapse [19], prior use by the patient's family of some type of unconventional therapy [6], and the religiousness of the family [18,20]. In summary, CAM use is common among paediatric oncology patients and is often not discussed with the treating physician(s). Because of the frequent use of CAM, and in order to make a clear decision, parents are in need of scientific and honest information over these therapies. Therefore, health care professionals should have an open mind when helping and informing parents and should avoid the categorical rejection of all forms of unconventional treatments. Some nutritional supplements, vitamins and herbs could positively help in improving the quality of life during treatment and some alternative interventions offer better psychological, body and mind health [21].

Conclusions

The findings of this study suggest that many Greek parents use prayer and faith healing as a therapeutic adjunct. The distress of having a child with cancer may lead parents to use formal or informal spiritual practices for comfort and strength. If we exclude these, the use of other CAM practices by Greek families for their children with cancer does not appear to be very popular, although the experiences of those who did use them were generally positive. According to recent data there is an increase in the popularity of CAM, especially among adult cancer patients. Therefore a therapist must ask about the use of such therapies in all patients, offer parents and patients the best information about them that is currently available and encourage parents to report promptly any adverse effects. SIOP published recently guidelines that called the health care team to be attentive to complementary therapies that may be physically or psychologically harmful to children and their parents but also indicated that the health care team should not automatically and dismissively discourage the use of non harmful complementary therapies [10,22].

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