



Complementary and alternative medicine use among patients presenting to a pediatric otolaryngology clinic

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ABSTRACT

Objectives: This study sought to quantify and characterize complementary and alternative medicine (CAM) use among patients presenting to a pediatric otolaryngology clinic with the aim of increasing CAM use awareness for the practicing pediatric otolaryngologist.

Methods: Four hundred thirty-four caregivers of patients presenting to a pediatric otolaryngology clinic were surveyed regarding their child's use of CAMs. Demographic information, perceived benefits, and sources of information regarding CAM was collected. Spearman correlation coefficient was used to assess strength of associations.

Results: Three-hundred and sixty-four caregivers completed the survey (83.9% response rate). The children of 69% of respondents had utilized CAM, and 46% were using CAM at the time of the survey. Higher income and chronic illness in the child were significant predictors of CAM use. The children of older and married parents were more likely to have utilized CAM (non-significant). The most common agents were multivitamins (43%) and vitamin D (32%). Parents whose children used more CAMs were more likely to perceive a benefit.

Conclusions: A significant proportion of pediatric otolaryngology patients utilized CAM in our study population. The most commonly used agents are mostly benign, but others may have more unknown consequences. It is crucial that otolaryngologists ask specifically about these agents, as they potentially interact with prescription medications and some may lead to surgical complications.

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1. Introduction

Complementary and alternative medicine (CAM) refers to a diverse range of products and practices that are not considered part of mainstream Western medicine. These agents are becoming increasingly popular among North Americans and Europeans as an alternative or adjunct to prescription medications and other forms of medical therapy. General rates of CAM use in Canadian adults were reported as 54% in a 2006 national survey, representing a 4% increase over rates reported in 1997 [1]. A different survey in 2005 administered by Health Canada revealed that 71% of Canadians had utilized a CAM agent at some point in their life, and 38% do so daily [2].

The use of CAM is not limited to adults. A study of Canadian pediatric patients presenting to the emergency department

revealed considerable use as well. Of the 1804 families interviewed, the number of patients utilizing CAM agents or CAM practitioners was almost equal to those taking prescription medications (45% versus 44%) [3]. Further, 1 in 5 patients were taking a CAM and prescription medication simultaneously, and 15% were taking more than 1 CAM concurrently. This study also found that 16% of the drug combinations in use by the pediatric patients could theoretically result in an unfavorable drug interaction.

Few studies in Canada and the United Kingdom have assessed CAM use among otolaryngology patients [4–7] and they have demonstrated that CAM use is very common in this cohort of patients. However, the awareness by the respective healthcare providers was found to be inadequate, and the actual reporting of CAMs by the patients to the otolaryngologist was found to be low.

Despite the increasing prevalence of CAM use and its potential interactions with prescription medications and possible interference with surgical outcomes, only 1 study from the United Kingdom has assessed CAM use in pediatric otolaryngology patients. As well, many surgeons are unaware and not well informed about CAM agents themselves and whether or not their

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patients actually utilize CAMs. The objective of this study is to describe CAM use among Canadian patients presenting to a pediatric otolaryngology clinic. The specific types of CAMs, factors influencing the use of CAMs, and perceived benefits were ascertained in hopes of increasing the awareness of CAM use for the practicing pediatric otolaryngologist.

2. Methods

Four hundred and thirty-four caregivers of patients presenting to a pediatric otolaryngology clinic at the IWK Health Centre in Halifax, Nova Scotia, between February and May 2011 were asked to complete a questionnaire on their child's use of CAMs. Informed consent was obtained prior to questionnaire administration and parents who did not wish to participate were excluded from the study. Parents completed the survey after clinic registration while waiting for their child to be assessed by the attending surgeon. Only new patients were asked to participate in order to avoid duplicate surveys.

The questionnaire asked caregivers about 35 common CAMs and herbal medications and therapies (Appendix A). These specific agents were chosen based on a survey previously administered by our colleagues at the adult otolaryngology clinic and a literature search of the most common CAMs in current use [7]. A naturopathic doctor was consulted to ensure a relatively complete list of the CAMs. We also asked parents to specify any other CAM agents that their child was using with an open-ended question.

Parents were asked whether the CAM was currently being used or was used in the past. As well, their reasons for use, source of information, and whether there was any apparent benefit associated with the CAM agent or therapy was ascertained. Demographic information was also obtained from each caregiver in regards to their age, their child's age, marital status, income, education, and place of residence.

Data was collected and entered into an Excel Spreadsheet (Microsoft, Redmond, WA), and then imported into the SAS statistical analysis program (SAS Institute Inc., Cary, NC). The Spearman correlation coefficient was used to determine the strength of association between CAM agents and patient demographics. A *p* value of less than 0.05 was considered statistically significant for all analyses.

Research ethics board approval was obtained for this study.

3. Results

Three hundred and sixty-four parents completed the questionnaire, which resulted in a response rate of 83.9%. Of the parents participating in the study, 38 (10.4%) were male and 326 (89.6%) were female. The children of participants were male in 208 cases (57%) and female in 154 cases (42%). Two parents surveyed did not specify child gender. Caregivers ranged in age from 21 to 62 years, with a mean age of 36.4 years. Children ranged in age from newborn to 18 years of age, with a mean child age of 5.6 years. A total of 63% (228/358) of respondents who provided their education level reported achieving a university degree or higher. Six patients did not provide their level of education. Twenty-seven participants declined to provide their income levels, but of those who responded, 29% (98/337) reported an annual income of greater than \$99,999. Regarding marital status, 77% (272/354) of those who responded were married at the time of survey. Demographic data of survey participants are summarized in Tables 1 and 2.

Of the 364 participants completing the survey, 252 (69%) reported having a child who used CAM in the past, and 144 (46%) had children using CAM at the time of the survey. Only income was significantly associated with current CAM use ($p = 0.007$). More

Table 1
Summary of caregiver demographics.

	Total	CAM users	%	Correlation
Total	364	252	69	
Sex of parent				0.9545
Male	38	23	61	
Female	326	229	70	
Age of parent				0.0538
20–29 y	56	38	68	
30–39 y	202	140	69	
40–49 y	93	65	70	
>50 (50–62 y)	11	8	75	
Marital status				0.2577
Single	53	29	55	
Married	275	203	74	
Divorced/separated	23	14	61	
Widowed	3	2	67	
Education of parent				0.0598
Some high school or less	12	9	75	
Completed high school	48	26	54	
Some university	40	26	65	
University degree	109	80	73	
Some post-graduate	30	17	57	
Post-graduate or higher	89	67	75	
Other	32	26	81	
Family income				^a 0.0046
<\$20,000	24	13	54	
\$20,000–\$39,999	48	31	65	
\$40,000–\$59,999	42	25	60	
\$60,000–\$79,999	67	44	66	
\$80,000–\$99,999	58	44	76	
>\$99,999	98	80	82	

CAM, complementary and alternative medicine; y, years.

Correlation: Spearman correlation coefficient.

^a Strong correlation.

specifically, children from higher income households were more likely to use CAMs. Although not statistically significant, older parents were more likely to have children that are current CAM users ($p = 0.0631$), and married parents were also more likely to have children that are currently using CAMs ($p = 0.0574$). Age of child, sex of parent, sex of child, marital status, and whether the parents identified themselves as having a chronic illness were not found to be significantly associated with having ever used a CAM agent. A higher income was significantly associated with using more types of CAMs ($p = 0.0046$). Additionally, parents who reported their children as having a chronic illness were more likely to have ever used CAM agents ($p = 0.0372$). In the case of having used a CAM agent in the past, older parents were again more likely to have tried CAM in the past ($p = 0.0538$), as were those who were more educated ($p = 0.0598$), but neither of these were found to be statistically significant.

Table 2
Summary of child demographics.

	Total	CAM users	%	Correlation
Sex of child				0.9632
Male	208	145	70	
Female	154	105	68	
Age of child				0.7449
0 y	10	9	90	
1 y	39	26	67	
2 y	48	32	67	
3 y	40	29	72	
4 y	41	28	68	
5 y	37	29	78	
6–7 y	50	33	66	
8–9 y	29	19	66	
10–11 y	24	17	71	
12–18 y	45	29	64	

CAM, complementary and alternative medicine; y, years.

Correlation: Spearman correlation coefficient.

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