SHORT REPORT

Survey of paediatric complementary and alternative medicine use in health and chronic illness

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Groups of 25 children with cerebral palsy (CP), inflammatory bowel disease (IBD), and cancer were compared to 25 healthy children to establish use of complementary or alternative medicine (CAM). Children with chronic disease were greater than three times more likely to use CAM, usually without paediatricians' knowledge.

Complementary or alternative medicine (CAM) use has greatly increased in the developed world, with paediatric prevalence figures between 1.8% and 80%, depending on population and study design.[1 2] CAM, although generally perceived as safe, has risks, with reports of death, anaphylaxis, renal failure, and malignancies.[3] Adverse effects occur directly, or from interactions with orthodox medicines.[3] For example, use of herbal remedies may decrease the effectiveness of orthodox medications or delay their use, having detrimental prognostic effects.

No studies have compared use in children with and without disease conclusively. CAM is reported as more prevalent in children with chronic diseases, despite lack of substantiating evidence. A Finish study compared children with acute lymphoblastic leukaemia (ALL) to age matched healthy controls, showing increased CAM use in ALL, but numbers were small.[4] A cross-sectional study in Florida showed no significant difference between oncology patients and controls.[5]

METHODS

Following local research ethics committee approval, 75 children (aged 0.5–18 years) attending specialist clinics at Leeds teaching hospitals, with at least a six month history of a chronic condition, were recruited. Disease groups were chosen to reflect previous literature; each consisted of 25 children with CP, IBD, or cancer. Children with cancer were excluded if recently relapsed or undergoing palliative care. Twenty five healthy children were recruited during admission for incidental injuries or minor surgery, but excluded if they were under the care of a paediatrician, or had any chronic illness. Non-English speaking people were excluded.

CAM was defined as any non-prescribed medication or therapy, including complementary therapy (CT) provided by parents or CAM practitioners, such as aromatherapy, therapist taught massage, homeopathy, osteopathy, or reflexology, and any purchased complementary medication (CM), such as Echinacea, herbal or Chinese remedies, and St John's Wort. Prayer, baby massage, simple vitamins, burning of aromatherapy oils, and over-the-counter medicines such as cough or anti-diarrhoeal preparations were discounted due to the common frequency of use.

A questionnaire based structured interview was conducted with parents of each child, including sections on CAM use, the child's illness, and sociodemographics. A single researcher (LM) interviewed all patients, being careful not to present any personal view about CAM during the interview. The χ^2 test was used to compare observed differences between groups.

RESULTS

The majority of children recruited in this survey were Caucasian (89%), with other representation from Asian (7%) and mixed white and black African (4%) groups. Sociodemographic characteristics were similar between all groups, with no significant difference in deprivation indices (table 1). Degree of deprivation was shown by Indices of Deprivation 2000, determined by postcode, using the government national statistics website. Families were grouped into those with high deprivation (rank of 1–4000) and low deprivation (rank of 4000–8414).

In total, in the whole group surveyed, 33 children used CAM. Children with chronic illnesses were significantly more likely to use CAM than healthy children (40% (95% CI 34 to 46) *v* 12% (95% CI 1 to 23), p = 0.009) (table 2).

Children with chronic disease were more likely to use complementary therapy than healthy children (35% (95% CI 29 to 40) *v* 12% (95% CI 1 to 23), p = 0.03) (table 2). This was particularly marked within the CP group (56% *v* 12%, p = 0.001). Aromatherapy, massage (therapist taught), and

Abbreviations: CAM, complementary or alternative medicine; IBD, inflammatory bowel disease; CP, cerebral palsy

Table 1 Sociodemographic details of sample

Group	Healthy (n = 25)	CP (n = 25)	IBD (n = 25)	Oncology (n = 25)
Females	9	12	5	11
Males	16	13	20	14
Mean age (years)	6.5	7.3	13.2	9.3
Median duration of disease (years)	N/A	5	2	1
Number with high deprivation index	14	15	12	16
Number with low deprivation index	11	10	13	9

Table 2 Use of CAM in children surveyed

Group	Healthy (n = 25)	CP (n = 25)	IBD (n = 25)	Oncology (n = 25)	Total with chronic disease (n = 75)	p value (healthy *v* chronic disease)
Use of CAM	3	14	10	6	30	0.009
Use of CT	3	14	7	5	26	0.03
Use of CM	1	4	7	5	16	0.045

CAM, complementary therapy or medicine; CT, complementary therapy; CM, complementary medicine.

homeopathy were used most commonly by all patient groups. Seventeen children used more than one therapy.

More children with chronic disease used complementary medications than healthy children (21% (95% CI 16 to 26) *v* 4% (95% CI −2 to10), p = 0.045), particularly in the IBD group (28% *v* 4%, p = 0.02). The most common complementary medications given to children within this sample were Echinacea, and herbal and Chinese remedies. Four patients used complementary medications without complementary therapies.

There was no significant difference in CAM use according to gender or religion, but CAM was used more if family members used CAM. CAM was used with orthodox medicine in 30 children (91%), but 18 (55%) parents did not discuss use with their child's paediatrician or GP. Most parents believed it harmless, and their decision. Many feared a negative response from the doctor, although when discussed, 28 (85%) received a positive reaction.

DISCUSSION

Paediatric data on CAM use is scarce within the UK; worldwide, there are vast disparities in study methodology. This study shows that in the sample of parents surveyed, children with chronic illnesses are three times more likely to use CAM than a healthy population. There are limitations, including small sample size and exclusion of non-English speaking parents. The ''chronic illness'' cohort does not reflect children with chronic illness per se, but representatives from three diverse, but serious, chronic conditions. An interest in CAM may have motivated parents to partake in this study, but conversely, the hospital setting pre-empts participation to a greater or lesser extent in orthodox medicine. Exclusion of palliative care patients no doubt reduced numbers using CAM within the oncology group. However, a clear strength is that the same researcher interviewed all patients, allowing consistent, reliable, and complete results.

It is important to inquire non-judgementally about CAM use during paediatric consultations. CAM should be considered in the event of adverse events, even after prolonged use (batch-to-batch variation can occur). Doctors should have a working knowledge of the escalating literature on CAM in order to be in a position to discuss implications of use. Resources should be expanded and advertised more to allow increased use by medical professionals. Parents would like CAM within a hospital setting. Perhaps this is an appropriate future goal, with CAM and orthodox medicine working in an integrated way, under appropriate control and regulation.

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