

## Use of Complementary and Alternative Medicine in children with cancer treated at a Swiss pediatric oncology unit: A retrospective study

Magi, T.<sup>1</sup>, Torchetti, L.<sup>1</sup>, Leibundgut, K.<sup>2</sup>, Frei-Erb, M.<sup>1</sup>

<sup>1</sup>Institute of Complementary Medicine KIKOM – University of Bern, Bern,

<sup>2</sup>Division of Pediatric Hematology/Oncology, Department of Pediatrics, University of Bern, Bern, Switzerland

**Background:** Aim was to investigate retrospectively the use of Complementary and Alternative Medicine (CAM) in the treatment of pediatric oncology patients for the first time in Switzerland. The proportion of general CAM-use and of the specific methods applied were examined. Of interest were also the communication between medical staff and patients regarding CAM, the reasons for choosing (respectively not choosing) CAM, as well as its perceived effectiveness.

**Methods:** All patients treated between 2002 and 2011 at the pediatric oncology unit of the University Hospital of Bern, were retrospectively surveyed about their CAM use during and after the conventional cancer treatment. Of the 257 patients contacted, 143 (55.6%) returned the questionnaire, and data of 131 (50.9%) patients could be analyzed. 61 of the children were girls (46.6%), the mean age at diagnosis was 6.7 years (range 0–17 years), and 16 (12.2%) had deceased.

**Results:** 66 (50.4%) patients indicated to have used CAM methods in conjunction with the cancer treatment. 28 children (21.4% of the total sample) had applied one or two different methods, and 38 (29%) had applied more than two methods. The most commonly used CAM methods were classical homeopathy (56.1% of the children using CAM), dietary supplements (30.3%) and over-the-counter homeopathy (28.8%). In conjunction with cancer treatment, 33 (25.2%) of all responding patients were informed by the medical staff about CAM, and 69 (52.7%) would have desired such information. Among the 66 CAM users, 51 (77.3% of the children applying CAM) expected an improvement of the general condition, 45 desired to strengthen the immune system (68.2%) and 40 intended to abate the adverse effects of conventional treatment (60.6%). 86.5% of the CAM-users perceived only positive, 3% both positive and negative, and 9% no effects of the CAM treatment. The most frequent reasons for not choosing CAM in 65 children were ignorance of this option (27.7%), avoiding further emotional stress for the child (26.2%) and belief of the ineffectiveness of CAM (24.6%).

**Conclusion:** CAM was used in about one half of pediatric oncology patients. Patients were only selectively informed by the medical staff about CAM as an additional treatment option. A majority of the CAM users reported positive effects of the respective treatment. More information on the possibilities of CAM as add-on in the treatment of pediatric oncology patients is needed for both, oncologic medical staff, and concerned families.

**Disclosure:** No conflict of interest disclosed.

## Administration of Cardiodoron® in patients with functional cardiovascular disorders and/or sleep disorders – results of a non-interventional study

Rother, C.<sup>1</sup>, Weyers, G.<sup>2</sup>, Hufnagel, R.<sup>1</sup>

<sup>1</sup>Weleda AG, Schwäbisch Gmünd

<sup>2</sup>KardioPraxis Rheinberg, Bergisch Gladbach

**Background:** Functional cardiovascular disorders (FCD) can be attributed to around 30–40% of all heart patients, i.e. organic causes are not detectable. Characteristic symptoms are tachycardia, palpitations, cardiac arrhythmia, hyperventilation, vertigo, vasovagal syncope and sleep disorders (SD); with the latter being a problem on its own. Disturbed vegetative rhythms form the basis of these diseases. The medicinal product Cardiodoron® counteracts the dysfunctional vegetative rhythmicity with three medicinal plants – *Primula veris*, *Hyoscyamus niger* and *Onopordum acanthium*.

**Aim:** Development of disease-specific disorders under Cardiodoron® treatment

**Methods:** In a prospective, multicentre, non-interventional study patients with FCD and/or SD were observed who have been treated with Cardiodoron® (drops) for 3 to 6 months. After an initial examination, a final examination after 90 days and, in case of continuation of therapy, a follow-up examination after 90 days was carried out. During each examination the severity of FCD and/or SD plus 30 characteristic symptoms were assessed by the physician from 0 (not present) to 3 (severe). The patients rated their condition on the basis of the Complaints-List according to Zerssen (B-L+B-L') and the Pittsburgh Sleep Quality Index (PSQI) according to Buysse.

**Results:** 501 patients, documented by 92 physicians, were evaluated (mean age 53 years, 74% females, 24% FCD, 9% SD, 67% both diagnoses). The severity of FCD was significantly reduced from 1.9 points at the beginning of treatment to 0.9 after 3 months and 0.6 after 6 months; as well as sleep disorders from 2.0 to 0.9 respectively 0.7. All documented 30 disease-specific symptoms were improved, so that the total symptom score decreased from on average 22.2 to 8.9 at the follow-up. The total score of the Complaints-List (B-L+B-L') was significantly reduced from 24.1 to 10.1 at the follow-up. In patients with SD the PSQI decreased from initially 11.3 to 5.1. On average, patients reported initial improvement after 13 days of treatment. Tolerability was almost consistently assessed with «very good/good». The acceptance of the preparation was good which resulted in 70% in a very good compliance. 52% of patients used additional therapies.

**Conclusion:** Cardiodoron® shows positive effects in medical practice; it is a well-tolerated medicinal product for treatment of functional cardiovascular and/or sleep disorders with or without concomitant therapies.

**Disclosure:** This study was financed by Weleda AG Germany. Dr. C. Rother and R. Hufnagel are employees of Weleda AG. Dr. G. Weyers, cardiologist, participated in the study.

## Heavy metals and Alzheimer's disease

Loef, M., Walach, H.

Europa Universität Viadrina, Frankfurt

**Background:** Alzheimer's disease (AD) is becoming a health issue of high impact on global society. Its risk might be influenced by heavy metals: both elements that are essential for human life and those that are toxic at any dose.

**Methods:** We conducted four systematic reviews on the impact of five elements on AD. Since copper and iron are both transition metals with similar chemical features they were investigated in parallel, whereas zinc, lead, and mercury were analyzed individually. With regard to the respective literature we applied different selection criteria for each review, extracted the data narratively, and discussed the evidence in respect to the knowledge of the molecular mechanisms.

**Results:** In total, we searched 13 databases including MEDLINE, EMBASE, and XTOXLINE. We included 86 human studies for mercury, five studies for lead, 108 for copper and iron, and 55 for zinc. Although animal studies clearly indicated relevance for each of the metals in the pathogenesis of AD, the evidence that derives from studies in humans is much less conclusive. Iron and mercury appear to be accumulated in the brain of patients with AD, copper is increased in their serum, and zinc might be subclinically deficient. Any further evidence is inconclusive.

**Conclusion:** The biological roles of heavy metals in AD are complex and not completely understood while the evidence from human studies is tentative. Mercury should be removed from human circuits by any means, and iron overload and zinc deficiency avoided for the prevention of AD. Future research should include long-term studies on the association between different measures of multiple metals and AD.

**Disclosure:** No conflict of interest disclosed.