

Unproven Methods in Oncology

INTRODUCTION

BY THE END of the 1970s, discussions about unproven methods in oncology were mostly ignored by many universities [1]. Only in recent years has the topic of unproven methods been discussed more in public and also in medical literature.

Since 1962, the American Cancer Society has published a critical analysis on over 70 different unproven methods of cancer management [2]. In 1990, the Office of Technology Assessment of the Congress of the United States published a report on unconventional cancer treatments [3]. In 1989, the German Cancer Society issued an update of their basic document with the title "Cancer Treatments with Doubtful Efficiency" [4]. For 5 years, "scientific conventions", hosted by the Society for Biological Cancer Defense e.V., have been held in Heidelberg, Germany [5]. In early 1993, a tumour biology centre is expected to open its doors in Freiburg, Germany. The aim is to combine clinical cancer medicine with basic science and to study "alternative" cancer treatments [6].

In 1982, the Swiss Cancer League and the Swiss Society for Oncology constituted the Study Group on Unproven Methods in Oncology. Its purpose is to collect the available literature and information on unproven cancer treatments and to prepare reports about the most common methods as information mainly for physicians [7]. The 28 reports are available with the Swiss Cancer League, P.O. Box 2284, CH-3001 Bern.

In 1989, the 2nd International Symposium "Cancer and Alternative Medicine" was held in St. Gallen, Switzerland, with a large attendance by physicians, nurses and social workers [8]. The main topic of this year's conference of the Association of European Cancer Leagues, held in Oslo, will be the role of the cancer leagues in dealing with unproven methods.

What is the background for this opening of scientific medicine toward unconventional methods? Do these unproven methods play a significant role for the cancer patients? Are some of these methods a real alternative to the treatment offered by the scientific cancer medicine?

USE OF UNPROVEN METHODS BY CANCER PATIENTS

The application of unproven biological treatments seems to be very popular. Many of these unproven methods pretend to cure cancer on a natural basis. No toxic side-effects are supposed to be produced. Furthermore, with most of these therapies the organism is going to be "detoxified". The blockage of chronobiological rhythm is removed.

During the last 15 years, several different studies of the application of unproven treatments and methods on cancer patients have been conducted. The frequency of application of unproven treatments ranges from less than 10% to over 60% [9]. Main reasons for this large range in frequency are local and cultural differences and the interview techniques of the surveys.

High frequencies of unproven treatments have been found in Germany (65.7% of patients in so called conventional medical centres [10]), Austria (59%), Switzerland (52% [11], 70% [12]), and the USA (54% [13]). The technique of data investigation, however, can largely affect the results [12]. In 1984, a written survey at the University Hospital in Zurich showed that 21% out of 52 patients used unproven methods. A verbal survey showed that 65% out of 46 patients applied such methods. The 98 outpatients questioned were familiar with 28 different nutritional guidelines and regimens. To 41% a diet had been recommended, while every fourth patient changed his eating habits, and 14% tried a special unproven cancer diet [12].

An important message from these investigations is the fact that the patients are encouraged to seek unproven treatments mostly by their relatives and friends [1, 11]. The media is another important source for information on these methods [10]. The question arises whether or not it is the patient who grasps for that last life-saving straw with the desperate hope for a cure in an unproven miraculous method, or relatives and friends, who need help to cope with the psychological difficulties of cancer. The solution to this conflict, with the help of an informed physician, can be very supporting to the cancer patient.

UNPROVEN THEORIES AND TREATMENTS FOR CANCER

Increasingly, the promoters of unproven theories and treatments try to make a scientific impression through a rather logical system of cancer theory, diagnostic tests, and specific therapy. The cause and development of the illness are mostly explained by an unconventional but simply understandable theory. The diagnostic tests are gentle and non-invasive and are stated to be able to detect even precancerous conditions. The sensitivity and specificity are left mostly untested. The ideal correspondence of theory and diagnostic method is supposed to have the advantage that no side-effects or contraindications are known. Typically, one method or one drug has a positive effect on all different cancers. The promoters often have the opinion that the unconventional theory, case reports and testimonies from patients are sufficient as a basis for a routine application of a certain method. A clinical proof of efficiency through controlled studies is missing. Based on ethical reasons, a proof of efficiency with control groups is refused because the patient should have the right to every possible therapy. However, today it is seen as being unethical to apply a therapy to the cancer patient as a matter of routine if usefulness and compatibility have not been tested under internationally accepted rules [2, 4, 14].

Recently, a study on the holistic treatment of women with breast cancer in Denmark was refused by the State Central Scientific Ethic Committee, although the Danish Cancer Society agreed to support the study financially [15]. Members of this ethical committee were physicians and non-professionals. They agreed that it was important to perform studies on unproven methods to elucidate the efficiency. However, the majority of the members felt that the participation of well-known specialists in the study as well as the acceptance by the Central Ethic

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Committee might give several people the impression that unproven methods are generally acceptable.

Many unproven treatments are known. The following section consists of some unproven methods and treatments, listed for general information [1, 7, 12, 14].

Cancer therapies based on autonomous medical concepts. These include anthroposophically-oriented medicine and mistletoe preparations; homeopathy; macrobiotics.

Unproven therapeutic anticancer diets. An impressive conglomeration of more than 40 anticancer diets can be found in the literature [12].

Stimulation of natural and immunological defense mechanisms. Such methods include fresh-cell therapy of Niehans; tissue-sero-therapy of Thomas ("Serocytoles"); sero-therapy of Wiedemann; cytoplasmatic therapy of Theurer (Vitorgan); extract of sheep liver and spleen (Factor AF2), etc.

Stimulation of the aerobic phosphorylation of cancer cells. Oxygen-multistep-cancer-therapy according to M. von Ardenne; treatments with beta- and anthocyanes (beetroot) as a substitution for damaged oxydation enzymes, according to Seeger.

Orthomolecular medicine and eumetabolic treatments. The term "orthomolecular" was introduced by Linus Pauling. He recommends mega-doses of vitamin C as prevention and treatment, to prolong survival, and, in certain cases, to cure cancer. Pauling and colleagues claim that vitamin C stimulates the immune system and inhibits the tumour cell proliferation. The clinical studies from the proponents do not provide proof of efficiency of vitamin C in cancer treatment. The two prospective, randomised, controlled clinical studies at the Mayo Clinic did not show any advantages of high doses of vitamin C over a placebo [16].

Under the concept of an eumetabolic treatment, Nieper offers an extensive polypragmatic concept including vitamin D₂, vitamin C, selenium, thymus, zinc, bromelaine, laetrile, lithium and taurine. [14].

Enzyme therapies. Based on the hypothesis that cancer is caused by the lack of specific enzymes, different preparations containing enzymes are recommended, e.g. Wobe Mugos and Bromelain.

Physical and bioelectrical methods. These include reflexology; magnetic field therapy; microwave therapy of the pituitary gland, etc.

Parapsychological treatments. Healing; the so called animal magnetism; the "iron-rules of cancer" according to Hamer.

Carcinogenic microorganisms. Endobionts and bacterial cyclogeny (Enderlein); viromycetes (Scheller), Carcinoma protozoan (Weber); Syphonospora polymorpha (von Brehmer); Progenitor cryptocides (Livingston-Wheeler), etc. Virginia Livingston-Wheeler developed the theory that the bacterium "Progenitor cryptocides" is the cause of cancer. In 1965, she and her colleagues described an experimental treatment against this bacterium. The immune-stimulating regimen includes an autologous vaccine, a low carbohydrate diet, antibiotics and digestive enzymes [3]. She claimed a success rate of 82%. A recently published investigation showed that patients with conventional cancer treatments had

the same survival time and quality of life as the patients with an additional Livingston-Wheeler therapy [17].

Miscellaneous. A long list of more than 50 drugs that claim to be effective against cancer, i.e. petroleum, carnivora extract, and tea fungus Kombucha.

MISTLETOE PREPARATIONS

In 1920, Rudolf Steiner proposed the use of mistletoe preparations in the treatment of cancer because of mistletoe's "strong antagonism towards regular organisation" [3, 18]. Today, seven distinctly different preparations are on the market. The following groups of substances were found in these preparations or in the mistletoe itself: "Vester protein", lectins, viscotoxins, alkaloids, polysaccharides, and others [18]. In recent studies, the beta-galactoside-specific mistletoe lectin ML-I showed immunomodulatory effects [19-23].

The collected data on the immunomodulation were made from preparations which contained defined amounts of the lectin ML-I. The recommended ideal dose was 1 ng/kg body weight. The amount of ML-I in different Iscador batches seems to vary enormously, from 5 ng up to 70 ng per mg mistletoe extract [22]. This raises the question of whether or not a clinical effect against cancer could be proven with standardised mistletoe preparations. The proof of an immunomodulating effect of the lectin ML-I does not automatically verify its clinical efficiency. This discrepancy has been shown on different immunomodulators over the last years, i.e. BCG, interferons, interleukins, etc.

The questions of an induction of antibodies or the production of a tolerance instead of a tumour defence through immunostimulation have rarely been discussed by the promoters of mistletoe [8, 22].

The same discrepancy between research data and their interpretation for the clinical implications are seen in the DNA repair in lymphocytes of breast cancer patients [24]. Iscador increased the overall repair capacity of the whole genome on an average of 2.7 times, but was still lower than the level of the lower control group. To increase the understanding of the molecular and clinical aspects of DNA repair, the analysis of the fine structure of DNA damage and repair at the level of specific, important genes is recommended [25].

Today, mistletoe preparations take a special position in the field of the unproven methods. On the one hand, a large amount of data on the mistletoe lectin ML-I and on a possible immunological mode of action have been acquired [19-23]. On the other hand, summaries of well-known case reports and clinical studies [26, 27] are published even though several different authors doubt their significance [38, 18]. The stated results in a recently published pilot study with 16 patients at the Lukas Clinic prove to be exaggerated when properly analysed [20]. Contrary to the declaration of the promoters there are currently no convincing clinical investigations available that would justify the routine application of mistletoe preparation on every type of cancer [18].

CONCLUSIONS

The analysis of different investigations show that over 50% of all cancer patients try unproven methods. The patients use these methods mainly so they can do something actively for their disease [11]. The plain analysis of the limited therapeutical possibilities of scientific medicine shows that many cancer patients want to try an additional non-toxic and holistic method. Different studies showed that unproven methods do not offer a

real alternative for a possible cancer cure. Data that would present an improvement of quality of life do not exist.

To take supporting care of an incurable, desperate patient, who wants to do something actively against his or her disease, the physician should combine the ability to see and to recognise the patient's wish with the tact to gently overlook.

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