



Cancer & Homoeopathy

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According to a 2003 World Health Organization report, cancer is the 2nd leading cause of death in developed countries.[8] Conventional drugs are usually used to treat cancer. Side effects of non-surgical orthodox treatments limit their use, although they can treat and prevent cancer. In such cases, cancer patients turn to alternative therapies including homeopathy.[9] In the UK, almost 30% of patients in homeopathic hospitals have been referred directly by oncologists, although they do not directly agree with this. However, a research program should be established to determine the effectiveness of homeopathic medicine against cancer. Some homeopathy has been proven clinically and experimentally; however, there is a wide variety of drugs for which data were not found.[10] Ernst [11] and later Frenkel [12], [13] and Unlu [14] described some data of homeopathy for cancer but did not cover the whole subject. A current narrative review of the homeopathic approach in oncology care was conducted to find research reported in this area. The review includes the literature related to homeopathic approach in cancer using globally recognized scientific databases through electronic search (Elsevier, Google Scholar, PubMed, Scopus, Springer and Wiley Online Library).

Homeopathy for various types of cancer:

In an animal model study, the inhibitory effects of potentized preparations of Hydrastis, Lycopodium, Ruta and Thuja were studied against 3-methylcholanthrene-induced sarcomas in mice, as well as N'-nitrosodiethylamine-induced hepatocellular carcinoma in rats. Biochemical, morphological and histopathological evaluation showed that the reduction of elevated marker enzymes and tumor size. Among the four drugs used, Ruta 200c was the most effective in reducing tumor size and the incidence of sarcomas.[15] The homeopathic remedy Chelidonium at ultra-low doses has shown antitumor and antigenotoxic potential against hepatocarcinoma induced in mice with azo dye.[16] Ethanol extract and tincture of Condurango have shown antiproliferative effect in lung cancer through apoptosis.[17] In another animal study. The antitumor and antimetastatic effects of various homeopathic medicines have been studied in mice against transplanted tumors. Hydrastis and Ruta significantly prolonged the lifespan of mice with tumor-induced Dalton's lymphoma ascites and Ehrlich's ascites carcinoma. In addition, these drugs showed a significant reduction in solid tumor volume at day 31 after tumor inoculation. Most of the animals treated with Hydrastis 1M were completely free of tumors. Hydrastis 1M, Lycopodium 1M and Thuja 1M

showed antimetastatic effect in B16F-10 melanoma animals. These drugs have shown inhibition of lung tumor nodulation and reduced serum γ -GT levels.[18] Undifferentiated lung cancer, a woman with leiomyosarcoma, and a child with astrocytoma were treated with a new homeopathic approach to carcinogen-induced apoptosis.[9] The homeopathic medicine, Sulphur, has shown anti-apoptotic effect in non-small cell lung cancer cells.[19] Sabal serrulata mother tincture has shown significant reduction in prostate tumor xenograft size in an in vivo study. Additionally, Sabal serrulata decreased PC-3 cell proliferation and DU-145 cell proliferation.[20] Permixon, a lipidosterol extract from Sabal serrulata, is used to treat the symptoms of benign prostatic hyperplasia (BPH). It treats BPH by activating the mitochondrial permeability transition pore, the NF- κ B apoptotic pathway, and inhibiting the inflammation-related gene 5- α reductase. Insufficient research prevents Sabal serrulata from being proven to be the right cure for prostate cancer. Thuja along with Conium and Sabal serrulata in combination may provide more effective BPH treatment.[21] In another research study, 220 patients with metastatic pancreatic cancer were given Viscum album subcutaneously 3 times a week. Those who received this therapy did not need any additional anticancer therapy. Brain metastases were not observed in these patients. A patient using Viscum album as an anti-cancer drug showed an increase in survival rate of 4.8 months, and in patients who did not receive any treatment, the survival rate was 2.7 months.[22] To determine the anticarcinogenicity of Natrum sulph, a mouse model of hepatocarcinogenesis induced by P-dimethylaminoazobenzene was used, which induces cytological changes such as mitotic activity of chromosomal aberrations as well as chemical changes and reduced aspartate transaminase, lipid peroxidation, reduced carcinogenic changes of glutathione. These changes were reduced by Natrum sulphuricum. Natrum sulph 200 showed an effective potential to reduce cancer compared to Natrum sulph 30.[23] Administration of Lycopodium clavatum 5C and 15C has any anticancer effects on human cervical cancer cell line HeLa cells by causing cell death through apoptosis in cancer cells. It induced DNA fragmentation, increased protein expression, caspase 3 and Bax mRNA, and decreased Bcl2 and Apaf expression and cytochrome-c release.[24]

Anecdotal evidence has shown the following drugs to be effective in various types of cancer.[25]

- Calcarea flour for breast cancer with hard and stony lumps
- Lapis albus for scirrhus and uterine malignancies with burning where the discharge is black and putrid
- Silicea can be used as an adjuvant to reduce pain in cancer as well as sarcoma with yellow and offensive discharge
- Hecla lava is a cure for bone cancer
- Bryta carb for scattered lipomas
- Bryta iodine can cure ovarian cancer and breast cancer with a tubercular tinge
- Plumbum iodine in mastitis and induration of the breast

- Bromine is a cure for maternal cancer
- Phosphorus is used in cancers prone to bleeding
- Iodine can be used for uterine cancer
- Cicuta virosa for epithelial cancer
- Kali sulph for cancer of the facial epithelium
- Cedron can be used to relieve lancinating pains in cancer.

Carcinogen-induced apoptosis, a new homeopathic approach in cancer:

A man with undifferentiated lung cancer, a woman with leiomyosarcoma, and a child with astrocytoma were treated with a new homeopathic approach to carcinogen-induced apoptosis. Ultra-low doses of carcinogens have been administered for 2–3 months and have shown complete remission of cancer and increased life expectancy.[9]

Palliative approach of homeopathy in cancer:

Homeopathy can be used as a supportive or palliative treatment. As a palliative and supportive approach, homeopathy is used to promote overall health and to alleviate pain and suffering resulting from other orthodox treatments.[1],[9] A case of metastatic adenocarcinoma of the rectum, terminal squamous cell carcinoma of the face, and carcinoma of the larynx received homeopathic remedies prescribed for constitutional reasons. significantly relieved the patient's symptoms. A 64-year-old male patient complains of bloody stools that worsen at night after eating and drinking. Distended abdomen with flatulence worsened after eating and drinking and improved after stool. Edema of the lower limbs from the age of 2, aggravated by sitting and standing. He also has a history of inguinal hernia. The patient's physical generals were a desire for sweets, an aversion to spicy foods, and a rush. X-ray showed a 10 cm neoplasm on the anal margin. He was diagnosed with moderately differentiated adenocarcinoma with liver and lymph node metastases. Lycopodium 30c 3 times a day was prescribed for 4 days, Ruta-MT 5 drops for rectal bleeding. Rectal bleeding was better with gas, edema and iliac fossa tenderness. Stool retention was observed for 4 to 6 days during follow-up. Lycopodium 30c was continued with untreated lactose three times a day about 1 month later, the patient presented with these symptoms of recurrent rectal bleeding, edema, and flatulence. Lycopodium 30c was prescribed twice a day for 2 weeks. The patient's condition remains stable for about 1½ months. Lycopodium continued after every 3rd day. About 7 months later, there were complaints of loose stool pain in the abdomen, left inguinal fossa with tenderness. Lycopodium in LM was prescribed. The case was followed by Thuja and Lycopodium in a potency of 1 M. The patient came 5 months later with these symptoms of rectal bleeding, loss

of appetite, swelling and thirst for warm water. Arsenic 30c was prescribed.[26] Various research studies have been conducted to find out the effectiveness of homeopathic medicines as a palliative therapy or to overcome the adverse effects of other conventional cancer treatments.

Homeopathic approach after radiotherapy:

Kulkarni conducted a randomized controlled trial to determine the effectiveness of homeopathy in reducing the severity of side effects associated with radiotherapy. Patients were randomly divided into three groups. One group received Causticum 30, the second group received Cobaltum 30, and the third group received a placebo. These drugs were selected based on their use in reducing radiation reaction symptoms. Tumor reduction was nonsignificantly reduced in the medical groups.[27] Another study investigated the effectiveness of homeopathic remedies for skin reactions induced by radiotherapy in breast cancer patients. Patients were randomly divided into two different groups. One group received a homeopathic treatment consisting of X-rays 15 cH and Belladonna 7cH, while the other group received a placebo. Both groups were also given a topical medication containing fluocortolone. Skin and subcutaneous edema, erythema, hyperpigmentation, and skin warmth were the primary outcome measures. Homeopathic treatment showed a transient benefit in reducing hyperpigmentation and skin warmth, but the results were not significant at the end of follow-up.[28] A study with 254 participants showed that calendula was an effective prophylactic compared to trolamine in radiotherapy-induced dermatitis.[29]

Homeopathic approach after chemotherapy:

A preliminary, non-randomized controlled clinical trial tested the efficacy of Traumeel S on chemotherapy-induced stomatitis. Traumeel S is a homeopathic combination prepared by combining Calendula 2X, Millefolium 3X, Belladonna 2X, Arnica 2X, Hepar sulfuris 6 x 0.1, Symphytum 6X, Mercurius 6 x 0.05 g, Echiria purpura 2 x 0.025 ml, 6Xconitummilla 2.6X, Bellis perennis 2 x 0.05 ml and Echinacea angustifolia 2X. A total of 20 patients, including children and adolescents, received Traumeel S and were compared with seven controls (not treated for stomatitis) with similar stages of cancer and the same age groups. Efficacy was determined by the level of pain, which was measured according to the need for opiates. Opioid requirement and duration of symptoms were significantly different in the intervention and control groups in favor of the treatment group.[30] Later, a larger randomized controlled trial (RCT) was conducted by the same author to estimate the efficacy of Traumeel S in cancer patients for chemotherapy-induced stomatitis after autologous or allogeneic stem cell transplantation. Subjective symptom scores of the patients were recorded during the first 7 days of the study. The intervention group demonstrated a significant reduction in the duration and/or severity of stomatitis compared to the control group.[31]

Homeopathic approach for menopause symptoms after breast cancer:

A study was conducted to determine the effectiveness of homeopathic remedies for menopausal symptoms (especially hot flashes) in breast cancer survivors. Patients included in the study had a history of in situ breast cancer, stage I–III, had completed breast cancer treatment with either surgery, radiation, or chemotherapy, and had a history of at least 3 hot flashes/day during the month prior to the study. All patients were randomized into three different groups: verum single drug and verum combined drug, verum single drug and placebo combination, and two placebo combinations. All patients received individualized individual homeopathics which could be one of the following: Calcarea carbonica, Kali carbonicum, Lachesis, Sepia or Sulphur. The combination medicine was "Hylands menopause" and consisted of: Lachesis, Sanguinaria canadensis and Amyl Nitrate. Efficacy was assessed in terms of decreasing number and severity of hot flashes. Both homeopathy groups showed significant improvement in quality of life scores compared to placebo. A subset of patients also received tamoxifen. In the subgroup that did not take tamoxifen but received the combined homeopathic medicine, there was a significant increase in hot flashes compared to the single drug and placebo.[32]

A pilot study was conducted to determine the effectiveness of homeopathy in breast cancer survivors with clinical symptoms from estrogen withdrawal. In this double-blind RCT, patients with more than three hot flushes per day, no concomitant hot flush treatment, no metastatic disease, no severe co-morbidity; and is not undergoing chemotherapy. All patients were randomly divided into two groups, receiving either homeopathic medicine or placebo. The homeopathic treatment group was prescribed individualized homeopathic medicines and the medicines mostly included Arnica, Belladonna, Carcinocin, Natrum muriaticum, Sepia and Sulphur. Efficacy was assessed using activity scores (the primary outcome measure) and frequency and severity of hot flashes (the secondary outcome measure). No significant difference was observed between the intervention and placebo groups on both primary and secondary outcome measures at follow-up.[33]

Various studies reporting a homeopathic approach in cancer:

In a cross-sectional cohort study, two cohorts of patients were compared; the characteristics of patients who were treated at a clinic of homeopathic oncology care and at a clinic of classical oncology care were compared. Their characteristics differed mainly due to the course of treatment after the cancer diagnosis. Patients visiting the homeopathic oncology clinic were mostly treated either with chemotherapy, radiotherapy or people who refused treatment with conventional medicine. In addition, most patients are young and employed, so they have to earn money for cancer treatment. It is therefore not justifiable to state general plans when examining conventional treatment with homeopathy.[34] Retrospective data on the survival time of cancer patients using homeopathic treatment in addition to conventional anticancer treatment showed an increased

survival time. Patients with severe disease prognosis who underwent at least three homeopathic consultations along with conventional cancer treatment were included in the study, and data on survival time and patient demographic characteristics were collected at the University of Vienna.[35] However, the letter to the editor regarding the above study stated that the results are biased and misleading because it is mandatory to use a statistical model capable of handling the time of immortality in the control and active groups. Kaplan-Meier plots from the literature should be used to determine control data.[36] Data from homeopathic patients were reanalyzed by the authors and compared with control data from patients from the same site. In this reanalysis, the probable immortal time variance was also analyzed. The results of the re-analysis showed a statistically significant advantage of the use of homeopathy compared to the control in terms of survival time.[37] A prospective observational study demonstrated better quality of life and reduced fatigue in oncology patients treated with homeopathic treatment compared to conventionally treated oncology patients. In comparison, the two differently treated cohorts had a comparable prognosis and the same tumor entity. Complementary classical homeopathic treatment significantly improved the subjective well-being and overall health of cancer patients in a pragmatic randomized controlled trial.[38]

A five-year-old boy suffering from bilateral strabismus underwent a computed tomography scan, which diagnosed a brainstem tumor. He was treated with combined conventional chemotherapy Temozolamide, Arsenic album 6X, Nitrated guanidine. The tumor size was reduced from 6 cm × 4 cm to 2 cm × 2 cm.[39]

Dosing effects of homeopathic medicines on cancer:

In an in vitro study, the effects of low-dose, high-potency homeopathics on normal and cancerous human lymphocytes were studied. The study methodology involved pretreatment of cells with either a high potency (pool 15–20c) or a low concentration (nM– μ M) of cadmium. After 120 h of medication, cells were exposed to cadmium (8–80 μ M).

The MTS/PES assay was used to assess cell viability. NaCl 0.9% was used as a control for lower potencies and water 15–20 c for high potencies. Both lower and higher potencies of cadmium pretreatment significantly increased cell viability in primary lymphocytes after toxic doses of cadmium compared to pretreated cells as a control. The effect of low-dose pretreatment was also significant in cancer lymphocytes; however, high potencies showed no effect on cancer lymphocytes.[40]

Mechanism of Homeopathic Medicines in Cancer:

A study in an animal model (mouse) demonstrated immunomodulatory effects of homeopathic medicines in high dilutions with antineoplastic effects, suggesting their mechanism of action through immune modulation.[41] *Sabal serrulata*, *Conium maculatum* and *Thuja occidentalis* did not show any direct anticancer effects on cells in experimental animals . studies, but slow cancer progression and significantly reduce cancer incidence and mortality in induced prostate cancer in

rats.[42] A study demonstrated the lack of immunomodulatory and apoptotic effects of *Conium maculatum*, *Sabal serrulata*, *Thuja occidentalis* in rat prostate cancer tissues.[43] An in vitro study was conducted to determine the effect of homeopathic medicines on gene expression that controls apoptosis in breast and prostate cancer cells. *Asterias*, *Conium maculatum*, *Carcinosin*, *Sabal serrulata*, *Thuja occidentalis* and *Phytolacca* were tested; however, neither drug showed significant inhibitory or growth-promoting activity against breast or prostate cancer cells.[44] Another study also showed no significant change with the use of homeopathics in mRNA levels of apoptotic genes, cytokines interleukin (IL)-1 α , IL-1 β , caspase-1, 2 and 3, tumor necrosis factor and interferon- γ in lung metastases and tumor prostate. *Nosoda* *Carcinosin* and a homeopathic treatment regimen including *Sabal serrulata*, *Conium maculatum* and *Thuja occidentalis* were administered to observe effects on apoptotic genes.[43] However, in an in vitro model, *Hydrastis canadensis* 30c and *Condurango* 30c show gene-modulating effects compared to placebo (subject alcohol 30c). The recognized epigenetic model was treated with the above homeopathic potencies. The results of the study showed that these homeopathic dilutions worked through modulation of gene expression.[45] *Chelidonium* at ultralow doses showed antigenotoxic potential against hepatocarcinoma induced by azo dye in mice.[16] An in vitro study demonstrated the apoptogenic effect of the homeopathic *Sulfur* on non-small cell lung cancer cells.[19] *Psorinum* 6X was administered to various cell lines in vitro. It triggered apoptosis by inhibiting cell proliferation in A549 (a human lung cancer cell line). *Psorinum* induces apoptosis through a mitochondria-mediated caspase-3-dependent pathway. As shown by CD spectroscopy, the target of *Psorinum* 6X was calf thymus DNA.[46] *Rutin* and *quercetin* are clastogenic and genotoxic. *Ruta* 6X with calcium phosphate induces apoptosis signals in transplanted DLA cells and may be useful in glial cell lymphoma or intracranial carcinoma.[47] In homeopathy, *Conium maculatum* is traditionally used to treat cervical and breast cancer. Its anticancer effect was studied in vitro on Hela cells. *Conium* caused accumulation of mucosal potential and reactive oxygen species and reduced colony formation and cell proliferation inhibiting the G sub-phase of the cell cycle. Activation of phosphatidylserine cytochrome C and caspase 3 and inhibition of AKT and NF κ B lead to apoptosis and cell proliferation.[48]

Conclusion:

Homeopathy can be a useful approach in cancer. Various studies report the effects of homeopathic remedies in managing cancer pain and other cancer-related symptoms. Several studies have also attempted to elaborate the mechanism of homeopathic medicines in cancer using cell and animal models. Some studies report apoptotic effects and gene expression modulation of homeopathic medicines in cancer, while other studies negate this mechanism. In the clinical arena, research studies of Homeopathy in cancer are lacking and describe only prolonged survival in cancer patients or as an adjuvant with conventional treatment or eliminated side effects of conventional treatment. More evidence is needed to demonstrate antitumor or antimetastatic potential in controlled clinical trials.

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