



International Journal of Homoeopathic Sciences

E-ISSN: 2616-4493

P-ISSN: 2616-4485

www.homoeopathicjournal.com

IJHS 2021; 5(1): 362-367

Received: 25-11-2020

Accepted: 27-12-2020

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Homoeopathic remedies in carcinoma

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DOI: <http://dx.doi.org/10.33545/26164485.2021.v5.i1f.340>

Abstract

Homoeopathy is among the commonly used alternative approaches in Cancer. It is being widely used as palliative and curative in patients suffering from cancer. Though studies on the use of Homoeopathy in cancer after surgery, radio therapy and chemotherapy have been reported, clinical trials on effects of Homoeopathy in cancer are rare. Some studies on the effect of dosage of Homoeopathic medicines and their mechanism of action in cancer have also been published. A few case reports published here and there also find a mention in different databases. This review aims to describe literature available on the approach of Homoeopathy in Cancer by searching various databases from online library. It was found that beneficial effects of Homoeopathic medicine are reported on some cancer cell lines via apoptosis and immune modulation. Homoeopathic treatment given as add on also improves the quality of life, survival time and presenting complaints. However, more evidence needs to be generated to demonstrate anti tumor or antimetastatic potential in controlled clinical trials.

Keywords: alternative system of medicine, cancer, homoeopathy

Introduction

Homoeopathy is among the most famous alternative system of medicine. In Europe, Homoeopathy is used in cancer care extensively from 6% in cancer diagnosis ^[1, 2] and almost 24% in breast cancer females ^[3, 4] Homoeopathy is most commonly used complementary and alternative medicine (CAM) in paediatric oncology in Germany and patient satisfaction with homoeopathic treatment is very high. ^[5] An overview of systematic reviews of CAM for cancer pain concluded that Homoeopathy might have a reduction in adult cancer pain ^[6]. Homoeopathy is a complete system of medicine which is established in practice and theory.

The basis of Homoeopathy is that:

- Similia similibus curentur (like cure like)
- Holistic treatment
- Serially diluted medicines prepared by succussion and dilution
- More a substance is diluted, more potent it becomes ^[7].

According to the 2003 report of the World Health Organization, cancer is the 2nd largest cause of death in developed countries ^[8] Conventional medicines are usually used to treat cancer. Side effects of non-surgical orthodox treatments limit their use despite they can treat and prevent cancer. In such cases, cancer patients turn towards alternative therapies including Homoeopathy ^[9]. In the UK, almost 30% patients in homoeopathic hospitals were referred directly by oncologists. However, a research program should need to setup for finding the efficacy of homoeopathic medicine against cancer. Some homeopathic medicines have been proven clinically and experimentally; however, there is a wide range of medicine on which data has not found ^[10]. Ernst ^[11] and later Frenkel ^[12, 13] and Unlu ^[14] described some data of homeopathy for cancer but not covered the whole topic. The present narrative review of homeopathic approach in cancer care was carried out to find researches reported in this field. The review comprises literature pertaining to the approach of Homeopathy in cancer using worldwide accepted scientific databases through electronic search.

Approach of Homoeopathy in Different Types of Carcinomas

In an animal model study, the inhibitory effects of potentised preparations of *Hydrastis*, *Lycopodium*, *Ruta* and *Thuja* against sarcomas that were induced by 3-Methylcholanthrene in mice as well as hepatocellular carcinoma induced by N'-nitrosodiethylamine in rats was

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studied. Biochemical, morphological and histopathological evaluation revealed that the reduction of elevated marker enzymes and tumour size. Among the four used medicines, *Ruta* 200c was most effective in reducing tumour size and incidence of sarcomas [15]. A homoeopathic medicine, *Chelidonium* in ultra-low doses showed anti-tumour and anti-genotoxic potential against hepatocarcinoma that was induced by azo-dye mice [16]. Condurango ethanolic extract and tincture showed antiproliferative action in lung cancer through apoptosis [17]. In another animal study. Anti tumor and anti metastatic effects of various homeopathic medicines were studied in mice against transplanted tumors. *Hydrastis* and *Ruta* significantly increased the lifetime of Dalton's Lymphoma Ascites and Ehrlich Ascites Carcinoma induced tumour -bearing mice. Moreover, these medicines showed marked reduction of solid tumour volume on the 31st day after tumour inoculation. Most of the *Hydrastis* 1M-treated animals were completely tumour free. *Hydrastis* 1M, *Lycopodium* 1M and *Thuja* 1M exhibited antimetastatic effect in B16F-10 melanoma-bearing animals. These medicines showed inhibition of lung tumour nodule formation and decreased levels of γ -GT in serum [18]. Undifferentiated lung cancer, a woman with leiomyosarcoma and a child with an astrocytoma, were treated with a new homoeopathic approach of carcinogen-induced apoptosis [9]. A homoeopathic medicine, *Sulphur*, showed anti-apoptotic effect in non-small cell lung carcinoma cells [19]. *Sabal serrulata* mother tincture showed the reduction of prostate tumour xenograft size significantly in an *in vivo* trial. Moreover, *Sabal serrulata* decreased PC-3 cell proliferation and DU-145 cell proliferation [20]. Permixon, a lipidosterolic extract of *Sabal serrulata*, is being used to treat symptoms of benign prostate hyperplasia (BPH). It treats BPH by activating the permeability of transition pore of mitochondria, NF-KB apoptotic pathway and inhibition of 5- α reductase inflammatory-related gene. Insufficient research hinders to prove that *Sabal serrulata* is the right medicine for prostate cancer. *Thuja* along with *Conium* and *Sabal serrulata* in combination can assure more effective treatment against BPH [21]. In another research study, 220 patients of metastatic pancreatic cancer were administered by *Viscum album* sub-cutaneous 3 times weekly. Those who took this therapy needed no more anticancerous therapy. In those patients, brain metastasis was not observed. The patient receiving *Viscum album* as anticancerous remedy showed increase in the survival rate by 4.8 month and patients who took no treatment the survival rate was 2.7 month [22]. P-dimethylaminoazobenzene-induced hepatocarcinogenesis mice model which induce cytological changes such as chromosomal aberration mitotic activity and also chemical changes and reduced aspartate transaminase, lipid peroxidation, reduced glutathione carcinogenic changes was used to determine the anticarcinogenicity of *Natrum sulph*. These changes were reduced by *Natrum sulphuricum*. *Natrum sulph* 200 showed effective potential to reduce cancer as compared to *Natrum sulph* 30. [23] *Lycopodium clavatum* 5C and 15C administration have any anticancer effects on human cervical cancer cell line HeLa cells by causing cell death through apoptosis in cancer cells. It induced DNA fragmentation, the increases in the expressions of protein, mRNA of caspase 3 and Bax and the decreases in the expressions of Bcl2 and Apaf and in the

release of cytochrome-c. [24]

Anecdotal evidence showed the effectiveness of following medicines in different types of carcinomas [25].

- *Calcarea flour* for breast cancer with hard and stony lumps
- *Lapis albus* for scirrhus and uterus malignancies with burning where oozing of fluid is black and putrid
- *Silicea* can be used as adjuvant to reduce cancer pain and also sarcoma with yellow and offensive discharge
- *Hecla lava* is a bone cancerous remedy
- *Bryta carb* for scattered lipomas
- *Bryta iodium* can cure ovarian cancer and mammae cancer with tuberculosis tinge
- *Plumbum iodium* in mastitis and induration of breast
- *Bromine* is a remedy for mammae cancer
- *Phosphorus* is used for cancer with bleeding tendency
- *Iodium* can be used for uterus cancers
- *Cicuta virosa* for epithelial cancer
- *Kali sulph* for facial epithelial cancer
- *Cedron* can be used to reduce the lancinating pains of cancer.

Carcinogen-Induced Apoptosis, a New Homoeopathic Approach in Cancer

A male with undifferentiated lung cancer, a woman with leiomyosarcoma and a child with an astrocytoma were treated with a new homoeopathic approach of carcinogen-induced apoptosis. Ultra-low doses of carcinogens were administered for 2–3 months and showed complete remission of cancer and increased life extension [9].

Palliative Approach of Homoeopathy in Cancer

Homoeopathy can be used as a supportive or palliative treatment. As a palliative and supportive approach, homoeopathy is used to develop general health and to relieve the pain and suffering resulting from other orthodox treatment [1, 9]. A case of metastatic adenocarcinoma of the rectum, terminal squamous cell carcinoma of the cheek and carcinoma of the larynx received received homeopathic medicines prescribed on constitutional grounds relieved the patient symptoms markedly. A male patient aged 64 years complains about bloody stool aggravated at night after eating and drinking. Distended abdomen with flatulence aggravated after eating and drinking and ameliorated after passing stool. Oedema of lower extremities since 2 years aggravated by sitting and standing. He has also history of inguinal hernia. Physical generals of patient were sweets desire, spicy food aversion and hurriedness. X-ray image showed 10cm neoplasm at anal margin. Moderate differentiated adenocarcinoma with metastasis to liver and lymph nodes was diagnosed. *Lycopodium* 30c three times daily was prescribed for 4 days, *Ruta*-MT 5 drops for rectal bleeding. Rectal bleeding was better by flatulence, oedema and tenderness of iliac fossa. Stoppage of stool from 4 to 6 days was seen during follow-up. *Lycopodium* 30c was continued with un-medicated lactose three times a days about 1 month later, the patient come with these symptoms recurrent rectal bleeding, oedema and flatulence. *Lycopodium* 30c 2 times a day for 2 weeks was prescribed. The patient states remain stable for about 1½ month. *Lycopodium* was continued after every 3rd day. About 7 months later came with complaints of loose stool pain in the abdomen, left inguinal fossa with tenderness. *Lycopodium* in LM was prescribed. The case

was followed up with *Thuja* and *Lycopodium* in 1 M potency. The patient came 5 months later with these symptoms rectal bleeding, no appetite, oedema and thirst for warm water. Arsenic 30c was prescribed [26]. Various research studies have been conducted to find the efficacy of homoeopathic medicines as a palliative therapy or to overcome adverse effects produced by other conventional treatments of cancer.

Homoeopathic approach after radiotherapy

A randomised controlled trial was conducted by Kulkarni to find the efficacy of Homoeopathy in decreasing the severity of radiotherapy-related adverse effects. Patients were grouped randomly divided into three groups. One group was given *Causticum* 30, a second group was given *Cobaltum* 30 and the third group received placebo. These medicines were selected on the basis of their use in decreasing symptoms of radiation reaction. Tumour reduction was insignificantly decreased in medicine groups [27]. In another study, effectiveness of homoeopathic medicines was investigated for radiotherapy-induced skin reactions in breast cancer patients. Patients were randomly divided in to two different groups. One group received homoeopathic treatment that consisted of X-ray 15 cH and *Belladonna* 7cH while the other group received placebo. A topical medication containing fluocortolone was also administered to both groups. Cutaneous and subcutaneous oedema, erythema, hyperpigmentation and skin heat were primary outcome measures. Homoeopathic treatment showed a transient benefit regarding decreasing hyperpigmentation and skin heat, however, results became insignificant at the end of follow-up [28]. A study with 254 participants proved topical *Calendula* as powerful prophylactic as compared to trolamine in radiotherapy-induced dermatitis [29].

Homoeopathic approach after chemotherapy

A preliminary, non-randomised controlled clinical trial tested the efficacy of Traumeel S on stomatitis occurred due to chemotherapy. *Traumeel S* is a homoeopathic combination prepared by combining *Calendula* 2X, *Millefolium* 3X, *Belladonna* 2X, *Arnica* 2X, *Hepar sulfuris* 6 × 0.1, *Symphytum* 6X, *Mercurius* 6 × 0.05 g, *Echiria purpura* 2 × 0.025 ml, *Aconitum* 2 × 0.06, *Chamomilla* 3X, *Bellis perennis* 2 × 0.05 ml and *Echinacea angustifolia* 2X. A total of 20 patients including children and teenagers received Traumeel S and were compared with seven controls (received no treatment for stomatitis) having similar stages of cancer and same age groups. The efficacy was determined by the pain level that was measured according to the requirement of opiates. Requirement of opiates and symptoms duration was significantly different in the intervention and control group favouring the treatment group [30]. Later, a larger randomised controlled trial (RCT) was carried out by same author to estimate the efficacy of *Traumeel S* in cancer patients for stomatitis occurred due to chemotherapy after autologous or allogeneic stem-cell transplantation. During the first 7 days of trial, subjective symptom scores of patients were recorded. Intervention group showed significant reduction of duration and/or severity of stomatitis compared to control group [31].

Homoeopathic approach for menopausal symptoms after breast cancer

A study was conducted to find the effectiveness of

homoeopathic medicines on menopausal symptoms (mainly hot flushes) in breast cancer survivors. The patients included in the trial had a history of breast cancer *in situ*, Stage I–III, had completed breast cancer treatment either surgical, radiation or chemotherapy and had a history of at least 3 hot flushes/day for a month before study. All the patients were randomised in to three different groups: a verum single remedy and a verum combination medicine, a verum single remedy and a placebo combination and two placebo combinations. All patients were received individualised single homoeopathic medicines that can be one of these: *Calcarea carbonica*, *Kali carbonicum*, *Lachesis*, *Sepia* or *Sulphur*. The combination medicine was 'Hylands menopause', consisted of: *Lachesis*, *Sanguinaria canadensis* and *Amyl nitrate*. The efficacy was assessed regarding decreasing number and severity of hot flushes. Both Homoeopathy groups showed significant improvement in quality of life score compared to placebo. A subgroup of patients also received tamoxifen. There was significant increase in hot flushes in subgroup that had not received tamoxifen but received combination homoeopathic medicine compared to single remedy and placebo [32].

A pilot study was carried out to find the effectiveness of Homoeopathy in breast cancer survivors having estrogen withdrawal clinical features. In this double-blind RCT, patients having more than three hot flushes per day, no coexisting treatment for hot flushes, not having metastatic disease, no severe contemporary disease; and not experiencing chemotherapy. All the patients were divided randomly in two groups to receive either homoeopathic medicines or placebo. Individualised homoeopathic medicines were prescribed to homoeopathic treatment group and the medicines mostly includes were *Arnica*, *Belladonna*, *Carcinocin*, *Natrum muriaticum*, *Sepia* and *Sulphur*. The efficacy was assessed by activity score (Primary outcome measures) and hot flushes frequency and severity (secondary outcome measures). No significant difference was observed between intervention and placebo group regarding both primary and secondary outcome measures at follow-up [33].

Different Studies Reporting Homoeopathic Approach in Cancer

In cross-sectional cohort study, two patient cohorts were compared; the characteristics of patients who were treated in a homoeopathic cancer care clinic and in a conventional oncology care clinic were compared. Their characteristics were different particularly the course of treatment after cancer diagnosis. Patients visiting homoeopathic cancer care clinic were mostly treated with either, chemotherapy, radiotherapy or the persons who refused to treat with conventional medicine. Moreover, mostly patients are young and employed so they have to earn their income during their cancer treatment. Hence, it is not justifiable to relate general plans when investigating conventional treatment with Homoeopathy [34].

Retrospective data regarding survival time of cancer patients who take homoeopathic treatment complementary to conventional anticancer treatment showed extended survival time. The patients who had serious prognosis of disease receiving at least three homoeopathic consultations along with conventional cancer treatment were included in study and data regarding survival time and demographic characteristics of patients were collected in the University of

Vienna [35]. However, a letter to editor said regarding the above study that the results biased and misleading because it is compulsory to apply a statistical model capable to handle the immortality time in control and active groups. Kaplan–Meier plots from literature should be used to establish control data [36]. Homoeopathic patient data were reanalysed by authors and comparison was done with control patient data from the same place. A probable immortal time bias has also been analysed in this re-analysis. Results of re-analysis showed statistically significant advantage of using Homoeopathy compared to control regarding survival time [37]. A prospective observational study showed better life quality and decrease of fatigue in cancer patients who were treated with homoeopathic treatment compared to conventionally treated cancer patients. For comparison, both differently treated cohorts had comparable prognosis and same tumour entity. Adjunct classical homeopathic treatment improved subjective well-being and the global health status of cancer patients significantly in a pragmatic randomised controlled trial [38].

A 5-year-old boy, suffering from bilateral strabismus, was computed tomography-scanned, which diagnosed a brain stem tumour. He was treated with combined conventional chemotherapy Temozolamide, *Arsenic album* 6X, Nitrated guanidine. Size of tumour was reduced from 6 cm × 4 cm to 2 cm × 2 cm. [39]

Effects of Dosage of Homoeopathic Medicines on Cancer

In an *in vitro* study, effects of homoeopathic medicines in low doses and high potencies in normal and cancerous human lymphocytes were studied. The methodology of study involved pretreatment of cells with either high potencies (pool 15–20c) or low concentrations (nM– μ M) of cadmium. After 120 h of medication, cells were exposed to cadmium (8–80 μ M).

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

Mechanism of Homoeopathic Medicines in Cancer

An animal model study (mice) showed immunomodulatory effects of homoeopathic medicines in high dilutions having antineoplastic effects thus proposing their mechanism of action through immune modulation [41]. *Sabal serrulata*, *Conium maculatum* and *Thuja occidentalis* showed no direct cellular anticancer effects in an experimental animal study but slow the progression of cancer and decrease cancer occurrence and mortality significantly in induced prostate cancer in rats. [42] A study showed lack of immunomodulatory and apoptotic effects of *Conium maculatum*, *Sabal serrulata*, *Thuja occidentalis* in prostate cancer tissues of rats [43]. An *in vitro* study was conducted to find the effect of homoeopathic medicines on gene expression that controls apoptosis on breast and prostate cancer cells. *Asterias*, *Conium maculatum*, *Carcinosin*, *Sabal serrulata*, *Thuja occidentalis* and *Phytolacca* were tested; however, no medicine showed significant inhibitory or growth-promoting activity against breast or prostate

cancer cells [44]. Another study also showed no significant change by the use of homoeopathic medicines in mRNA levels of the apoptotic genes, cytokines interleukin (IL)–1 α , IL-1 β , caspase-1, 2 and 3, tumour necrosis factor and interferon- γ in lung metastasis and prostate tumour. A nosode *Carcinocin* and a homoeopathic treatment regimen comprising *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 showing gene modulating effects compared to placebo (succussed alcohol 30c). A recognised epigenetic model was treated with above-mentioned homoeopathic potencies. Results of the study indicated that these homoeopathic dilutions acted through modulation of gene expression [45]. *Chelidonium* in ultra-low doses showed anti-genotoxic potential against hepatocarcinoma that was induced by azo-dye in mice [16]. An *in vitro* study showed apoptogenic effect of homoeopathic remedy, *Sulphur*, in non-small cell lung carcinoma cells [19]. *Psorinum* 6X was administered to various cell lines *in vitro*. It triggered apoptosis by inhibiting cell proliferation in A549 (human lung cancer cell line). *Psorinum* causes apoptosis through mitochondria-mediated caspase-3-dependent pathway. Calf thymus-DNA was the target of *Psorinum* 6X as revealed on CD spectroscopy [46]. Rutin and quercetin are clastogenic and genotoxic. Ruta 6X with calcium phosphate induces signals of apoptosis in transplanted DLA cell and might be useful in glial cell lymphoma or intracranial cancer [47]. In Homoeopathy, *Conium maculatum* is being used traditionally for the treatment of cervix carcinoma and breast cancer. Its anticancer effect was studied *in vitro* in Hela cell. *Conium* caused accumulation of mucous membrane potential and reactive oxygen species and reduced colony formation and cell proliferation inhibiting sub-stage G of cell cycle. Phosphatidylserine cytochrome C and caspase 3 activation and inhibition of AKT and NFKB lead toward apoptosis and cell proliferation [48].

Conclusion

Homoeopathy can be a useful approach in cancer. Various studies reported the effects of homoeopathic medicines in the management of cancer pain and other symptoms related to cancer. A few studies also tried to elaborate the mechanism of homoeopathic medicines in cancer using cellular and animal models. Some studies reported that apoptotic effects and modulation of gene expression of homoeopathic medicines in cancer while other studies negate this mechanism. In clinical arena, research studies of Homoeopathy in cancer are lacking and only described extended survival time in cancer patient or as an adjuvant with conventional treatment or removed side effects of conventional treatment. More evidence needs to be generated to demonstrate antitumour or antimetastatic potential in controlled clinical trial.

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