

Evaluation of Holistic Needs of Lung Cancer Patients Throughout COVID-19

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Received: May 21, 2023

Published: September 11, 2023

Abstract

Background: Lung cancer is still the second most frequently occurring cause of cancer mortality in both women and men even in COVID-19 pandemic era.

Purpose: The aim of this systematic review is to evaluate the holistic needs of lung cancer patients throughout COVID-19.

Method: A literature review was conducted from February 2023 to April 2023 using keywords in PubMed, Embase, Cochrane Library Scopus Databases.

Results: Emotional state, physical activity, nutrition and Mediterranean diet, usage of medical plants and essential oils, spiritual support as well as family and friends play a much significant role when dealing with lung cancer patients.

Conclusion: A multidisciplinary approach is essential in order to strengthen the ability of human body to struggle against cancer and promote wellbeing.

Keywords: Lung Cancer; Patients; COVID-19; Holistic Needs; Health

Introduction

As one of the most serious infectious diseases caused by the SARS-CoV-2 coronavirus, the COVID-19 pandemic continues to be a serious health crisis threatening the physical and mental health of citizens every day that requires extensive and coordinated actions, as it puts the health of populations at immediate risk, while severely testing the state apparatus [1].

Lung cancer, classified by either biomarkers or histology, is the second most frequently occurring cause of cancer mor-

tality in both women and men with over 2 million confirmed cases worldwide [2,3]. Although there have been a lot of recent developments for solid tumors in medical treatment and diagnostics, the survival rate of lung cancer patients remains short apropos other cancer types [4]. The negative effects of COVID-19 on patients principally differ based on the intensity of lung cancer stages (0-IV) and the 2 major types (non-small cell lung cancer-NSCLC and small cell lung cancer-SCLC). Speeding up early and accurate diagnosis as well as gaining access to appropriate treatment is the key element that ame-

liorates the prognosis and management of lung cancer [5,6]. Different kinds of lung cancer treatments, such as radiotherapy, chemotherapy and immunotherapy, could also lead to a worse outcome, due to the fact that lung cancer patients need often radiologic study follow-ups that might be influenced by SARS COV-2 infection [7].

Additionally, cancer patients usually cope with tremendous psychological distress, as fear of recurrence or progression, anxiety, post-traumatic stress disorder (PTSD), symptoms of depression and psychosocial stress, which changes physical activity and dietary behaviors. Complementary and Alternative Medicine (CAM), such as mind-body interventions that are focus on enhancing mind's effect on human body, including yoga, meditation, herbalism or Heart Rate Variability (HRV) Biofeedback (BFD) could ameliorate autonomic balance, physiological adaptability, relaxation as well as wellbeing in lung cancer symptoms and help to manage stress, leading to a better health status and a higher survival rate [8,9].

Considering demographics and socio-economic inequalities, they could also affect the health of lung cancer patients, leading them to experience worse outcomes [10]. Taking the risk of COVID-19 to lung cancer patients into seriously consideration, a multidisciplinary approach is absolutely necessary in order to cover their supportive care needs and enhance their functional status.

Undertaking a holistic needs evaluation is a way of making sure that the individual's concerns and issues have been accurately identified, and proper efforts have been made to give the necessary attention. The broader purpose is to ensure a personalized healthcare which will bring about a care, or action plan. The assessment process can assist people realize that their worries are not unusual but are worthy of careful consideration and a serious discussion. It gives the opportunity to individuals and their healthcare professional to think deeply of their personal needs, make an appropriate plan and work together more efficiently to best meet them and simultaneously improve their self-management. Health professionals should prepare themselves to communicate positively, to listen and respond carefully as far as lung patients support plan (diet, exercise, psychosocial issues) and sustainable solutions (out-of-hospital care due to low income, digital health and medicine, new affordable biopharmaceutical and pharmaceutical products, follow-up care) as side effects of patients' medical treatments can be very hard to live with (NHS, 2009).

The aim of this systematic review is to evaluate the holistic needs of lung cancer patients during COVID-19 pandemic and map the existing evidence concerning the holistic approach as for lung cancer care.

Emotional State

Psychological distress, closely related to external and internal Health Locus of Control (iHLOC, eHLOC) refers to acute mental or physical suffering, such as depression, sorrow and anxiety, and has an association with poor medication adherence and compliance as well as low quality of life [11]. It has been increased among lung cancer patients throughout the coronavirus COVID-19 pandemic principally on account of the fear either of treatment, helplessness and palliative care delays, or accurate cancer diagnosis [12]. The distressed behavior could

be worsening because of alterations concerning the health care delivery and reorganization of healthcare system due to the COVID-19 [11,13].

Referral to experts at first, such as oncology social workers, who help a lot with psychosocial and practical daily worries, specialized nurses in oncology who provide a high quality of care to patients with lung cancer, psychiatrists whose specialty is working with cancer patients (consolation-liaison psychiatry) and psychologists, who can offer evaluation and treatment especially for behavioral and cognitive changes with a view to ameliorating patients' quality of life are absolutely necessary [14].

Nevertheless, when cancer patients appear a very low level of Perceived Control (PC) over their condition and distress, they are in the position to gain benefit from holistic breathlessness services in order to feel relieved. Non-drug tailored interventions could be an important part of lung cancer patient life as they rely on providing psychological support as well as managing and learning techniques to cope with breathlessness, are organized by a multidisciplinary team and are suggested by the NICE guidelines as regards to lung cancer patients and management and assessment of dyspnea within palliative care [15].

Physical Activity

Both participation in a Physical Activity (PA) and exercise tolerance have an association with decreasing dramatically the risk of lung cancer death rate and long-term overall survival and a higher Quality of Life (QoL). Patients who experience advanced NSCLC are in a much vulnerable position, because they frequently have the most serious symptoms, QoL, and physical functional impairment [16].

Morbid obesity is probably connected with an increased danger of in-hospital mortality, especially in solid cancer patients (lung cancer patients) without any COVID-19 symptoms and in hematologic (blood) cancer patients with COVID-19 symptoms [17]. Furthermore, the working lives, free time activities and hobbies of patients were seriously influenced by the pandemic lockdown, too, leading them to gain weight, feel tired and be in a bad mood [18].

It is necessary for lung cancer patients to increase their PA levels at home or in hospital environment, as PA has got a potential clinical benefit on improving their psychological and body health. Patients who receive home exercise telehealth programs and set realistic and achievable goals have reported a clinically important improvement in their QoL as well as in dyspnea and insomnia. In this way, lung cancers can maintain their independence and lifestyle, self-organize their leisure time and perform their daily activities or hobbies [19].

Nutrition and Mediterranean Diet

Loss of weight and appetite are some of the principal symptoms of lung cancer. An optimal nutritional status may significantly affect the clinical outcomes, as it improves physical function, treatment effectiveness and somatic symptom disorder, leading to overcome the nutritional decline [20]. According to Kiss & Curtis [21], more than 70% of lung cancer patients suffer from malnutrition and muscle loss, based on disease stage and type of treatment. This happens due to inadequate nutritional intake on account of nausea, poor appetite, cachexia or vomiting.

As a multifaceted and pathological disorder, Cancer Cachexia (CC) is characterized by anaemia, weakness, anorexia, increased metabolism, altered immune function, reduced functional status, and QoL, affects 50–80% of cancer patients and causes at least 20% of deaths [22]. Nutrition counselling, appropriate planning of meals and proper use of supplements are approaches of vital significance to oppose to sarcopenia and malnutrition in lung cancer. As a result, a nutritional approach accompanied by life-style counselling is necessary not only for chemotherapy, but also for prognosis and survival of patients who are diagnosed with lung cancer [24,25].

Patients who have diagnosed with cancer during the COVID-19 pandemic are at high risk for deteriorating owing to cachexia and sarcopenia due to health and nutrition restrictions. Advanced cachexia has especially got a high mortality rate in lung cancer because of the lack of treatment options [22,23]. Following healthy dietary patterns, lung cancer patients can be benefited by Mediterranean diet due to the fact that it works as a protective factor against lung cancer [26].

Mediterranean diet is a mainly plant-based dietary pattern that includes a daily intake of cereals, olive oil when cooking or in salads, fruits, vegetables, nuts and beans. A moderate consumption of poultry, eggs, fish, fresh seafood, and dairy products (milk, yoghurt and cheese) and wine and a lower intake of processed meat, sugary foods as well as red meat [26]. As a model of resilient, sustainable and most of all healthy dietary pattern, Mediterranean diet has a beneficial impact on impaired lung function. According to Catalin et al., [27] healthy diet habits could protect lung function, respiratory health as well as strengthen the potential result of nutrition intervention programs to better help lung cancer patients.

Usage of Medical Plants and Essential Oils

In this day and age, chemotherapy, hormones, surgery and immunotherapy are the principal cancer treatment approaches, which can be enhanced by Complementary and Alternative Medicine (CAM) practices, like herbal medicine or supplements. Even if chemotherapy and radiation are the most frequent cancer treatments, many issues have an association with their usage, including limited effectiveness, serious toxicity, and multidrug resistance or lack of energy [28].

Herbal medicines are well-known not only as an alluring approach to lung cancer treatment with small side effects but also as an essential source of new drugs. South Korea, Japan, China and Ethiopia are the countries whose published scientific studies about antitumor activity have been proven significant enough. Herbal medicines are helpful and fruitful apropos the prolongation of patient survival time, prevention of side effects of lung cancer treatment strategies, and improvement of quality of daily life [29].

They can even interact with other pharmaceutical medications but it ought to be taken with extreme care for this reason, lung cancer patients should always consult their doctor before deciding to take them [30]. Teas and herbal infusions are the most famous plants for therapeutic usage as regards cancers as well as cardiovascular diseases.

Recent data indicated that various herbal infusions and types of teas that are consumed in Taiwan, Macau, Hong Kong and Mainland China to a large extent, have got antiproliferative effects on lung cancer cells [29].

On the other hand, essential oils have proven their value and contribution to the fight against COVID-19 and, especially, to the recovery of post-COVID-19 Brain Fog [31]. Folk and traditional medicine has been supported by essential oils, for instance eucalyptus oil or garlic oil, owing to their anti-inflammatory, immunomodulatory, antioxidant, antimicrobial and sedative attributes. The clinical applications of essential oils are principally referred to palliative and cancer care (immediate effect in lungs and airways), care for the elderly as well as mental health in case of depression, insomnia and anxiety. A combination of chemical agents and essential oils could multiply the possibilities to fight against lung cancer [32].

Spiritual Support

Being a lung cancer patient, especially during the COVID-19 pandemic era, has inevitably provoked death-related thinking. Oncological patients many times make efforts to detach from adverse thoughts but, at the end, they might induce their dread, feelings of suffocation, isolation and anxiety, worsening their mental and emotional performance. For this reason, it is of crucial importance cancer patients have access to spiritual, psychosocial and psychological support to maintain and improve their well-being, as the multidimensional needs of oncological patients could not be well-addressed during the pandemic [33].

Chaplaincy care is pretty important either a cancer patient has got strong beliefs, conflicted beliefs, various beliefs or even no beliefs. When having spiritual support, a cancer patient has more possibilities to feel empowered and stronger to ameliorate the quality of life and promote comfort, relief and inner peace. A chaplain is in the position to provide counseling, guided meditation or even help with health care services to improve spiritual prosperity and ethical issues [14].

Lack of techniques to relieve stress and anxiety were connected with poor adaptation to living with cancer. Palliative patients were found strong enough to manage any threatening information that came to their life via social media and family environment during COVID-19 pandemic era. Furthermore, older patients who have been diagnosed with lung cancer, managed to keep a positive mood, and pretty high levels of hope for life and recovery due to their religious internalization and spirituality. Acceptance of lung cancer as a situation that is not possible to be controlled or changed can affect any planned treatment-oriented activities, as well. However, there is still a number of patients who prefer not paying attention to any religious or spiritual worries they could have, as they give more emphasis to their finances or insurance issues, anxiety, family-health problems or fatigue [11,33].

Human Relations - Family and Friends

Many studies indicated that even though isolation has helped cancer patients to achieve the aim for lessening infections, due to non-attendance, avoidance or delay of medical care, the feeling of that reduced access to family, friends and social support systems comes into contact with toxic loneliness and intensified psychological problems, like panic disorders and emotional distress [34]. Lung cancer patients experienced much pessimism and inner negativism during the first two years of COVID-19 pandemic, as face-to-face interactions with both family and friends was not permitted in most cases, based on health protocols and public guidelines [33]. As a result, patients could not rely on their family relatives and friends, and felt unable or helpless to carry on and fight for their lives, due

to lack of family and peer communication, support or social belonging [35].

To participate in talking, counselling or support groups accompanied by either friends or family members to alleviate any difficult feelings or complex health conditions is of essential importance for lung cancer patients. Psychological vulnerability and financial disruption many times make them incapable of conquering their full independence in daily life activities, even if they have the flexibility of using video or medical appointments. The relationship between caregivers and patients has been perplex and challenging, as caregivers often strive to avoid hopelessness, depression, and feelings which often get associated with the pain of lung cancer patients. For this reason, interventions concentrated on offering social support to both parts could help in many ways to better understand cancer care path, as this disease is a crucial medical condition [36-39].

Conclusion

The evaluation of holistic needs of lung cancer patients throughout the Covid-19 pandemic indicated the valuable contribution of complementary and alternative medicine with a view to empowering tailored treatment and holistic approximation by integrating with conventional therapy for lung cancer. Thus, a multidisciplinary approach is of vital importance with the expectation of improving the ability of human body to struggle against cancer and promote the patient's wellbeing.

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