

Letter to the Editor

Knowledge of yoga among cancer patients and their attendants: a survey in a tertiary cancer centre in North East India

Sir,

Yoga is an ancient Indian science that has evolved over thousands of years. Yoga deals with the physical, mental, moral and spiritual well-being of an individual.¹ We have conducted an electronic survey amongst the cancer patients and attendants of our hospital about their knowledge of yoga. It's a survey of 62 participants from 15/06/2021 to 18/06/2021 (before international yoga day on 21/06/21), 46.8% of the participants are male and 53.2% are female in the survey. The age of the participants ranges from 9 to 69 years. We have designed a set of ten questions, first six questions are designed to know their knowledge about the beneficial effects of the yoga, next two questions are about the misconceptions, cautions and guidance needs while performing yoga and the last two questions about the possibility of the practical application of it in their life. In our survey, we find that 93.5% of the participants think yoga reduces stress, 96.8% think yoga reduces fatigue, 95.2% opine yoga improves sleep, 93.5% feel yoga improves posture-related dysfunctions in cancer patients. Regarding chances of recurrence in cancer patients, 75.8% of patients think it has a negative impact on recurrence, 40.3% of participants have an opinion that yoga can cure cancer (no study till now proves that yoga cures cancer), and 90.3% feels that unguided yoga can cause injuries. At last, 93.5% patients feel yoga improve quality of life in cancer patients and 93.5% want to implement yoga in their daily life. From our survey, it seems participants have a fair idea of the benefits of yoga in cancer.

Cancer is one of the most common causes of morbidity and mortality, with approximately 14 million new cases and nearly 9 million cancer deaths annually worldwide.² Psychological distress (depression, anxiety, fear of recurrence), physical symptoms (fatigue, sleep disturbance, pain, nausea, vomiting, chemotherapy and radiation-induced toxicity, surgery-related complications) are consequences of cancer itself and its treatment. Plenty of literature validates the beneficial effect of yoga in anxiety, depression and other psychological distress.³ Pranayama and relaxation techniques are effective in lessening anxiety while Bhastrika, Kapalabhati, and Ujjayi pranayama (hyperventilation breathing techniques) are associated with antidepressant effects of yoga.⁴⁻⁶ Several studies have linked yoga with reduced fatigue in cancer patients. Yoga has been used in the management of a variety of other symptoms such as sleep disturbances, loss of appetite, chemotherapy-induced nausea and vomiting (CINV), and pain in cancer patients.

Various cooling Pranayamas such as Sheetal, Sheetakari, and Sadanta and other asanas such as Pavanamuktasana (supine knee-chest) and Uttana padasana (straight leg raise) has been useful in tailing off chemotherapy-induced nausea and vomiting along.⁷ Cancer-related fatigue, pain and sleep problems can be effectively decreased with loosening exercises, gentle stretches, Yogasanas (stretching postures), Sudarshan kriya and relaxation techniques. Cyclic meditation, movement meditation with postural techniques helps in reducing stress and improves sleep. The fear, anxiety is shown to be lessened by the sound resonance technique that involves chanting and meditating on sound "a," "u," and "m," and mantras.⁸ Other forms of yoga that facilitates stretching followed by relaxation have also found to reduce fatigue and pain in cancer patients. Udana Vayu, one of the five divisions of the life force, prana, holds special significance in spiritual practice. Udana is the upward-moving breath, which directs the flow of prana from the lower to the higher planes of consciousness. Anticancer therapy causes gastroparesis and obstructs Udana Vayu and Apana Vayu (downward force) causing nausea. Various yoga techniques that work on the abdomen, facilitate the downward flow of the otherwise sluggish Apana Vayu, which reduces nausea and improves appetite. Cancer patients are vulnerable to depression and fear. Severe depression in these patients causes abnormal diurnal cortisol elevations that may result in altered sleeping patterns, insomnia and immune suppression. Yoga attributed the reduction in stress hormones, HPA axis regulation, relaxation response and improved parasympathetic function, therefore reduces stress and modulates response to stressors and instils a greater control over situations. By reducing cortisol peaks yoga reduces fatigue, improves sleep and immune response.⁹ Yoga also changes perception and reactivity to situations and reduces intrusive thoughts and thus lessen depressive episodes. There have been various studies that show that yoga is associated with reductions in blood cortisol, inflammatory cytokines and improved natural killer cell counts.¹⁰ All these proposed phenomena help in improving the quality of life in cancer patients.

Yoga should be performed initially under guidance. Careful selection of the patients is a must. Patients with long bone metastasis, severe osteoporosis are prone to fracture with some asanas, especially in the elder population. Hyperventilation practices can cause lung injury in patients with lung cancer or lung metastases undergoing radiotherapy. Deep breathing exercises are

not recommended in patients with pleural effusion, ascites, abdominal surgeries, etc.

Yoga is a very effective intervention in cancer patients. In a summary, it can improve the quality of life in cancer patients by reducing stress, depression, fear, insomnia, fatigue and also different physical symptoms due to cancer and cancer-related treatment.

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