Yoga for Allergy and Asthma

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Background:

There is a substantial body of evidence on the efficacy of yoga in the management of allergy and bronchial asthma. Many studies have reported, as the effects of yoga on allergy and asthma, significant improvements in pulmonary functions, quality of life and reduction in airway hyper-reactivity, frequency of attacks and medication use. In addition, a few studies have attempted to understand the effects of yoga on exercise-induced bronchoconstriction (EIB) or exercise tolerance capacity. We also conducted a randomized controlled study at All India Institute of Medical Sciences, India in order to understand the plausible mechanisms by which yoga improves these variables in bronchial asthma and how yoga influences T-cell and mast cell activation levels in these patients.

Methods:

Expedite systemic review - a comprehensive search strategy, including electronic databases, grey literature, and hand searching of relevant journals was undertaken.

Results:

Our study data was equivocal with other previous controlled trials. In our study, values of pulmonary function indices were improved progressively with yoga, as compared to the corresponding baseline values. In the yoga group, there was a significant reduction in EIB; however, there was no corresponding reduction in the mast cell activation levels as depicted through urinary prostaglandin D2 metabolite (11β prostaglandin F2α) levels in response to the exercise stimuli. Yoga did not significantly change serum eosinophilic cationic protein levels, but significantly reduced serum sIL-2R levels. Yoga also showed a significant change in bronchodilator response to short acting β2-agonist in PEFR values. Nevertheless, there was a significant improvement in Asthma Quality of Life (AQOL) scores, and it was achieved earlier and was more complete in the yoga group. The number-needed-to-treat worked out to be 1.82 for the total AQOL score. An
improvement in total AQOL score was greater than the minimal important difference and the same outcome was achieved for the sub-domains of the AQOL. The frequency of rescue medication use showed a significant decrease over the study period in both the groups. However, the decrease was achieved relatively earlier and was more marked in the yoga group than in the control group. The control group did not show significant differences in any of these variables from baseline values.

Conclusion:

Our trial along with other studies supports the efficacy of yoga in the management of bronchial asthma. Previous controlled studies, including our own study has demonstrated that adding the mind-body approach of yoga to the predominantly physical approach of conventional care results in measurable improvement in subjective as well as objective outcomes in bronchial asthma. However, the preliminary efforts made towards working out the mechanism of action of the intervention have not thrown much light on how yoga works in bronchial asthma.