



# The benefits of acupuncture for dyspnea in patients with chronic obstructive pulmonary disease and of cardiac ablation for atrial fibrillation in hemodialysis patients

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The Message from the Editor-in-Chief continues, focusing on content from the prior month's *Annals of Palliative Medicine* issue. The September 2022 issue featured a noteworthy Study Protocol article highlighted below and 17 original research articles, one of which will be highlighted in this October 2022 Message from the Editor-in-Chief.

In the Study Protocol article, He *et al.* detailed their single-blind, randomized, sham-controlled trial of combining acupuncture with exercise training to improve dyspnea in patients with chronic obstructive pulmonary disease (COPD). Dozens of articles previously published in *Annals of Palliative Medicine* have chronicled some of the myriad medical benefits of acupuncture, including recent systematic reviews and meta-analyses showing that acupuncture is an effective treatment for insomnia (1), beneficial in the early treatment of stroke (2), has a significant positive effect in treating myasthenia gravis (3), improves symptoms of osteoarthritis (4), and effectively treats restless leg syndrome (5).

He and colleagues will randomize 70 patients with COPD to real acupuncture and exercise training or to sham acupuncture and exercise training. The study soundly attempts to eliminate the potential for placebo effect by administering sham acupuncture in the control arm, and to further minimize bias by having data collectors and statisticians blinded to treatment arm, with only the acupuncturists knowing the group allocation. The study will assess patient questionnaires for dyspnea and for health status impairment in COPD, as well as exercise capacity, along with lung function testing, cardiopulmonary exercise testing, and blood gas analysis. Although a limited sample

size, with this rigorous trial design, this study should help more definitively determine if acupuncture provides benefits beyond exercise training for patients with COPD.

There is precedent for using acupuncture to improve dyspnea as is being explored in this study. While radiation therapy to the lungs can cause respiratory symptoms and dyspnea due to pneumonitis and/or pulmonary fibrosis (6), a prior prospective feasibility study demonstrated that acupuncture can improve dyspnea and also reduce fatigue and enhance quality of life following thoracic radiotherapy and other cancer therapies among patients with lung cancer (7). Acupuncture has also been reported to treat bronchial asthma, chronic bronchitis, and chronic disabling breathlessness, and to reduce exertional dyspnea, relieve respiratory muscle fatigue, and improve the exercise capacity and quality of life of patients with COPD (8-13).

In an Original Article, Chen *et al.* assess the benefits of catheter ablation in patients on hemodialysis with symptomatic atrial fibrillation. Atrial fibrillation is the most common sustained arrhythmia and increases all-cause mortality and risk of stroke. While catheter ablation is a well-established treatment option that can reverse atrial fibrillation, improve patient quality of life, reduce hospitalizations, and reduce mortality (14,15), its use in patients on hemodialysis to date has been under characterized, and these patients have often been excluded from seminal trials on cardiac ablation. This is, however, an important clinical population given that hemodialysis patients often cannot tolerate medical management for atrial fibrillation and given there is an association between the need for hemodialysis and developing atrial fibrillation

and also requiring hospitalization for atrial fibrillation (16,17).

Among patients undergoing catheter ablation for atrial fibrillation, Chen and colleagues matched 25 consecutive hemodialysis patients with 100 patients without renal impairment or need for hemodialysis. Although the atrial fibrillation recurrence rate was higher after a single ablation in hemodialysis patients than matched patients, the majority of hemodialysis patients did not experience symptomatic atrial fibrillation following initial ablation. Furthermore, most of those who received a second cardiac ablation remained without atrial fibrillation recurrence. Ablation was well tolerated among both hemodialysis and non-hemodialysis patients, with tamponade being the only procedural complication seen, occurring in a single patient in each group.

While the study cohort size was quite limited, these findings are encouraging and suggest that cardiac ablation is well tolerated and a potentially efficacious treatment option even for hemodialysis patients. However, the benefit in mortality reduction from catheter ablation in this population remains unclear, and larger studies are needed to better characterize if cardiac ablation can similarly reduce mortality in hemodialysis patients like can be seen in non-hemodialysis patients, and to further characterize the safety profile of cardiac ablation in this patient population.

In an accompanying Editorial, Prasitlumkum and colleagues point out that the higher atrial fibrillation recurrences rates among hemodialysis patients in the study by Chen *et al.* is not surprising given that end-stage kidney disease patients are at higher risk of atrial fibrillation recurrence, have more comorbidities, have greater preexisting structural heart changes, and have great aberrant drug metabolism for antiarrhythmic drugs. Prasitlumkum and colleagues underscore the limited number of hemodialysis patients studied by Chen *et al.* but commend the authors for advancing the understanding of cardiac ablation in a hemodialysis patient population that for too long has been neglected in studies assessing optimal treatment approaches for atrial fibrillation.

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