

Use of Digoxin in Chronic Systolic Heart Failure in Current Era



To the Editor:

We thank Bourge et al¹ for their article titled “Digoxin Reduces 30-day All-cause Hospital Admission in Older Patients with Chronic Systolic Heart Failure,” which was published in *The American Journal of Medicine*. The authors demonstrated benefit of digoxin in reduction of 30-day all-cause hospital admission based on the main Digitalis Investigation Group (DIG) trial. This is very relevant in the current era because heart failure is a leading cause of hospitalization and re-hospitalization in the elderly.¹ As mentioned by the authors, the DIG trial was conducted during 1993-1995 when beta-blocker and Aldactone (Pfizer, New York, NY) were not yet approved for use in chronic heart failure. The benefits and safety of combination treatment using digoxin with beta-blocker, Aldactone, and angiotensin-converting enzyme inhibitor (ACEI) remain unclear. The combination may provide synergistic beneficial effects or increase incidences of adverse events such as life-threatening bradyarrhythmia, renal failure, and hyperkalemia.

Digoxin reduces heart rate, increases systolic blood pressure and ejection fraction, and improves symptoms of heart failure, all of which should predict a better prognosis.² However, it has not been shown to improve overall survival. There are not enough data to support the use of digoxin with current medications for chronic systolic heart failure like beta-blocker, Aldactone, and ACEI. Hence, the use of digoxin has not been emphasized in

chronic heart failure treatment unless concomitant with atrial fibrillation.

The effect of slowing heart rate by digoxin may overlap with beta-blocker, but its side effects may be aggravated by worsening renal function from ACEI. However, digoxin is so far the only oral inotropic agent that may provide distinct additive benefit in improvement of left ventricular systolic function. Therefore, we agree with the authors that randomized control trials are needed for better understanding the possible role of the only “oral inotrope” in chronic systolic heart failure. If digoxin can reduce all-cause hospitalization and re-hospitalization in population groups who are on the current heart failure treatment, it will provide tremendous clinical advantages and cost benefit.

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<http://dx.doi.org/10.1016/j.amjmed.2014.03.030>

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Funding: None.

Conflict of Interest: None.

Authorship: All authors had access to the data and a role in writing the manuscript.