

## Protective Effects of Intravenous L-carnitine (LC) Administration on Development of Cardiomyopathy in Hemodialysis (HD) Patients.

Recent studies have shown that L-carnitine can improve left ventricular (LV) function in HD patients. In this study we aimed to investigate whether intravenous administration of LC can prevent the development of cardiomyopathy in HD patients as assessed by M-mode ultrasound cardiography (UCG).

Thirty-eight HD patients without reduced left ventricular function were treated with intravenous administration of 1000mg/body of LC at the end of every HD session for 12 months. M-mode UCG assessments were undergone in all subjects at the three points; 1 year prior to the treatment, the start of LC administration and 1 year after the treatment.

As shown in [figure], average %FS (fractional shortening) significantly declined during 1 year before the start of LC, then stabilized after the treatment, suggesting LC administration might protect the progression of LV contraction impairment. Average early diastolic filling velocity (E) / atrial filling velocity (A) ratio was similar pattern, suggesting LC treatment could be protective in LV diastolic disorder. LC treatment also might prevent LV hypertrophy.

Intravenous LC administration can be a candidate therapy for protective of the development of cardiomyopathy in HD patients.