**COMPARISON OF CARDIAC OUTPUT DETERMINED BY THERMODILUTION, THE FICK METHOD, AND TRANSTHORACIC ECHOCARDIOGRAPHY**

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Background: Variety of methods can be used to measure cardiac output.

Objectives: To determine the correlation between 3 methods for measuring cardiac output (CO): Thermodilution (TD), the Fick method, and transthoracic echocardiography (TTE).

Methods: Data from patients who underwent right heart catheterization (RHC), and transthoracic echocardiogram (TTE) within 1 week at our center over 2 years period were reviewed. A total of 266 patients were included in the analysis. Cardiac output was determined by using thermodilution via pulmonary artery catheter in 251 patients, by the Fick method in 172 patients, and by TTE in 90 patients.

Results: Mean cardiac output was 5.3 L/min by thermodilution, 5.5 L/min by the Fick method, and 4.4 L/min by TTE. There was a strong correlation in CO measured by the 3 methods, even in the subgroups. Patients with moderate to severe tricuspid regurgitation (59 patients) had a good correlation in CO measured by TD and Fick; and TD and TTE (r=0.76, and 0.56 respectively). Also in patients with depressed left ventricular systolic function there was a good correlation in CO measured by TD and Fick, and TD and TTE (r=0.68, and 0.52 respectively).

Conclusion: Thermodilution, Fick, and TTE determinations of cardiac output correlate well, and are interchangeable, and either maybe relied upon if the rest are not available.