**IS NON-INVASIVE MEASUREMENT OF CARDIAC OUTPUT USING ELECTRICAL CARDIOMETRY IN PATIENTS WITH AORTIC STENOSIS A RELIABLE METHOD?**

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*Aim:* The purpose of this study is to evaluate the agreement of cardiac output (CO) measurements obtained by non-invasive Electrical Cardiometry (EC, COEC), and those derived from the “gold standard” measured by the Thermodilution (COTD) method in adults with aortic valve stenosis.

*Methods:* Simultaneous measurements of CO, obtained by means of COEC and COTD, were compared in twenty one patients (16 female and 15 male) thus far, with mean ages of 74 years (SD=9) who were undergoing diagnostic right and left heart catheterization. For non-invasive measurements of COEC, which is a variation of impedance cardiography, standard surface electrodes were applied to the left side of the neck and the left side of the thorax at the level of the xiphoid process. COTD was determined during the heart catheterization.

*Results:* A good correlation (r = 0.65) was found between COEC and COTD (p=0.003). The bias between the two methods (COEC – COTD) was -1.1 L∙min-1. According to the Bland and Altman method, the upper and lower limits of agreement, defined as mean difference ± 2SD, were +0.52 L∙min-1 and -2.77 L∙min-1, respectively.

*Conclusions:* Although Electrical Cardiometry compared to Thermodilution in these thirty one patients seems to underestimate the cardiac output, COEC demonstrates acceptable agreement with data derived from COTD in adults with aortic stenosis. In the first glance it seems that EC can be applied for continuous non-invasive beat-to-beat estimation of CO. Further data will be required to establish more robust analysis of data.