



Letter to Editor

The Most Accurate and Fastest Method for Measurement of Vena Contracta Area by Direct Planimetry 3D Transesophageal Echocardiography

Dear Editor,

Two-dimensional (2D) echocardiography is a powerful tool for assessment of mitral regurgitation (MR) [1]. However, it bears several major disadvantages. Evidence suggests that measurement of the vena contracta area (VCA) via a three-dimensional (3D) method is significantly more accurate than 2D methods in the quantification of MR since the 2D method is not sufficiently reliable in calculation of VC diameter because of circular assumption of VC area [2]. VCA direct planimetry (DP) and multiplanar reconstruction (MPR)-derived VCA are direct and reliable methods to quantify MR severity, and their results are comparable with those of 2D integrative method [2, 3]. It is strongly recommended that these methods especially DP can replace 2D methods in the quantification of MR in the clinical practice, as it is more accurate and easy to perform [3].

ACKNOWLEDGMENTS

The manuscript was derived from the dataset of Dina Ashouri's subspecial dissertation entitled "Quantification of Mitral Regurgitation Severity With Vena Contracta Area: A Comparative Study between 2D and 3D Transesophageal Echocardiography".

Mehrnoush Toufan, Dina Ashouri*

Cardiovascular Research Center, Tabriz University of Medical Sciences, Tabriz, Iran. Corresponding Author: Dina Ashouri, E-mail: dnashouri@yahoo.com

REFERENCES

- 1. Garcia-Orta R, Moreno E, Vidal M, Ruiz-Lopez F, Oyonarte JM, Lara J, Moreno T, Garcia-Fernandezd MA and Azpitarte J. Three-dimensional versus two-dimensional transesophageal echocardiography in mitral valve repair. Journal of the American Society of Echocardiography: official publication of the American Society of Echocardiography. 2007; 20:4-12.
- 2. Kahlert P, Plicht B, Schenk IM, Janosi RA, Erbel R and Buck T. Direct assessment of size and shape of noncircular vena contracta area in functional versus organic mitral regurgitation using real-time three-dimensional echocardiography. Journal of the American Society of Echocardiography: official publication of the American Society of Echocardiography. 2008; 21:912-921.
- Toufan M, Ashouri D. (2017) Quantification of Mitral Regurgitation Severity With Vena Contracta Area: A Comparative Study between 2D and 3D Transesophageal Echocardiography". Cardiovascular Research Center, Tabriz University of Medical Sciences, Tabriz, Iran.

Published by Australian International Academic Centre PTY.LTD.

Copyright (c) the author(s). This is an open access article under CC BY license (https://creativecommons.org/licenses/by/4.0/) http://dx.doi.org/10.7575/aiac.abcmed.v.6n.3p.29