

P5569

## Effective regurgitant orifice area vs vena contracta method as predictors of outcomes in severe tricuspid regurgitation

A. Garcia Martin, R. Hinojar, A. Gonzalez Gomez, M. Pascual Izco, M. Plaza Martin, G. Alonso Salinas, S. Hernandez Jimenez, J.M. Monteagudo, E. Casas Rojo, J.L. Moya Mur, J.J. Jimenez Nacher, S. Ruiz Leria, V. Barrios Alonso, J.L. Zamorano, C. Fernandez Golfín

*University Hospital Ramon y Cajal, Department of Cardiology, Madrid, Spain*

**Background:** There is no gold standard echocardiographic method to evaluate tricuspid regurgitation (TR) severity. ESC guidelines recommend using a combination of several methods. The purpose of this study was to compare the prognostic value of the two most commonly used methods for the evaluation of the TR: Effective regurgitant orifice area (EROA) method and biplane vena contracta (VC) method.

**Methods:** Consecutive asymptomatic patients with significant TR (moderate to severe or severe by echocardiography) evaluated in the Heart Valve Clinic between 2015–2018 were included.

TR severity was evaluated by a combination of several methods, including EROA method and biplane VC method, using EPIQ system. End-point included cardiovascular mortality, tricuspid valve surgery or heart failure.

**Results:** A total of 70 patients were included (mean age was  $74 \pm 8$  years, 71% females). According to aetiology, 94% were functional TR (60% due

to left valve disease, 27% due to tricuspid annulus dilatation, 13% others). During a median follow up of 18 months [IQR: 4–28], 35% of the patients reached the combined end-point ( $n=16$  developed right heart failure,  $n=17$  underwent tricuspid valve surgery, and  $n=3$  died).

Patients with events showed a larger EROA ( $0.55$  vs  $0.40$   $p: 0.036$ ) but no significance different was found in VC ( $8.03$  vs  $7.80$   $p: 0.27$ ). Among both parameters, the tricuspid EROA was the only prognostic factor of the combined endpoint (EROA, HR 24.22 [1.54–380.86],  $p=0.023$ ; VC, HR 1.022 [0.882–1.183]. A value of EROA of 0.42 reached the best accuracy to predicted poor outcomes ( $p<0.01$ ).

**Conclusion:** Among the two most commonly used methods for the evaluation of the TR, EROA was the only method that obtained prognostic value during follow-up.