

Abstract No. **42**

Category: **Non Invasive Imaging**

Title: **Comparison of ventricular geometry obtained by Gated Spect and two-dimensional echocardiography in mexican population.**

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Abstract:

INTRODUCTION: Gated-SPECT evaluates ventricular function parameters, between them geometry is assessed by sphericity index (SI). The increase in cardiac volume and radius of the left ventricle leads to greater parietal tension that reflects decreased contractility. The sphericity is influenced by the loss of contractile tissue, the eccentric remodeling and by the expansion process, evaluated by the SI. The SI is an independent value to the preload and afterload change, and it is considered a prognostic factor in contractile dysfunction. However, their normal values have not been established by MPS Gated-SPECT.

METHODS: This is a descriptive study performed from January 2018 to February 2019. 38 patients without previous history of infarction or electrocardiographic abnormalities and normal MPS Gated-SPECT were included. All patients underwent to two-dimensional echocardiography (2D-Echo) for measurement of SI. The SI was calculated by obtaining the quotient between the left ventricular minor and major diameters during diastole. Socio-demographic data: gender, age, weight, height, body mass index and cardiovascular risk factors were obtained.

RESULTS: Of total, 57.89% of patients (n=22) were women. The mean age of total group was 70 ± 11.44 years. In relation to cardiovascular risk factors (CRF), hypertension was found in 37% (n=19), diabetes mellitus 11% (n=6), dyslipidemia in 17% (n=9), chronic renal insufficiency in 6% (n=3) and 29% (n=15) had no CRF. Based on SI normal values (0-1), the comparison between 2D Echo (0.58 ± 0.08) and MPS Gated-SPECT (0.66 ± 0.08) results, shows that MPS Gated-SPECT overestimates the SI up to 0.12. The SI values obtained by MPS Gated-SPECT were multiplied by 0.92 (correction factor) to obtain values similar to those obtained by 2D Echo (0.61 ± 0.08).

CONCLUSION: The MPS Gated-SPECT is useful in the evaluation of the SI, its values are similar to those obtained by 2D Echo, applying a correction factor of 0.92. The SI normal mean value by MPS Gated SPECT was 0.66 ± 0.08 in our population and it could be used as an additional parameter in the assessment of left ventricular systolic function.