Stress echo in Italy: state-of-the art 2015

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Background: Stress echocardiography (SE) is now an established, cost-effective method for the diagnosis and prognostic stratification in coronary artery disease (CAD) and beyond CAD, but the current practice may vary in different nations due to cultural and economic reasons.

Purpose: to have a snapshot of current SE practice in Italy

Methods: On behalf of the Italian National Society of Cardiovascular Echography, we polled with an electronic survey all censored and accredited echocardiographic laboratories asking information on: 1- number of SE studies during the year 2015; 2- type of stress used; 3- main diagnostic echocardiographic endpoints beyond regional wall motion abnormalities.

Results: Of the 203 echocardiographic laboratories that responded to electronic survey, SE was performed in 138 laboratories (68%), with mean value of 140 SE/year and a grand total of 28327 SE tests: 17 labs had high-volume (> 400/year), 75 moderate volume (100-400/year) and 46 low volume (<100/year) activities. The employed stresses were: dobutamine in 121 (88%), dipyridamole in 110 (80%), adenosine in 99 (71%), semisupine exercise with tilting table in 77 (56%), noninvasive pacing (in patients with permanent pacemaker) in 8 (6%) laboratories. All 3 main forms of stress, tailored on patient’s clinical profile, were used in 54 (39%) laboratories (Figure). The diagnostic end-point was always regional wall motion analysis, with addition of coronary flow velocity reserve on left anterior descending coronary artery during vasodilator test, whenever possible, in 68 (49%) laboratories.

Conclusion: The Italian echocardiographic community uses a versatile approach to SE, with widespread use of pharmacological stresses. Vasodilators are frequently combined with dual imaging (wall motion and coronary flow velocity reserve). Noninvasive pacing with external programming is a frequent option in patients with permanent pacemakers. This is the suitable platform of the Stress echo 2020 prospective research registry on applications within and beyond coronary artery disease now at the starting blocks.