Prevalence of Patients with QRS 120-150 ms and QRS ≥150 ms from Patients with LVEF ≤35% in Sinus Rhythm and Left Bundle Branch Block at St. Luke’s Medical Center - Global City, Philippines

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Introduction: This is a pilot study. To date, no study in published Philippine literature has investigated the prevalence of patients with QRS ≥120 ms (ESC/EHRA Guidelines) and QRS ≥150 ms (ACC/AHA/HRS Guidelines) from patients with LVEF ≤35% in SR with LBBB morphology, both said QRS durations were included in the criteria of Class I indication for CRT implantation. The objectives of the study are to determine the prevalence of patients with QRS 120-150 ms and QRS ≥150 ms from patients with LVEF ≤35% in SR and LBBB at St. Luke’s Medical Center-Global City (SLMC-GC), Philippines, to classify these patients to ischemic cardiomyopathy (ICM) and nonischemic cardiomyopathy (NICM), and to determine their demographics in terms of age, sex, and co-morbidities.

Methods: This is a cross-sectional study performed from January to September 2016, with subjects at SLMC-GC, Philippines. Data collection was performed which consists of 2-D echocardiogram with LVEF ≤35% in SR and LBBB, from which 2 groups of QRS 120-150 ms and ≥150 ms with their demographic profiles such as age, sex, and co-morbidities will be identified and analyzed using percentage or proportion.

Result: The sample size in the study period was composed of 10,113 patients, of whom 1% (135) had LVEF ≤35% in SR. From 135 patients, 11% (15) had LBBB with QRS ≥120 ms. From 135 patients, 7% (9) had QRS 120-150 ms and also 7% (9) had QRS ≥150 ms. All patients who had QRS 120-150 ms were ICM while those with QRS ≥150 ms, 56% (5) were ICM and 44% (4) were NICM. Among patients with QRS 120-150 ms, youngest age was 50, median age was 67, and oldest age was 84, while among patients with QRS ≥150 ms, youngest age was 50, median age was 66, and oldest age was 82. Among those with QRS 120-150 ms, 67% (6) were males and 33% (3) were females whereas those with QRS ≥150 ms, 78% (7) were males and 22% (2) were females. Both groups of QRS 120-150 ms and ≥150 ms had the same identified comorbidities: CAD, HPN, DM, dyslipidemia and ESRD. Those with QRS 120-150 ms, 67% (6) had both CAD and DM, 56% (5) had HPN, 22% (2) had dyslipidemia and 11% (1) had ESRD, whereas those with QRS ≥150 ms, 78% (7) had CAD, 56% (5) had HPN, 44% (4) had DM, and 11% (1) had both dyslipidemia and ESRD.

Conclusion: There was both 7% prevalence of patients with QRS 120-150 ms and QRS ≥150 ms from patients with LVEF ≤35% in SR and LBBB at SLMC-GC, Philippines. All patients with QRS 120-150 ms were ICM while majority of those with QRS ≥150 ms were ICM. In both groups of QRS duration, youngest age was 50; median age of QRS 120-150 ms was 67 whereas QRS ≥150 ms was 66; and with QRS 120-150 ms, patients who were affected were older (84 years old vs 82 years old). Both QRS 120-150 ms and ≥150 ms were predominantly males with CAD, HPN, and DM as identified important risk factors.