Characteristics of Asia-Pacific Heart Failure patients with Cardiac Resynchronisation therapy: data from the AdaptResponse trial

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Introduction: CRT response rates vary significantly with limited clinical improvement in at least 20-30% of device recipients. Multiple clinical factors are associated with CRT response, including QRS duration and morphology, age, gender, height, HF etiology, dyssynchrony, and scar burden. HF patient characteristics vary between regions and countries. The AdaptResponse trial is a large CRT trial well represented with women that enrolled worldwide and the present analysis was designed to compare patient characteristics of randomized Asia-Pacific patients (pts) with pts from other regions.

Methods: The AdaptResponse trial enrolled CRT indicated pts with NYHA Class II-IV HF, LBBB (QRS ≥140 ms in men, ≥130 ms in women), and baseline PR interval ≤200ms. Pts from Japan, Republic of Korea, Taiwan, India and Australia are included in the Asia-Pacific cohort. Statistical analyses were done to assess differences in patient characteristics.

Result: There were 3620 pts randomized in 226 centers worldwide, including 1569 (43.3%) women. In the Asia-Pacific cohort of 245 pts, 37.1% were women. The table below shows that Asia-Pacific patients had a comparable age, were shorter, had lower BMI, trended to have worse baseline status (57.6% in NYHA III/IV), reported significant less depression (4.1% versus 14.2%) and received more often CRT-P (15.1 % versus 3.7% in the other regions). Moreover, more pts reported HF hospitalizations (62.9% versus 47.1%) prior to randomization. Medication included significantly more loop diuretics and aldosterone antagonists (MRA), less Angiotensin Converting Enzyme (ACE) inhibitors and β-Blockers. Renal dysfunction was more frequently present in Asia-Pacific patients and chronic lung disease less; however, incidence of other comorbidities such as AF, diabetes, or ischemic cardiomyopathy was not significantly different.

Conclusion: Patient characteristics differ between patients from Asia-Pacific compared to other regions and Asia-Pacific patients have different medication treatment patterns. Their KCCQ overall summary score is comparable, although less Asia-Pacific patients reported to be depressed. The impact of these differences on clinical outcomes will be evaluated in the AdaptResponse trial.