Multiparameter Risk Assessment Tools Applied to the Functional Class(FCII) Cohort from the EARLY(AC-052364) Clinical Trial

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Rationale:

The 2015 European Society of Cardiology/European Respiratory Society (ESC/ERS) guidelines provide multi-parameter risk assessment for use at diagnosis and follow-up of Pulmonary Arterial Hypertension (PAH) patients. Patients are categorized as low, intermediate or high risk for estimated one-year mortality. We aim at investigating if patients with mild PAH defined as patients in World Health Organization (WHO) Functional Class (FC) II are at low risk of one-year mortality.

Methods:

In a post-hoc analysis, of the EARLY trial in which only FC II patients were enrolled (Galiè 2008), the REVEAL Risk Score (RRS) (Benza 2010, 2012) and COMPERA Risk Score (CRS) (Hoeper, 2017) were applied at baseline(BL) and month 6. Low risk, intermediate risk, and high risk of estimated 1-year mortality were assigned for each patient according to the CRS described in Hoeper, 2017 and for the RRS, risk score of 1-7 was classified as low risk, 8-9 intermediate risk, and ≥ 10, as high risk. Proportion of low, intermediate and high risk patients were calculated at BL, month 6, and change at month 6.

Results:

185 patients >12 years who were enrolled in the study were analyzed. Assessment of the RRS and of the CRS showed that, respectively, 35% and 89% of patients were not at low risk at baseline and 37% and

82% of patients were not at low risk at month 6. By 6 months, 12% and 7% had a worsening in risk as (RRS) and (CRS) indicated, respectively (Table 1).

Conclusions:

This study used two different risk assessment methods to analyze the FC II cohort from the EARLY trial. Both indicated that even in FC II, patients are not all at low risk. In addition, patients at low risk may rapidly deteriorate and should not be considered stable.

Table 1 Calculated risk score at baseline and at month 6

Risk Status		REVEAL Risk Score N (%)	Comprehensive Risk Score N (%)
Baseline, N=185	Low	120 (64.9)	21 (11.4)
	Intermediate	57 (30.8)	153 (82.7)
	High	8 (4.3)	11 (5.9)
Month 6 N=185*	Low	114 (61.6)	30 (16.2)
	Intermediate	57 (30.8)	135 (73.0)
	High	12 (6.5)	16 (8.6)
	Missing	2 (1.1)	4 (2.2)
Change at Month 6 from baseline N=185*	Improved	17 (9.2)	17 (9.2)
	Stable	143 (77.3)	151 (81.6)
	Worsened	23 (12.4)	13 (7.0)
	Missing	2 (1.1)	4 (2.2)

Note: missing components for in Reveal risk score are imputed to 0, while no imputation for missing assessments is applied for Comprehensive Risk score

*2 patients died before month 6