Is Isolated tricuspid regurgitation different from functional tricuspid regurgitation?

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Introduction: Isolated tricuspid regurgitation (TR) prevalence is increasing in the last decades. Its presence is associated with a worse prognosis when EROA is >40 mm^2. Because of high surgery risk and increasing incidence, isolated TR is a challenge in modern cardiology.

Purpose: To evaluate the prevalence and characteristics of isolated TR compared to other TR aetiologies in a large cohort of patients.

Methods: Prospective study where consecutive patients undergoing an echocardiographic study within a three-month period were included. All studies with at least moderate TR were selected. Isolated TR was defined as TR with no likely pulmonary hypertension (>50 mmHg), no overt TR cause (no intrinsic tricuspid disease, LVEF ≥50%, no pacemaker/defibrillator wire across the tricuspid, no other significant valve disease, no disease that may cause TR, no congenital or pericardial heart disease); and no previous valve surgery. Patients with isolated TR and other aetiologies were compared.

Results: 2121 patients with at least moderate TR were included. Isolated TR was found in 398 patients (18.8%). Basal characteristics are shown in table 1. Patients with isolated TR did not have a higher prevalence of AF (47.5% vs. 48.6% p=0.362). Isolated TR was less severe (20.5% vs. 32.1% of patients with severe TR; p<0.001) and less symptomatic (NYHA ≥ II in 27.8% of patients vs. 69.3%; p<0.001).

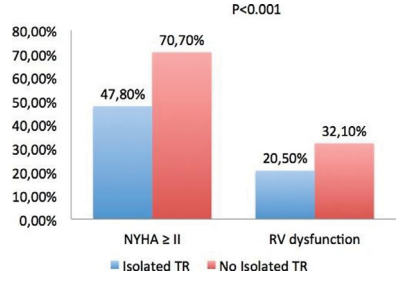
After selecting patients with at least severe TR, patients with isolated TR were also less symptomatic (NYHA≥II in 47.8% of patients vs. 70.7%; p<0.001) and they had better RV function (TAPSE <17 mm in 13.4% vs. 35.6%; p=0.001).

We found that patients with isolated severe TR had a larger tricuspid annulus diameter (25.4±0.8 mm/m^2 vs. 24.0±0.3 mm/m^2; p=0.047).

Conclusions: In this large prospective study, isolated TR is present in 18.8% of significant TR. Isolated TR was less severe, was associated with less RV dilatation (but with larger tricuspid annulus diameter) and patients had a better functional class compared to other TR aetiologies.

Table 1

	Isolated TR (n=398)	No Isolated TR (n=1723)	p
Woman	250 (62.8%)	1082 (63.9%)	0.983
Atrial firilation	197 (47.5%)	812 (48.6%)	0.362
Age (years)	77.3 (±0.5)	77.1 (±0.2)	0.638
Severe TR	82 (20.5%)	553 (32.1%)	<0.001
RA area	17.2±0,3 cm^2/m^2	21±0.8 cm^2/m^2	<0.001
Tricuspid annulus diameter	25.4±0.8 mm/m^2;	24.0±0.3 mm/m^2	0.047
NYHA ≥ II	111 (27.8%)	1194 (69.3%)	<0.001



Differeces in NYHA and RV function