



# RIGHT VENTRICLE DIASTOLIC DYSFUNCTION IN EARLY RHEUMATOID ARTHRITIS PATIENTS: RISK FACTORS AND THE EFFECT OF ANTIRHEUMATIC THERAPY

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## Introduction

Rheumatoid arthritis (RA) is a disease with proven high cardiovascular risk. High cardiovascular mortality are associated with accelerated progression of atherosclerosis, resulting in chronic heart failure (CHF) and sudden cardiac death in patient with RA.

## Methods

A total of 66 pts with early RA (ACR/EULAR criteria, 2010) were included: 71% of women, age 56 [46;61] years, disease duration 6 [4; 8] months; DAS28 5.3 [5.0; 6.2], positive for ACCP (100%)/RF (87%), without prior administration of DMARDs and glucocorticoides. All pts underwent blood pressure monitoring (BP), echocardiography, tissue Doppler imaging. Methotrexate (MT) therapy was started in all pts with an escalation of the dose up to 30 mg/week subcutaneously. In case of no remission 3 months later, MT was added with biologic therapy (BT): Adalimumab, Certolizumab pegol, Abatacept, Rituximab. After 18 months 29 (44%) pts achieved remission. Antihypertensive therapy was administered in 51 (77%) pts: ACE inhibitors, ARBs, beta-blockers, calcium antagonists, diuretics.

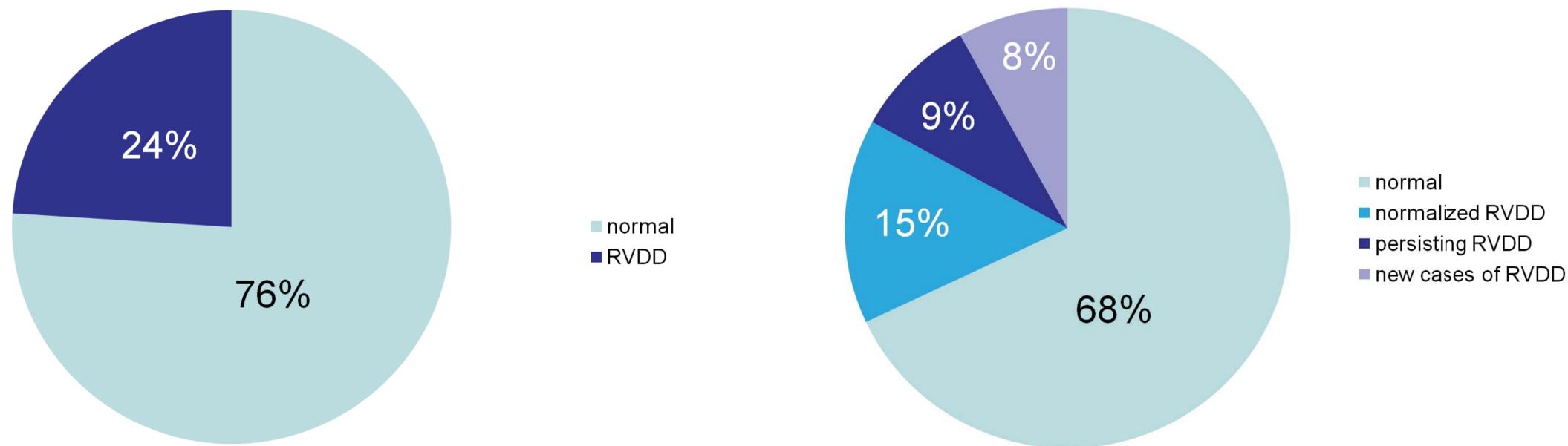
## Results

At baseline RVDD was detected in 16 (24%) pts. RVDD related factors that remained associated on a multivariable forward stepwise linear regression analysis were body mass index (BMI) ( $\beta$ -coefficient (95% CI) 0,3 (-0,003; -0,008), SDAI 0,2 (-0,009; -0,001), carotid atherosclerosis (CA) 0,2 (-0,3; 0,01), disease duration 0,2 (-0,02; 0,001). Multiple coefficient of determination (R<sup>2</sup>) was 38% (p=0,03). After 18 months the incidence rate of RVDD decreased from 24% to 18%, p>0.05. The dynamics of diastolic function was multidirectional. RVDD was normalized in 10 (63%) of 16 RA pts with RVDD (p=0.02). All of them had effective control of BP and achieved remission. 67% of pts with normalized RVDD received MT + BT. 5 (31%) pts with new cases of RVDD and 6 pts with preserved RVDD did not reach the target values of BP and RA remission.

## Objective

To determine the frequency of diastolic dysfunction of the right ventricle (RVDD) in patients (pts) with early rheumatoid arthritis (RA) prior to therapy with basic anti-inflammatory drugs (DMARDs), examine its relationship with traditional risk factors of cardiovascular disease and markers of inflammation, to study the effect of antirheumatic therapy administered in accordance with «treat to target» (T2T) principles on RVDD in early RA pts during 18-month follow-up.

**Fig. 1. The dynamics of diastolic function of the right ventricle after antirheumatic therapy**



## Conclusion

Presence of CA, higher BMI, SDAI and disease duration strongly associated with the incidence rate of RVDD.

A significant decrease of RVDD in case of achieved targeted BP values and RA remission was observed during 18-month therapy of early RA pts in accordance with «T2T» principles.