

ACS-like Myocarditis vs. Acute Myocardial Infarction: Continuous Clinical Challenge

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Disclosures

None



Background

- Myocarditis with an acute coronary syndrome (ACS)-like presentation poses an important clinical challenge
- Comparing ACS-like myocarditis with AMI patients can shed a light on the similarities and the important differences between the two clinical syndromes



Aim

To compare the clinical, laboratory and echocardiographic characteristics of patients with ACS-like myocarditis and acute myocardial infarction



Methods – study population

- Retrospective analysis of consecutive patients with acute myocarditis between Sep. 2002 and May 2012
- Diagnosis of ACS-like myocarditis was based on the combination of suggestive clinical setting and cardiac MRI findings consistent with myocarditis
- Comprehensive demographic, clinical, laboratory and imaging data were gathered to a registry



Methods – study population

- The control group consisted of consecutive patients hospitalized in ICCU with first non-ST elevation myocardial infarction
- No evidence of prior structural heart disease including any degree of left ventricular hypertrophy (LVH)
- Elderly NSTEMI patients (age>65) were excluded to achieve a minimal degree of matching between the cohort populations



Patient Characteristics

	Myocarditis (n=101)	NSTEMI (n=122)	P Value
Age (mean, y)	34	52.75	p<0.001
Gender (male)	95%	89%	
Diabetes Mellitus	4.90%	16.50%	p<0.001
Hypertension	7.80%	19.70%	
Dyslipidemia	15.70%	51.20%	p<0.001
Smoker	26.50%	55.10%	p<0.001
BMI (mean, kg/m ²)	25.9	27.07	
Family Hx of CAD	12.70%	41.70%	p<0.001
Coronary Angiography	41.60%	100%	

Myocarditis Patients

101 pts.

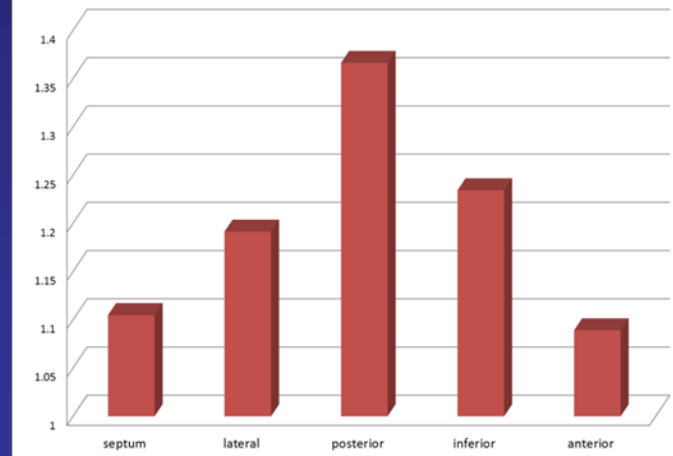
45 pts. (44.6%)
WMA

56 pts. (55.4%)
No WMA

37 pts. (82.2%)
Localized WMA

8 pts. (17.8%)
Diffuse WMA

Myocarditis - Regional Wall Motion Abnormality Distribution



NSTEMI Patients
122 pts.

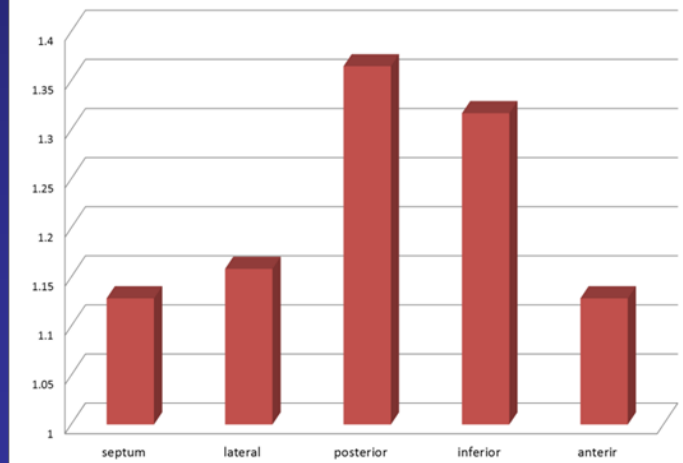
72 pts. (59.0%)
WMA

50 pts. (41.0%)
No WMA

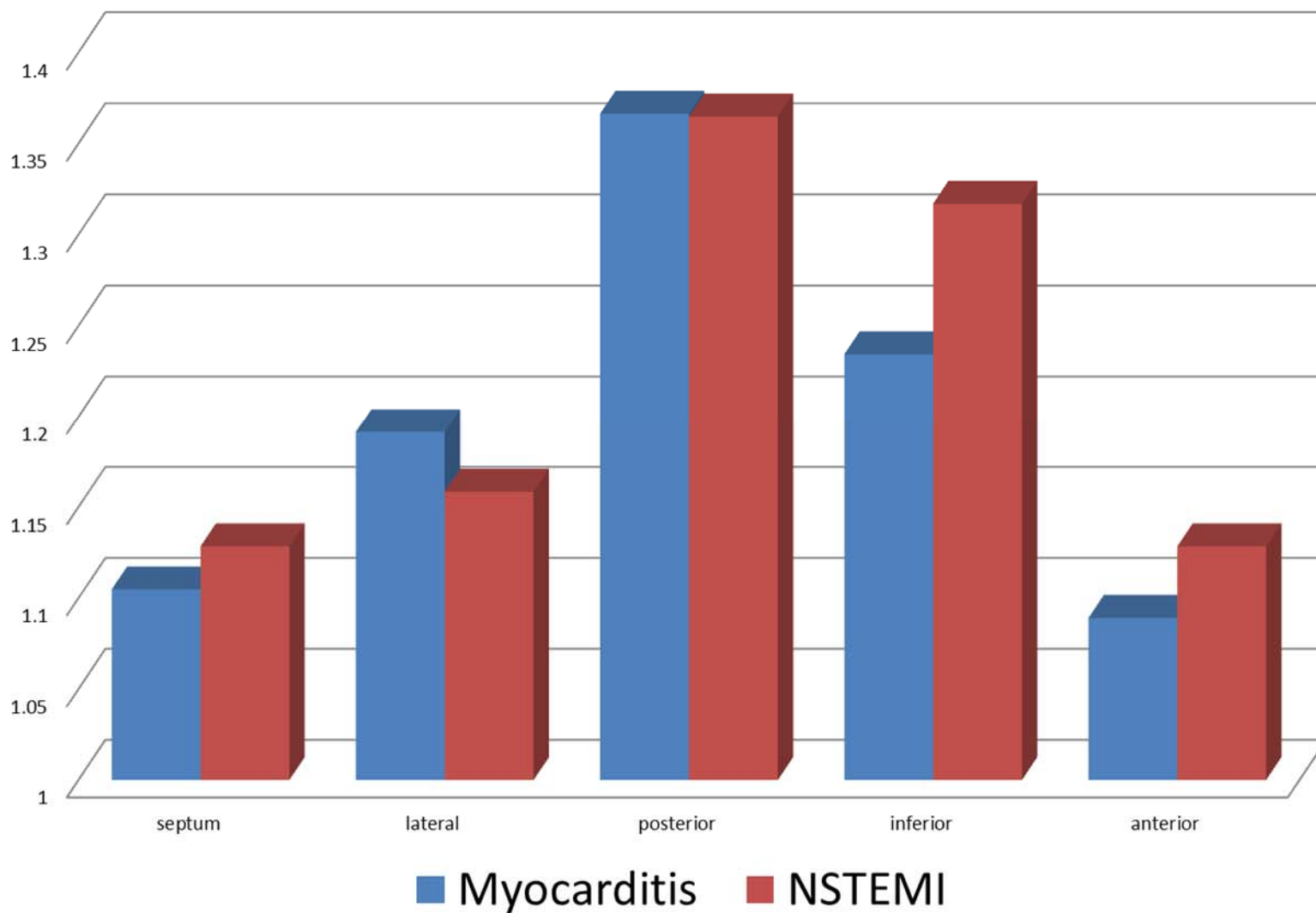
69 pts. (97.2%)
Localized WMA

2 pts. (2.8%)
Diffuse WMA

NSTEMI - Regional Wall Motion Abnormality



Regional Wall Motion Abnormality Distribution



Results

- Echocardiographic regional WMA were reported, yet global hypokinesis, is still considered as a common echo presentation of myocarditis
- We show that diffuse LV dysfunction is more prevalent in myocarditis than MI (7.9% vs. 1.6%, $p=0.013$)
- Yet regional WMA is a common finding, shown in 36.6% of all patients and 82% of patients with WMA

Results

<i>Indices of Myocardial Involvement</i>	Myocarditis (n=101)	NSTEMI (n=122)	P Value
EF (%)	54	54.5	NS
Wall Motion Score Index	1.2	1.2	NS
Peak CPK	648.5	433	p=0.004
Peak cTl	14.5	5.7	p<0.001
<i>Clinical Outcomes</i>			
Pulmonary congestion & Cardiogenic shock	1.98%	0.80%	NS
Ventricular Arrhythmia	7.92%	3.30%	p=0.07

Limitations

- Retrospective analysis
- Single center
- No long term follow up
- Not known viral ethiology



Conclusions

- Localized regional WMA prevalent in patients with ACS-like myocarditis, emphasizing the diagnostic dilemma
- Interestingly, we show higher cardiac biomarkers elevation for the same extent of myocardial dysfunction in patients with acute myocarditis compared to myocardial infarction





Thank you...



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Tel Hashomer



Myocarditis - Regional Wall Motion Abnormality Distribution

