Quando la pericardite acuta o la miocardite mettono in seria difficoltà la diagnosi; come evitare la coronarografia in acuto

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Disclosures

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Pericardite ⟺ miopericardite ⟺ perimiocardite

Pericardite epistenocardica

TROPONINA

Miocardite

SCA

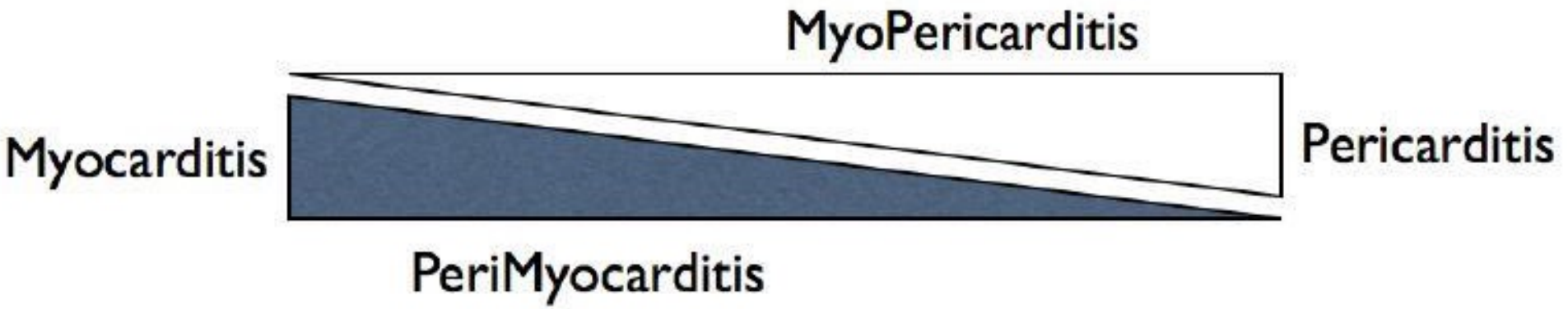


Table 4 Definitions and diagnostic criteria for pericarditis (see text for explanation)

Pericarditis	Definition and diagnostic criteria
Acute	Inflammatory pericardial syndrome to be diagnosed with at least 2 of the 4 following criteria: (1) pericarditic chest pain 98% (2) pericardial rubs 33% (3) new widespread ST-elevation or PR depression on ECG 40-50% (4) pericardial effusion (new or worsening) 60% Additional supporting findings: - Elevation of markers of inflammation (i.e. C-reactive protein, erythrocyte sedimentation rate, and white blood cell count); - Evidence of pericardial inflammation by an imaging technique (CT, CMR).
Incessant	Pericarditis lasting for >4–6 weeks but <3 months without remission.
Recurrent	Recurrence of pericarditis after a documented first episode of acute pericarditis and a symptom-free interval of 4–6 weeks or longer[a].
Chronic	Pericarditis lasting for >3 months.

NB: probability to have Pain + typical ECG+ pericardial effusion:
0,98x0,5x0,6= 0,29
= 29%

Acute pericarditis and Pericardial effusions are two distinct conditions, often but NOT always overlapping

N Engl J Med. 2013;369:1522-8
Lancet. 2014;383:2232-7
Ann Intern Med. 2011;155:409-14

MYOPERICARDITIS: 20-30%

- acute pericarditis
- PLUS elevated troponin
- WITHOUT newly developed focal or diffuse impairment of left ventricular function in ECHO or CMR.
- A primarily pericarditic syndrome with minor myocardial involvement, which describes the majority of combined pericarditis and myocarditis cases encountered in clinical practice.

Perimyocarditis

- acute pericarditis
- PLUS elevated troponin
- PLUS newly developed focal or diffuse impairment of left ventricular function in ECHO or CMR.

Confirmation will require endomyocardial biopsy according to the Myocardial and Pericardial Diseases Working Group position statement (Caforio).
However, the benign prognosis of patients with suspected concomitant myocardial involvement in predominant pericarditis (myopericarditis), with absent or mild left ventricular dysfunction, and no symptoms of heart failure does not clinicallyrequire endomyocardial biopsy (AHA, ACC, ESC) (Cooper)

Good Prognosis for Pericarditis With and Without Myocardial Involvement

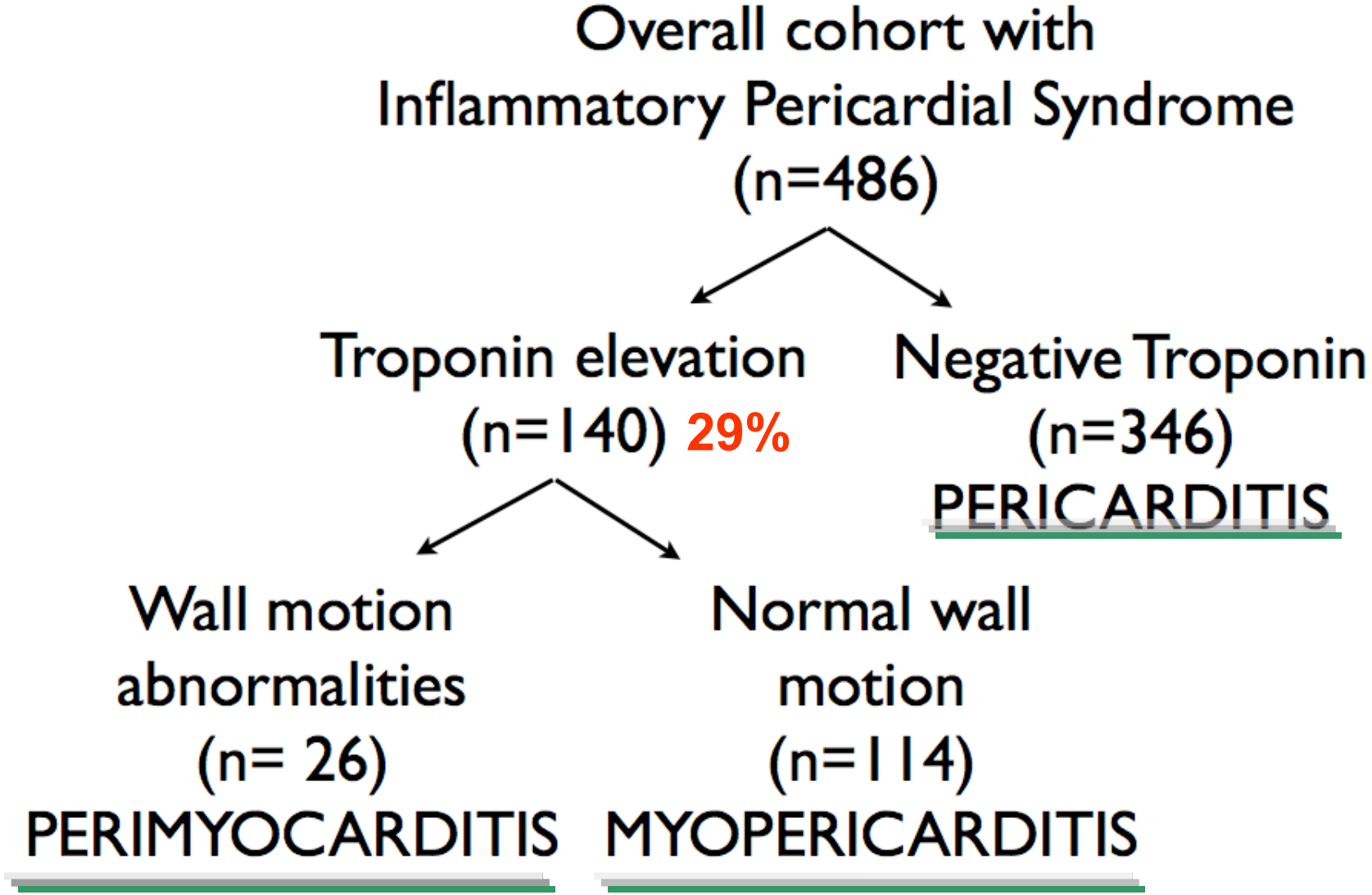
Results From a Multicenter, Prospective Cohort Study

Massimo Imazio, MD; Antonio Brucato, MD; Andrea Barbieri, MD; Francesca Ferroni, MD; Silvia Maestroni, MD; Guido Ligabue, MD; Alessandra Chinaglia, MD; Davide Cumetti, MD; Giovanni Della Casa, MD; Federica Bonomi, MD; Francesca Mantovani, MD; Paola Di Corato, MD; Roberta Lugli, MD; Riccardo Faletti, MD; Stefano Leuzzi, MD; Rodolfo Bonamini, MD; Maria Grazia Modena, MD; Riccarc

(*Circulation*. 2013;128:42-49.)

Methods and Results—A total of 486 patients (median age, 39 years; range, 18–83 years; 300 men) with acute pericarditis or a myopericardial inflammatory syndrome (myopericarditis/perimyocarditis; 85% idiopathic, 11% connective tissue disease or inflammatory bowel disease, 5% infective) were prospectively evaluated from January 2007 to December 2011. The diagnosis of acute pericarditis was based on the presence of 2 of 4 clinical criteria (chest pain, pericardial rubs, widespread ST-segment elevation or PR depression, and new or worsening pericardial effusion). Myopericardial inflammatory involvement was suspected with atypical ECG changes for pericarditis, arrhythmias, and cardiac troponin elevation or new or worsening ventricular dysfunction on echocardiography and confirmed by cardiac magnetic resonance. After a median follow-up of 36 months, normalization of left ventricular function was achieved in >90% of patients with myopericarditis/perimyocarditis. No deaths were recorded, as well as evolution to heart failure or symptomatic left ventricular dysfunction. Recurrences (mainly as recurrent pericarditis) were the most common complication during follow-up and were recorded more frequently in patients with acute pericarditis (32%) than in those with myopericarditis (11%) or perimyocarditis (12%; $P<0.001$). Troponin elevation was not associated with an increase in complications.

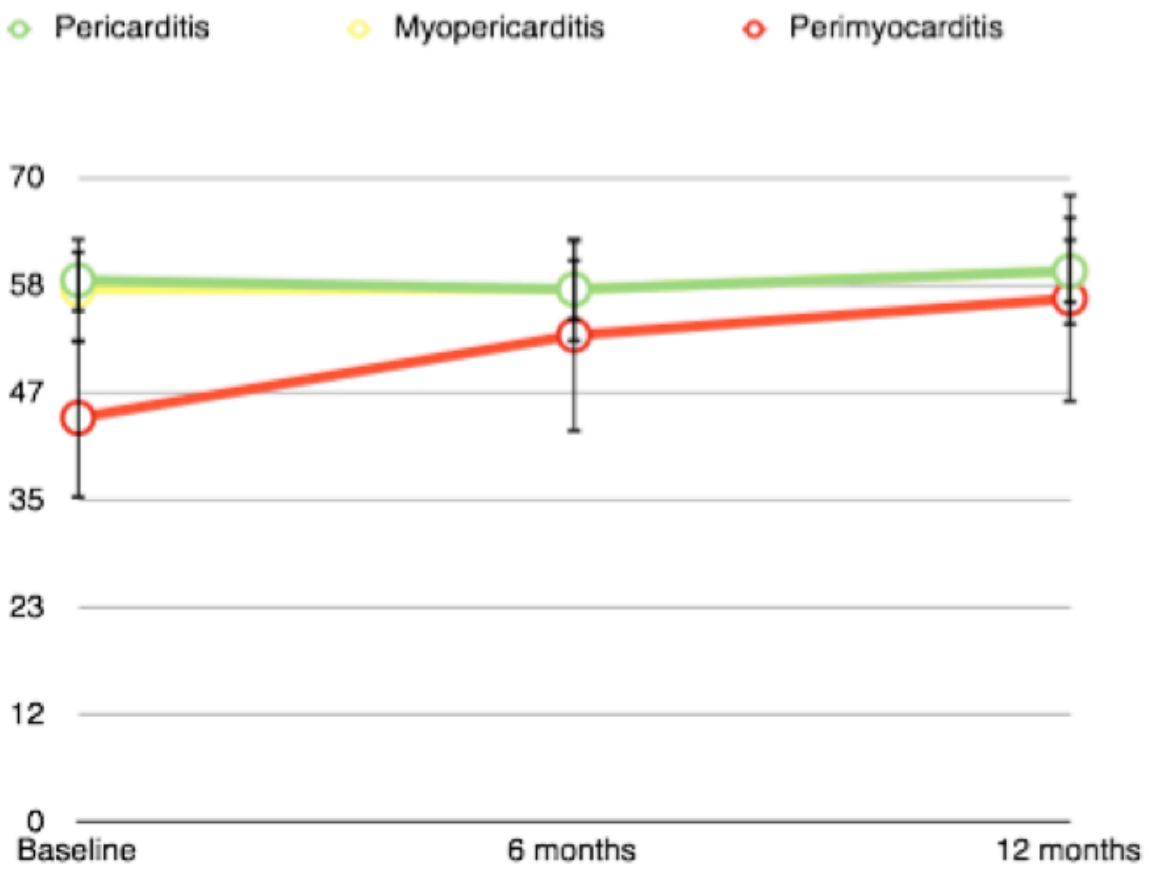
Conclusions—The outcome of myopericardial inflammatory syndromes is good. Unlike acute coronary syndromes, troponin elevation is not a negative prognostic marker in this setting. (*Circulation*. 2013;128:42-49.)


Overall cohort with
Inflammatory Pericardial Syndrome
(n=486)
Troponin elevation
(n=140) 29%
Negative Troponin
(n=346)
PERICARDITIS
Wall motion
abnormalities
(n= 26)
PERIMYOCARDITIS
Normal wall
motion
(n=114)
MYOPERICARDITIS

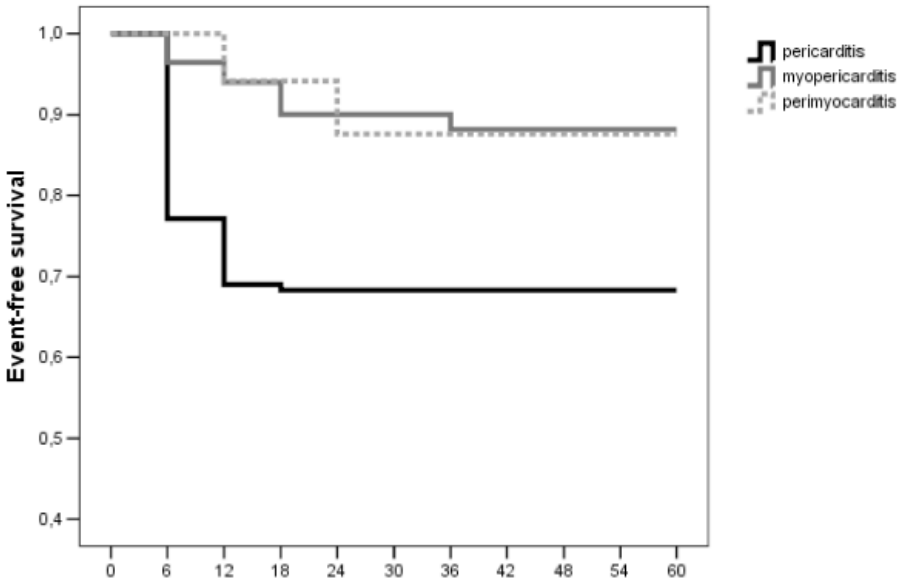
The initial presentation mimicked a ST-segment–elevation myocardial infarction in 87 of 114 patients (76.3%) with myopericarditis, in 20 of 26 patients (76.9%) with perimyocarditis, and in only 8 of 346 patients (2.3%; $P<0.001$) with simple acute pericarditis. All these patients underwent coronary angiography that excluded the presence of significant coronary artery disease. Acute myocardial infarction in the absence of significant coronary artery disease was also excluded by CMR.

The origin of disease (Table 2) was similar in different myopericardial subgroups (idiopathic in 84%–85%, infectious in 4%–5%, and connective tissue disease or inflammatory bowel disease in 10%–12%).

Evolution of mean values of left ventricular ejection fraction (LVEF) in study subgroups from baseline to 12 months. Mean values ± SD



Recurrence-free survival in different sub-groups of inflammatory myopericardial syndromes.



Patients at risk:										
Pericarditis:										
346	306	234	169	143	110	98	81	75	36	22
Myopericarditis:										
114	109	94	78	65	59	50	36	21	16	12
Perimyocarditis:										
26	26	24	20	18	14	7	5	3	2	2

Myocarditis (WHO)

- Inflammatory disease of the myocardium diagnosed by established histological*, immunological and immunohistochemical criteria**.
- *N.B. established histological Dallas criteria defined as follows: 'histological evidence of inflammatory infiltrates within the myocardium associated with myocyte degeneration and necrosis of nonischaemic origin"
- Myocarditis presents in many different ways, ranging from mild symptoms of chest pain and palpitations associated with transient ECG changes to life-threatening cardiogenic shock and ventricular arrhythmia

Universal definition of myocardial infarction

- Cardiomyocyte necrosis in a clinical setting consistent with acute ischaemia: increase and/or decrease of a cardiac biomarker, preferably high-sensitivity cardiac troponin, with at least one of the following:
- Symptoms of ischaemia.
- New or presumed new significant ST-T wave changes or left bundle branch block on 12-lead ECG.
- Development of pathological Q waves on ECG.
- Imaging evidence of new or presumed new loss of viable myocardium or regional wall motion abnormality.
- Intracoronary thrombus detected on angiography or autopsy.

Myopericarditis

Recommendations	Class	Level
In cases of pericarditis with suspected associated myocarditis, coronary angiography (according to clinical presentation and risk factor assessment) is recommended in order to rule out acute coronary syndromes.	I	C
Cardiac Magnetic Resonance (CMR) is recommended for the confirmation of myocardial involvement.	I	C
Hospitalization is recommended for diagnosis and monitoring in patients with myocardial involvement.	I	C
Rest and avoidance of physical activity beyond normal sedentary activities is recommended in non-athletes and athletes with myopericarditis for a duration of 6 months.	I	C
Empirical anti-inflammatory therapies (lowest efficacious doses) should be considered to control chest pain.	IIa	C

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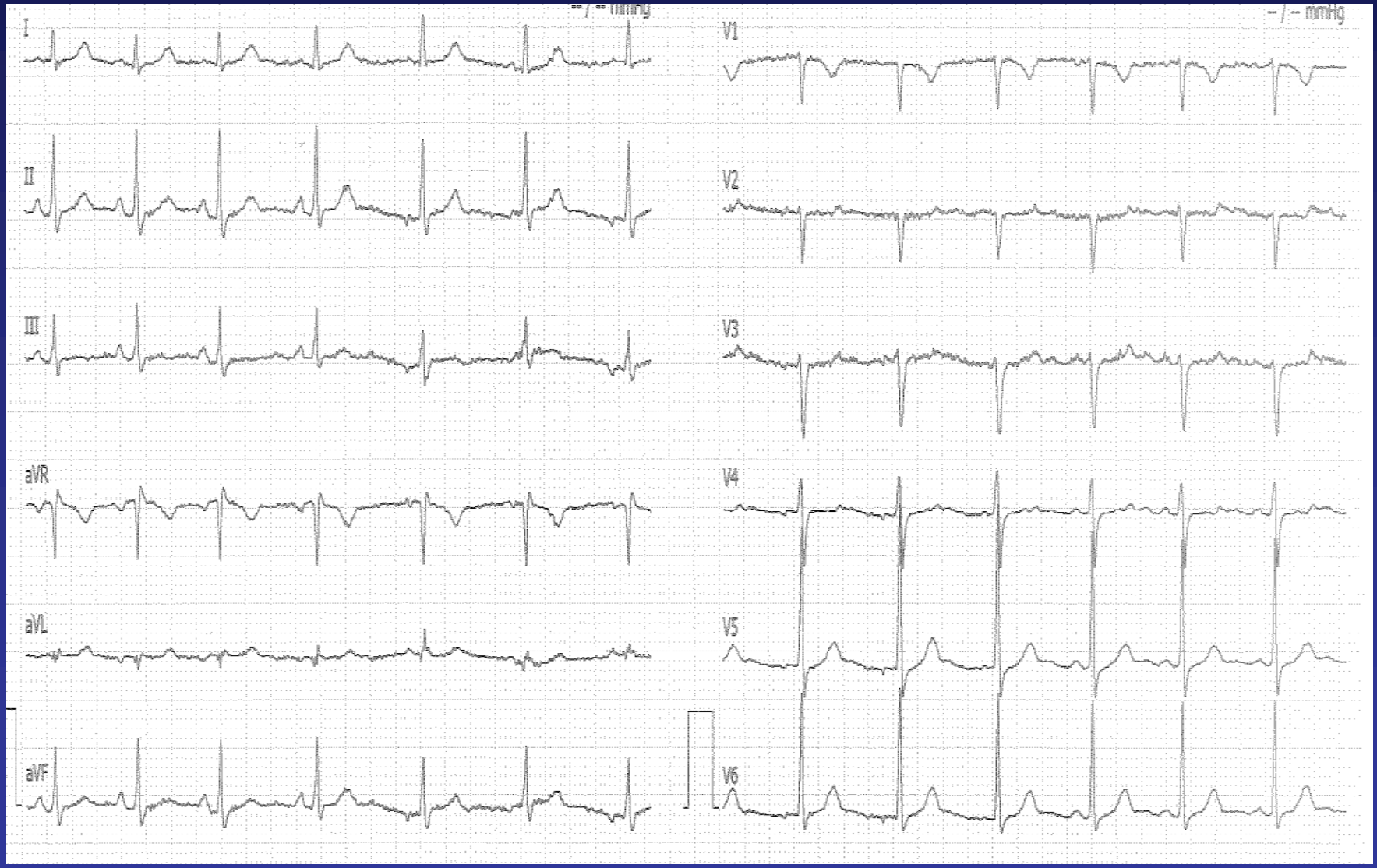
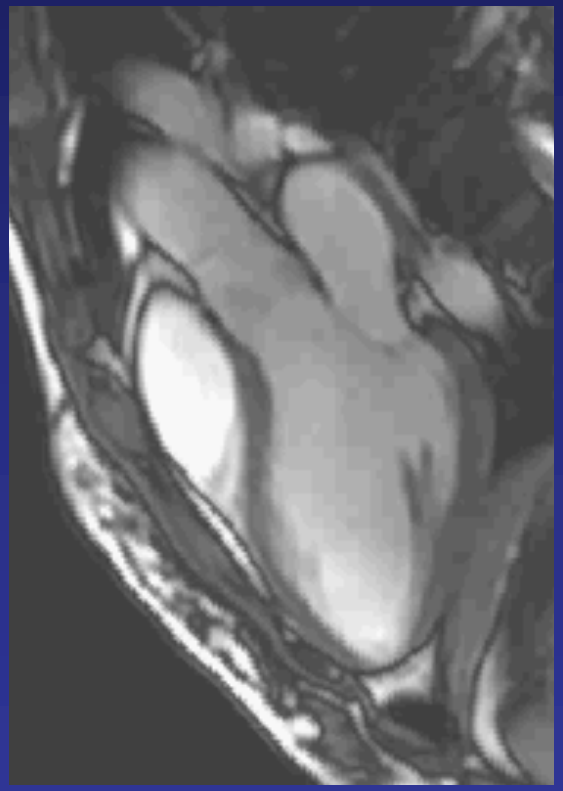
Probabilità pre-test e post-test

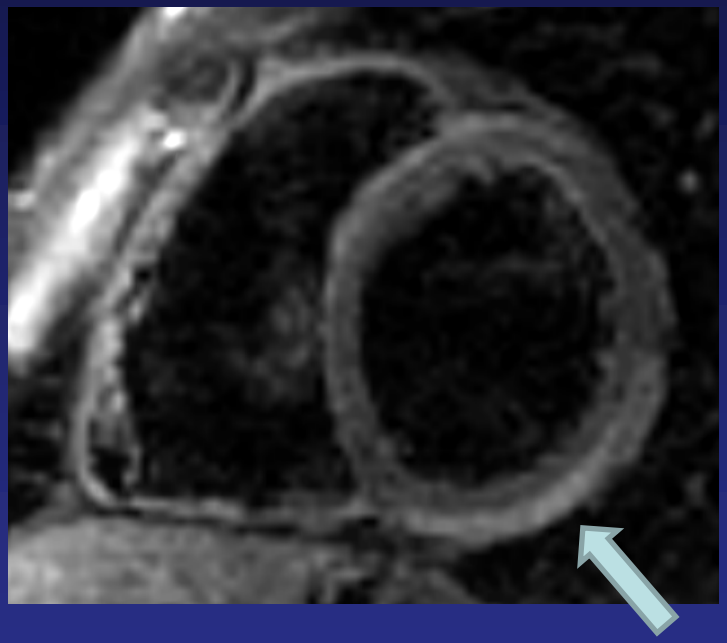
- Quadri tipici/atipici
- Nel dubbio: CORONAROGRAFIA
- Utile CARDIO RM: es. nel corso del ricovero

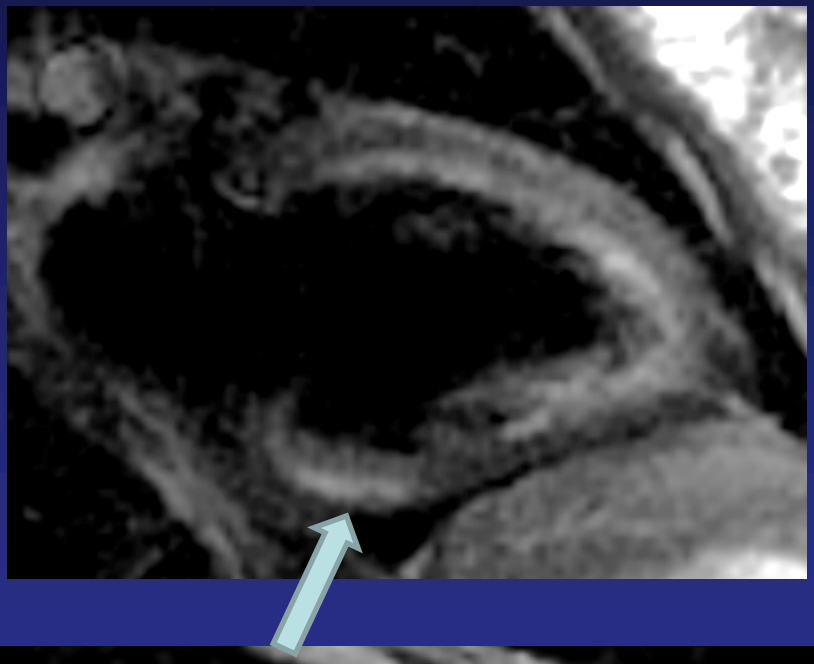
23 yo Female. CP. TnI 22,3 ng/ml (nv < 0,07) CRP 8,3 mg/dl. Echo: normal

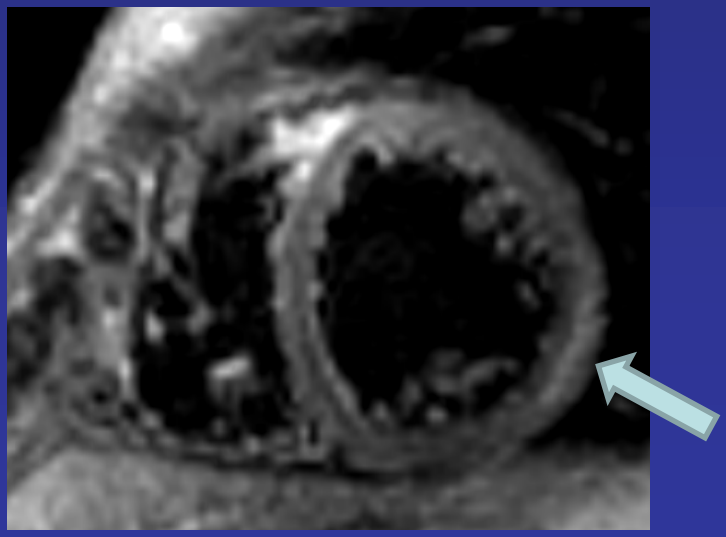


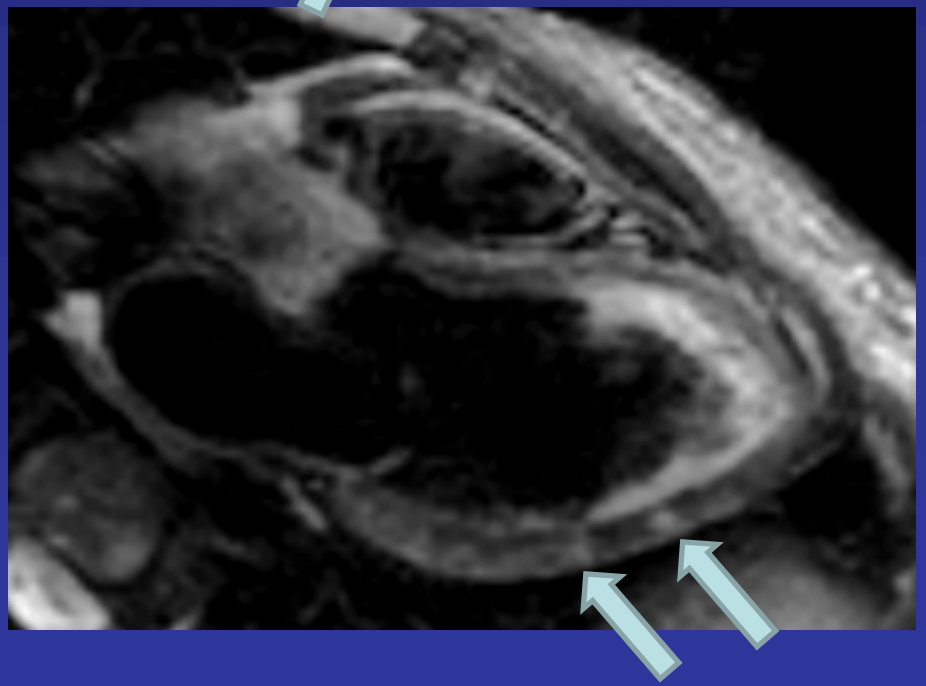
Kindly provided by Gianni Quarta

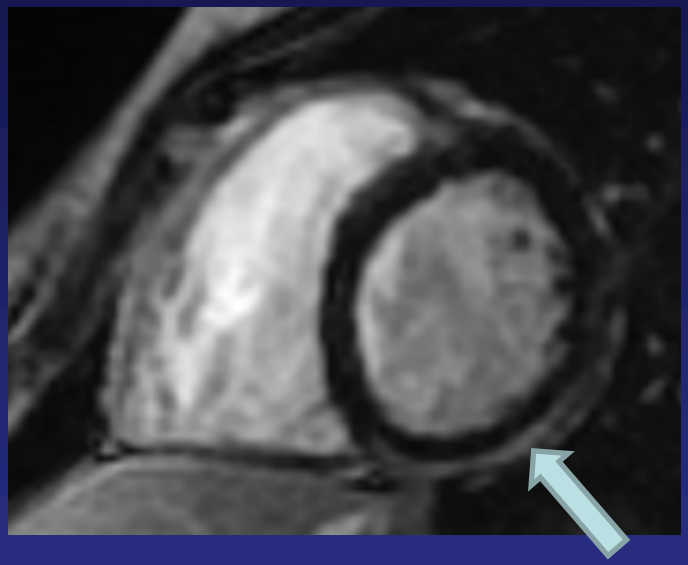


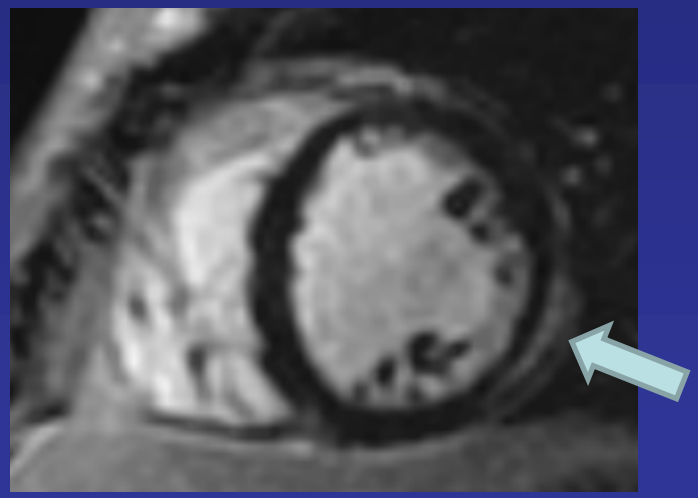


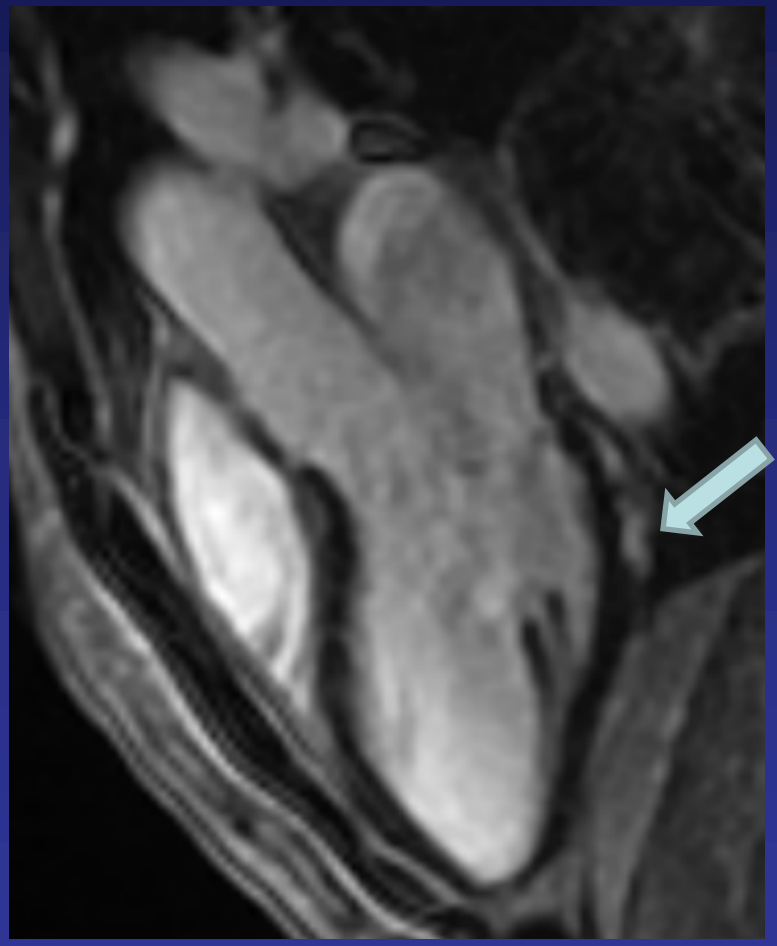




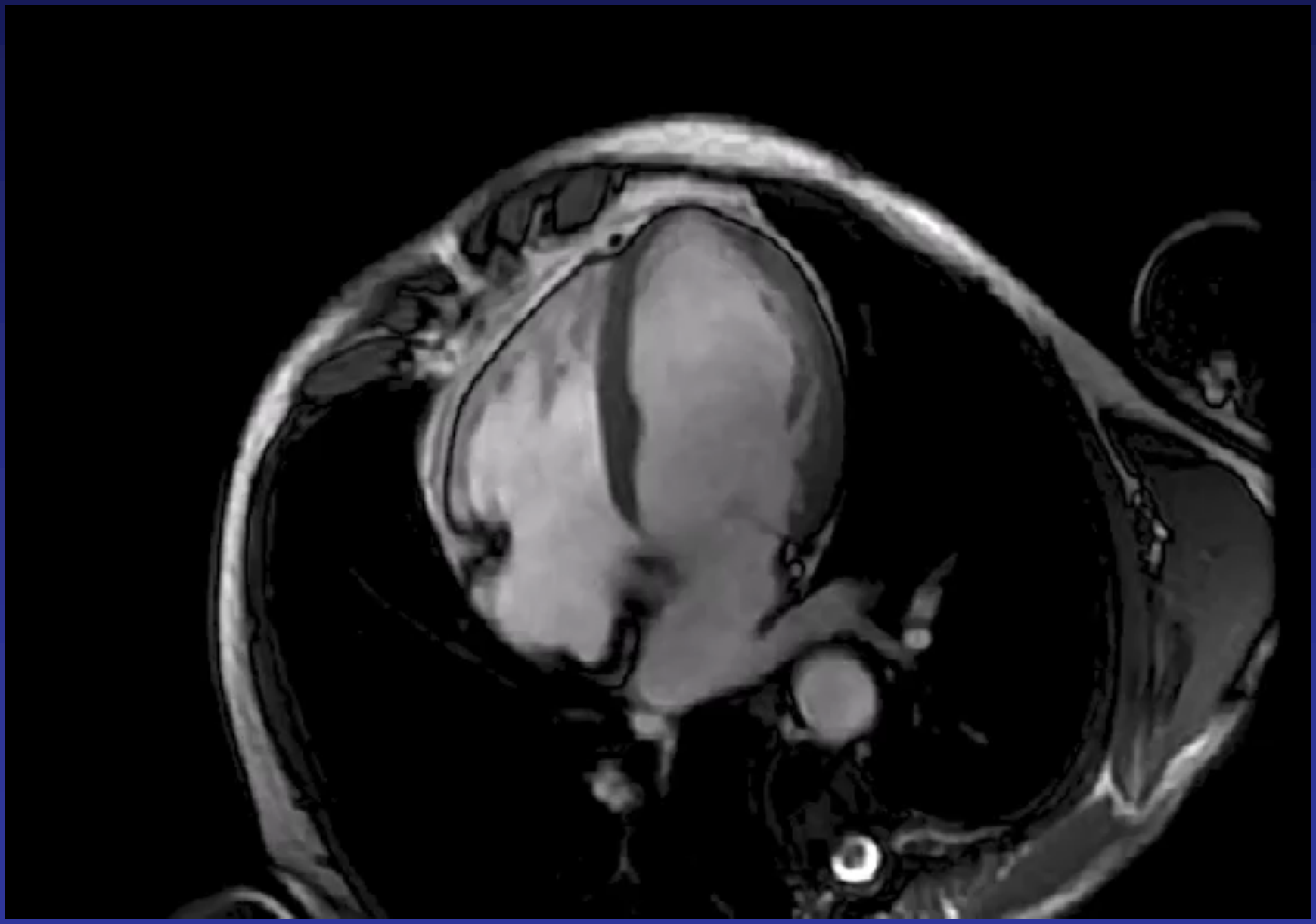


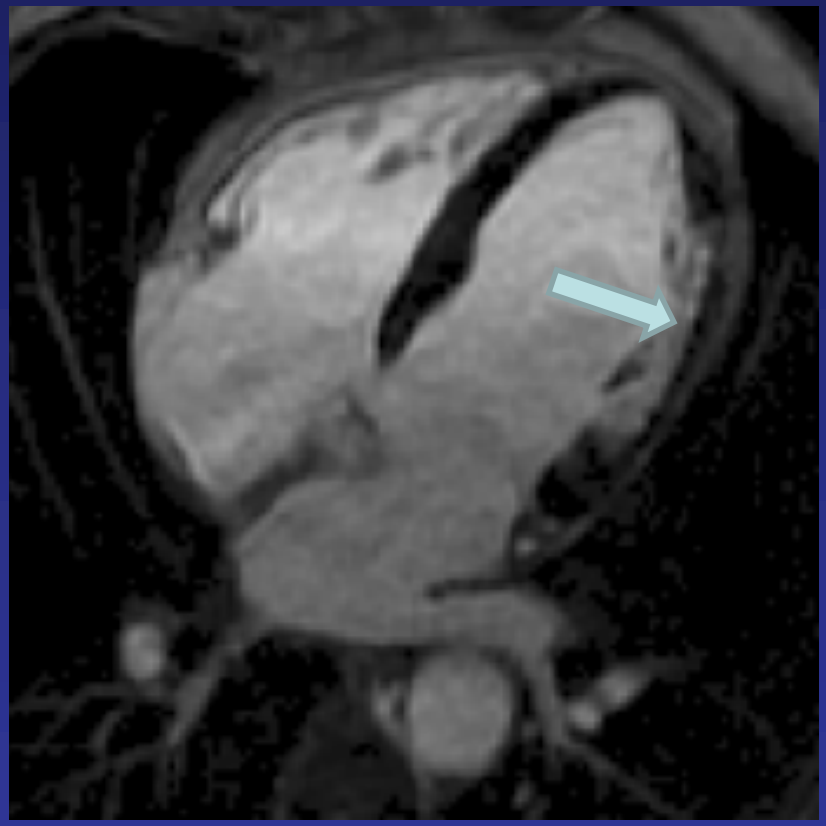


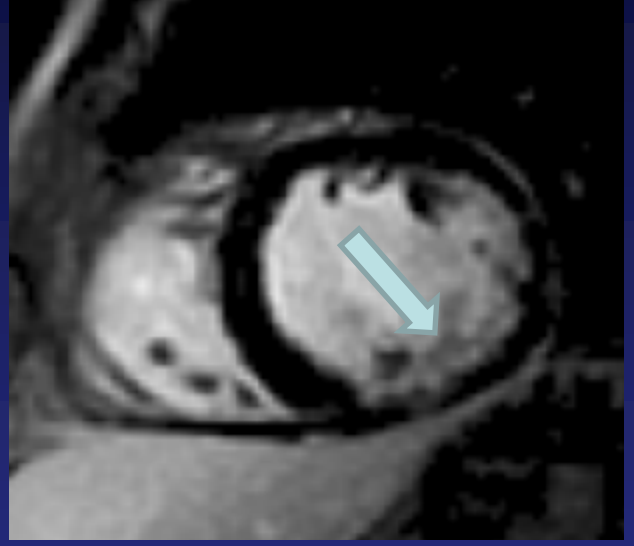


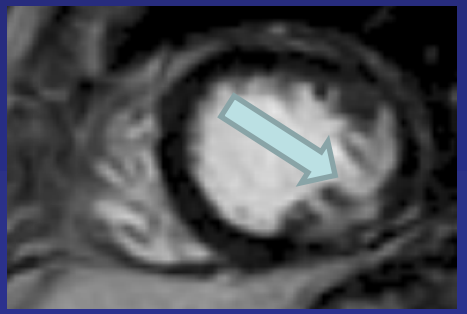


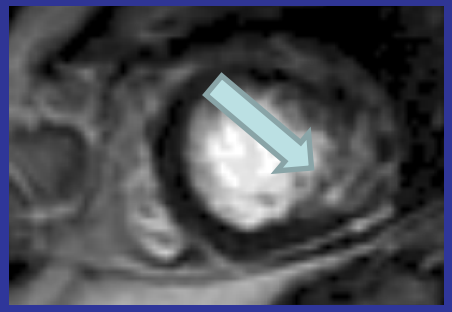
59 ♂ 01/2013 pericarditis; 03/2015 pericarditis; 05/2015: troponin positive (18 ng/dl) CP, increased CRP, ECG stable ?myocarditis

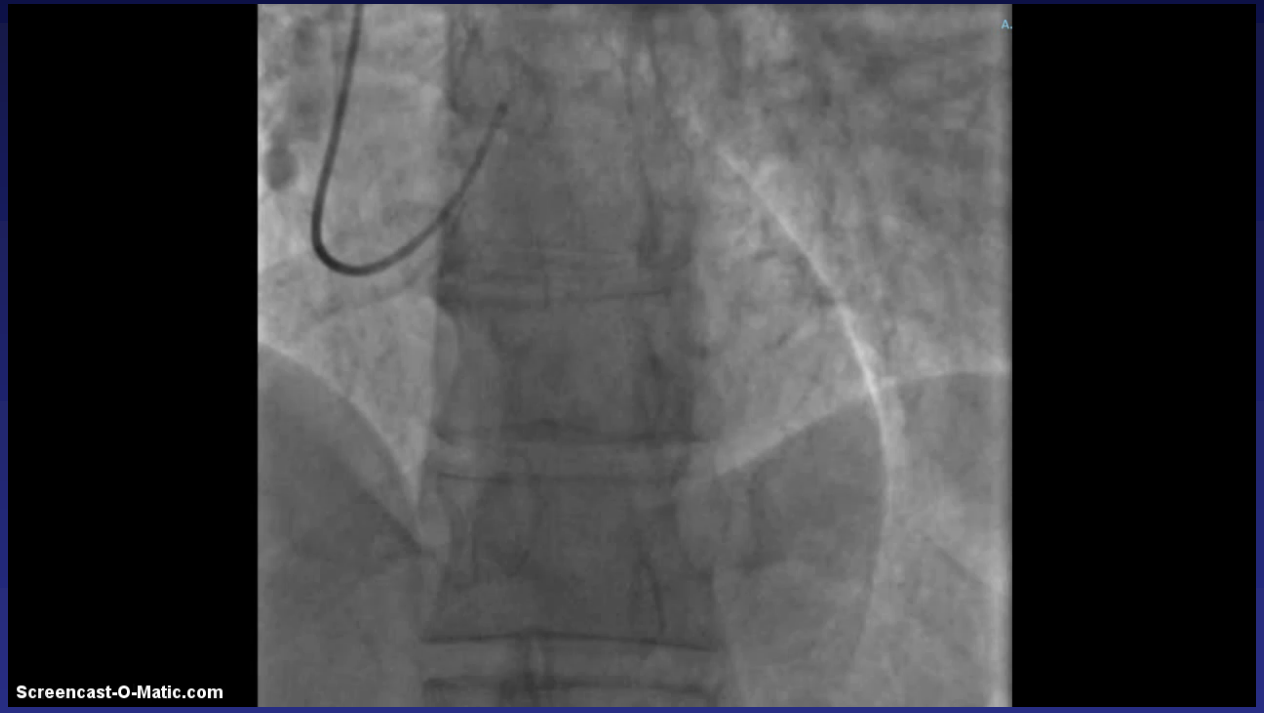








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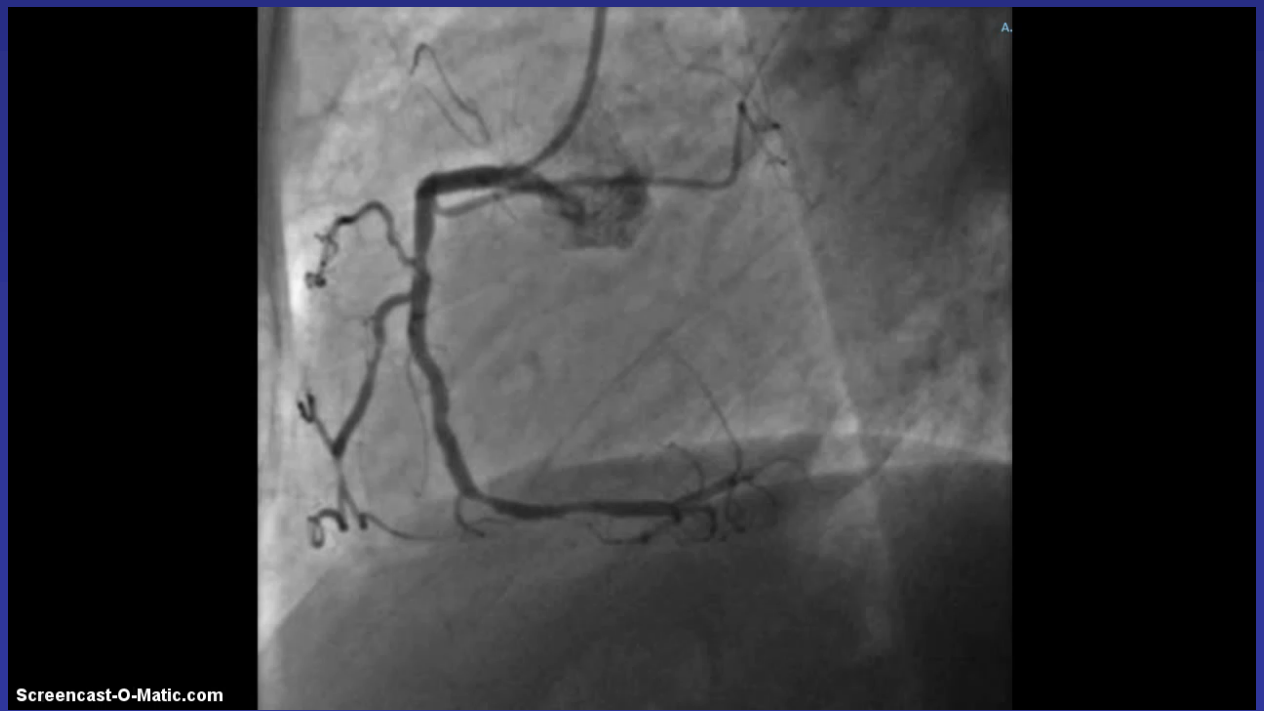
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DOLORE

- Prolungato (ore-giorni)/ Breve (decine di minuti/ore
- Accentuato oppure NO da posizione e respiro

CORONAROGRAFIA?

- 1. DOLORE tipico/non tipico (per pericardite o SCA)
- 2. TROPONINA elevata/non elevata
- 3. ANOMALIE CINESI diffuse o segmentarie sì/no

Se 2 di queste 3 alterate: CORONARO

TERAPIA se dubbio di ischemia

- ASA a qualunque dose
- Naprossene 500 x 2
- Sì Colchicina
- Evitare Ibuprofene, indometacina e tutti gli altri FANS.
- TARATA su SINTOMI e PCR:
- ++++ in PERICARDITE
- +- in Miocardite
- +- in SCA

Grossi problemi? NO

- Vari paz che fanno CORO neg, ma difficile contestare la opportunità di tale esame
- 1. DOLORE/ 2. TROPONINA/ 3.WALL MOTION ABN-LVEF:
- Pericardite con troponina NEG: non ricordo paz che abbiano fatto CORO.
- (Mio)pericarditi con troponina elevata: sì, CORO circa nel 50%; dolore meno tipico per pericardite, più simil-ischemico (breve, non accentuato da posizione o respiro)

Conclusioni

- Non ho visto particolari problemi o difformità di comportamenti per CORONAROGRAFIE nei paz con s. perimiocardiche infiammatorie e TROPONINA elevata.
- Viceversa penso si facciano troppo pericardiocentesi e recentemente BEM

BEM

Histopathological confirmation of the presence of concomitant inflammatory myocardial involvement requires an endomyocardial biopsy (EMB), but this is usually not performed in patients with no or mild LV systolic dysfunction and no symptoms of heart failure according to the indications for EMB issued by the American Heart Association/American College of Cardiology/European Society of Cardiology in a scientific statement.[17] In this study, the following indications were considered for EMB: subacute or acute symptoms of heart failure refractory to standard management, substantial worsening of the ejection fraction despite optimized pharmacological treatment, development of hemodynamically significant arrhythmias, heart failure with concurrent rash, fever or peripheral eosinophilia, history of collagen vascular disease, or suspicion of possible giant-cell myocarditis (young age, new subacute heart failure, or progressive arrhythmias without an apparent cause).

BEM

- PRO: Caforio et al; European Society of CardiologyWorking
- Group on Myocardial and Pericardial Diseases. Current state of knowledge on aetiology, diagnosis, management, and therapy of myocarditis: a position statement of the European Society of Cardiology Working Group on Myocardial and Pericardial Diseases. Eur Heart J 2013;34:2636–2648.

- CONS: Cooper LT, et al. The role of endomyocardial biopsy in the management of cardiovascular disease: a scientific statement from the American Heart Association, the American College of Cardiology, and the European Society of Cardiology. Endorsed by the Heart Failure Society of America and theHeart Failure Association of the European Society of Cardiology. J Am Coll Cardiol 2007;50:1914–1931

Pericardiocentesi in s. perimiocardiche infiammatorie

- "è come buttare benzina sul fuoco" se non accompagnata da energica terapia anti-infiammatoria.
- Ibuprofene 600 x 3 è INADEGUATO: A. Klein 800 x 3
- Indometacina ev

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