



ΚΑΡΔΙΟΛΟΓΙΚΗ ΕΤΑΙΡΕΙΑ  
ΒΟΡΕΙΟΥ ΕΛΛΑΔΟΣ

# 22ο ΠΑΝΕΛΛΗΝΙΟ ΚΑΡΔΙΟΛΟΓΙΚΟ ΣΥΝΕΔΡΙΟ ΚΕΒΕ

ΑΥΤΟΜΑΤΟΣ ΔΙΑΧΩΡΙΣΜΟΣ ΣΤΕΦΑΝΙΑΙΩΝ ΑΓΓΕΙΩΝ ΣΕ ΜΕΣΗΛΙΚΗ  
ΓΥΝΑΙΚΑ ΜΕ ΕΙΚΟΝΑ ΟΞΕΟΣ ΣΤΕΦΑΝΙΑΙΟΥ ΣΥΝΔΡΟΜΟΥ ΣΕ  
ΕΠΑΡΧΙΑΚΟ ΝΟΣΟΚΟΜΕΙΟ: Η ΔΥΣΚΟΛΗ ΑΠΟΦΑΣΗ



Νικόλαος Γούλιανος  
Επιμελητής Α', Καρδιολογική Κλινική, ΓΝ Δράμας

# CASE PRESENTATION

## 53-year-old female

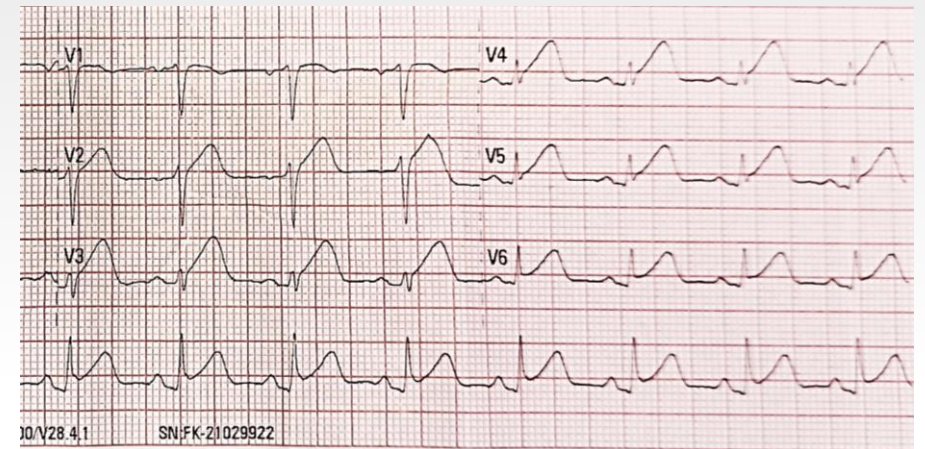
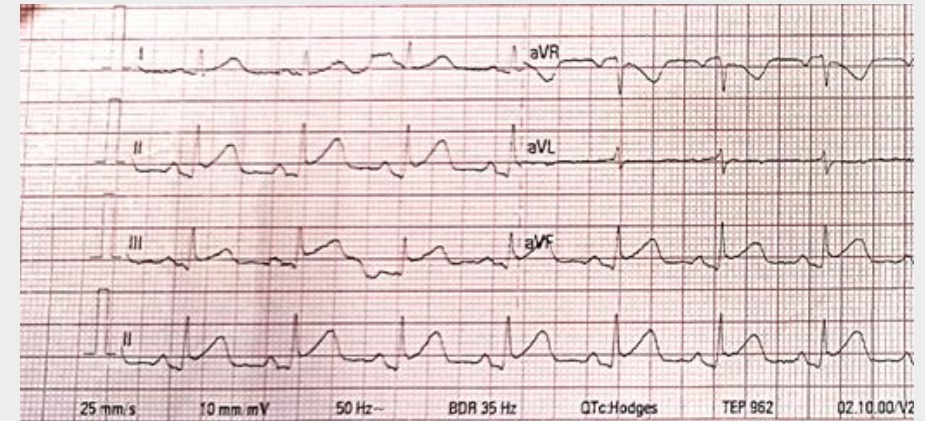
Sudden onset of severe central chest pain after intense emotional event

➤ Medical history: ∅

➤ Medication: ∅

On onset: BP= 135/85mmHg, spO2=97%, HR=100bpm, T=36,6 °C

## ECG



# CASE PRESENTATION

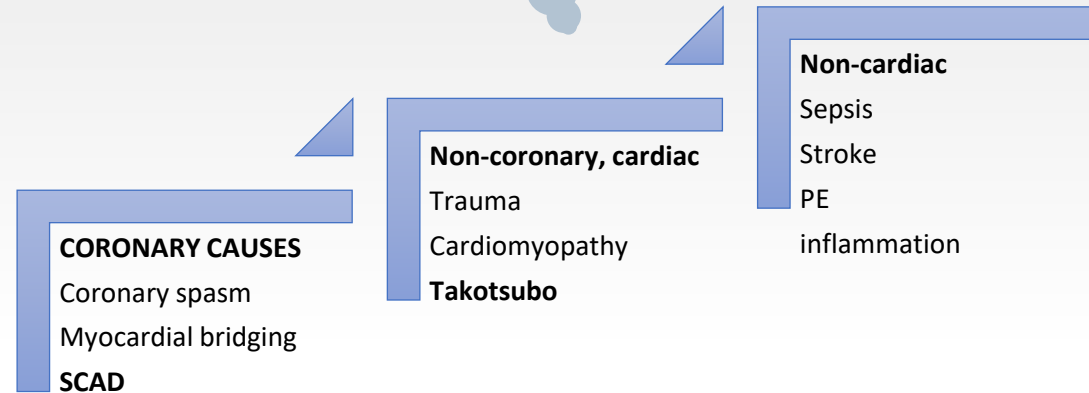


Acute  
aortic  
syndrome

Acute  
pericarditis

STEMI

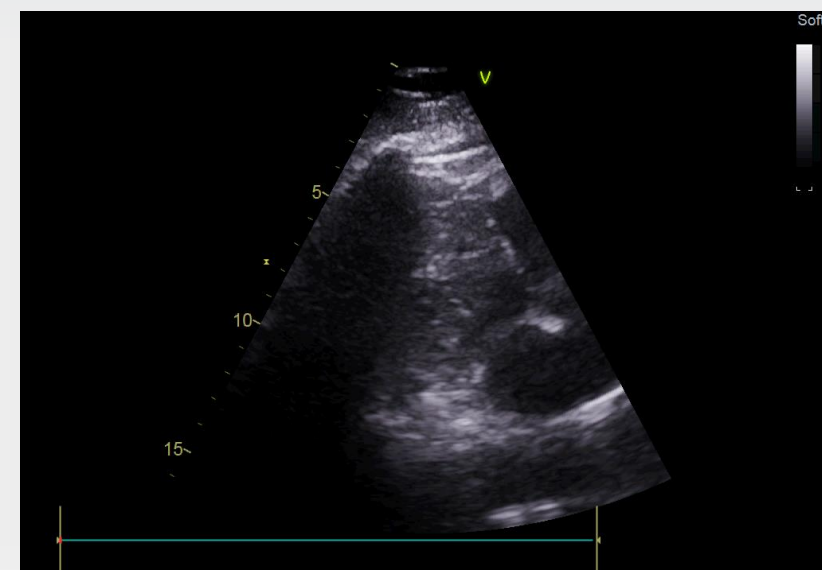
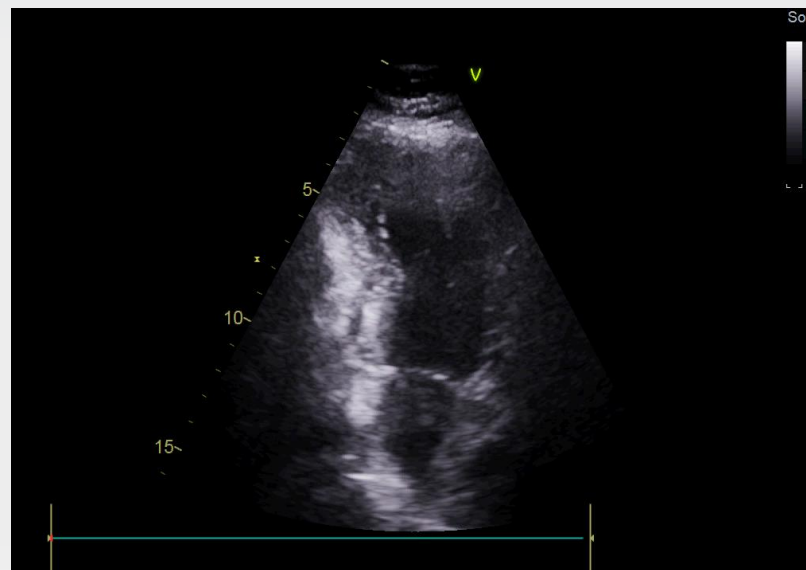
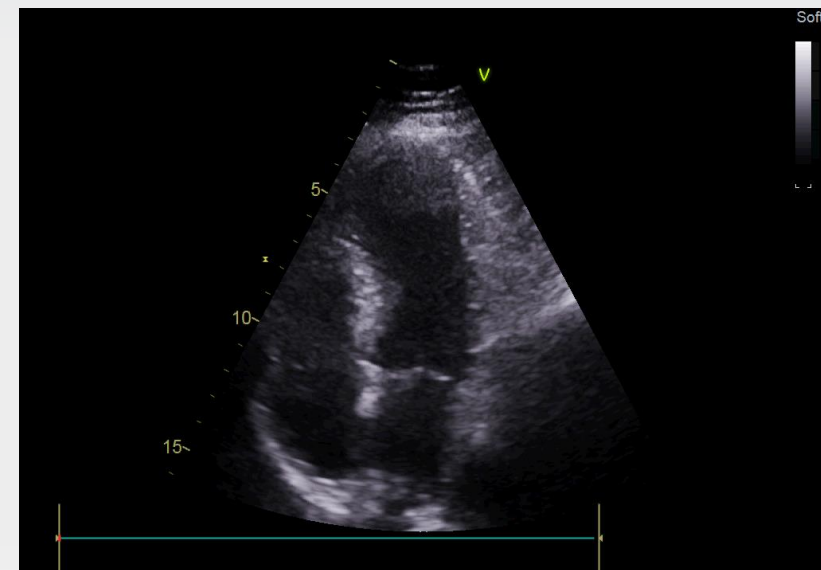
MINOCA



# CASE PRESENTATION

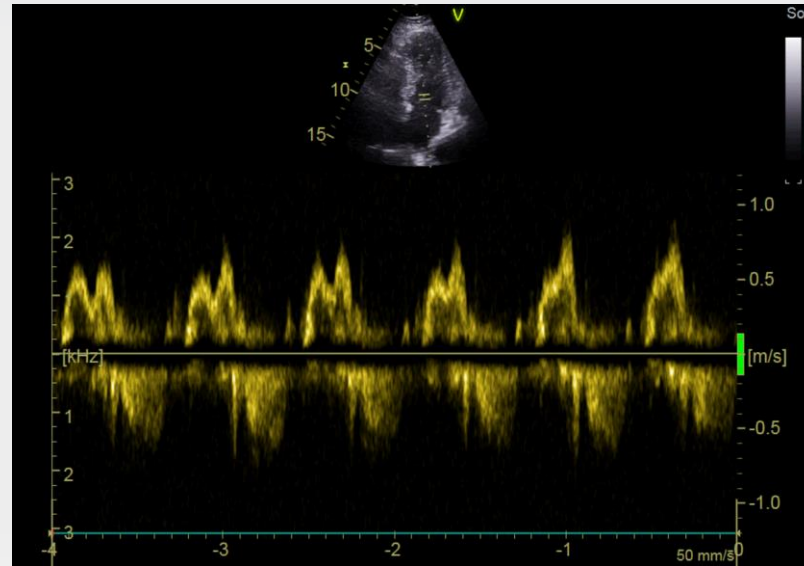
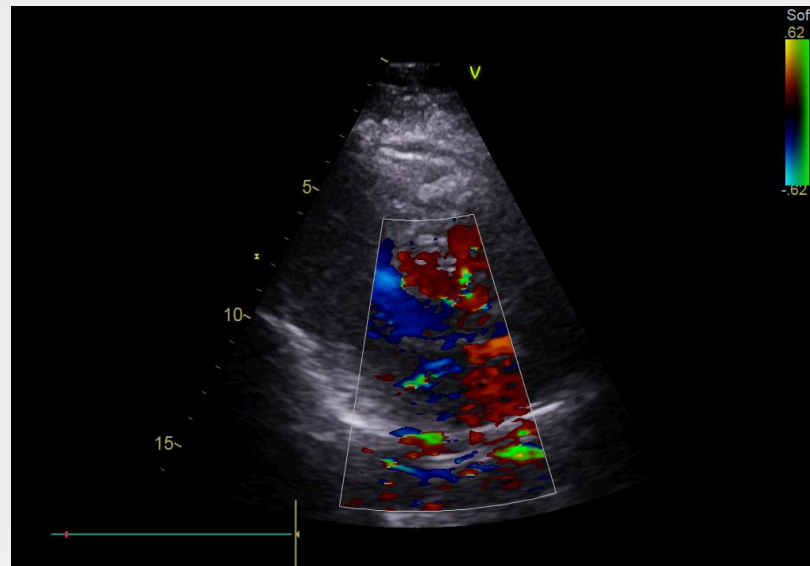
<b>WBC</b>	8960	4-10800
<b>Hb</b>	14,2 g/dl	11,5-16,5 g/dl
<b>Hct</b>	44,60 %	36-47 %
<b>PLTs</b>	382000	150-400000
<b>CPK</b>	125 U/L	26-140 U/L
<b>Trop hs I</b>	<b>14 pg/ml</b>	<9 pg/ml
<b>Crp</b>	1,91 mg/L	<7 mg/L
<b>D-dimers</b>	0,22 mg/L	<0,44 mg/L

# CASE PRESENTATION



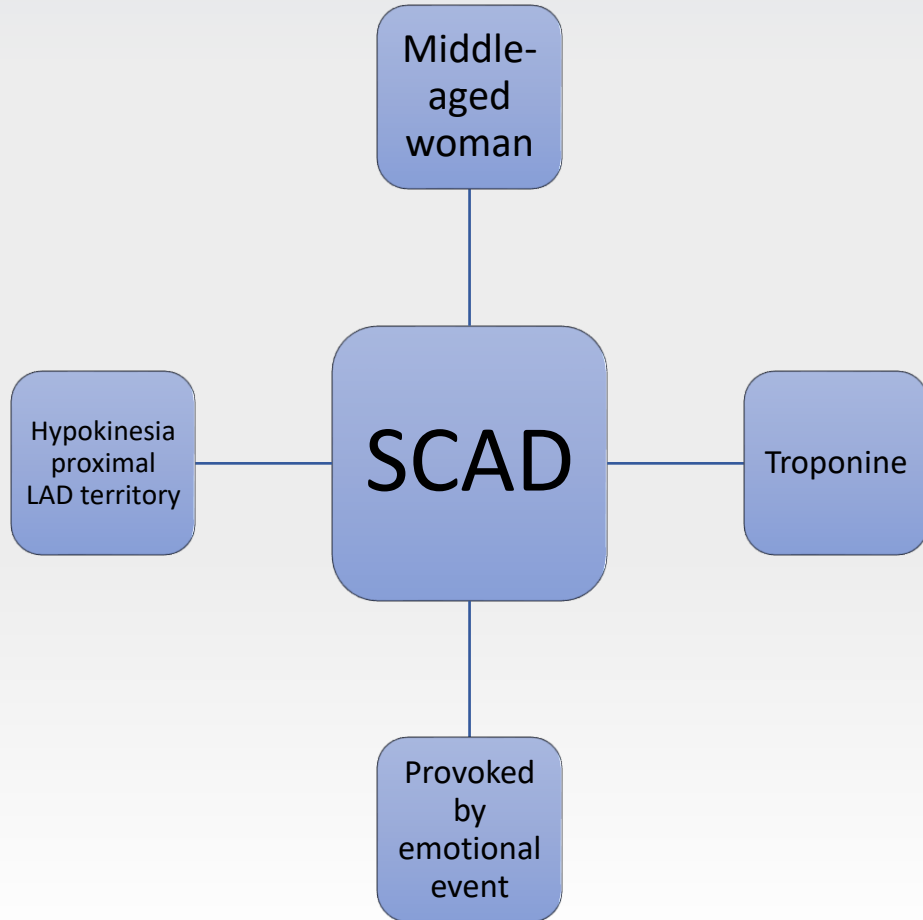
**Hyperkinetic basal segments, akinetic apex and hypokinetic apical segments**

# CASE PRESENTATION



**Normal dimensions, normal valve flows, normal aorta**

# CASE PRESENTATION



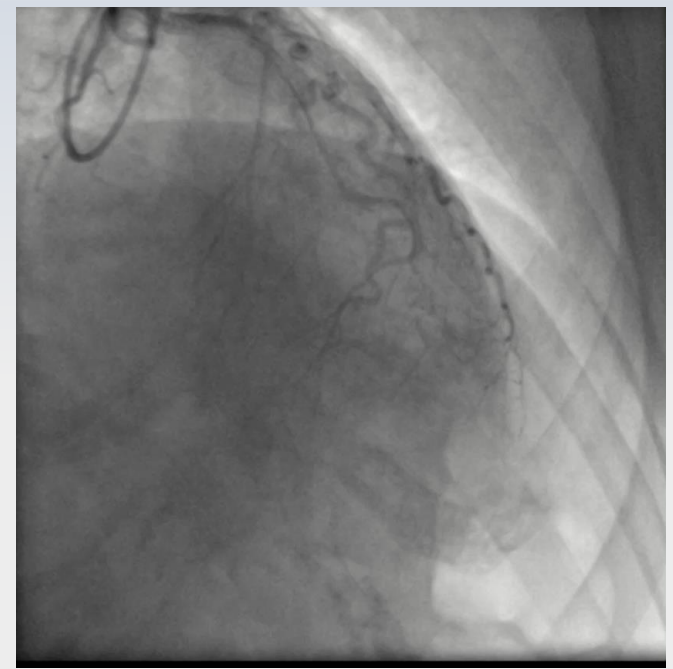
## **URGENT TRANSFER FOR RESCUE PCI**

- ✓ **NO thrombolysis**
- ✓ **Enoxaparin iv**
- ✓ **300mg ASA**
- ✓ **300mg clopidogrel**
- ✓ **Omeprazole iv**
- ✓ **Statin peros**

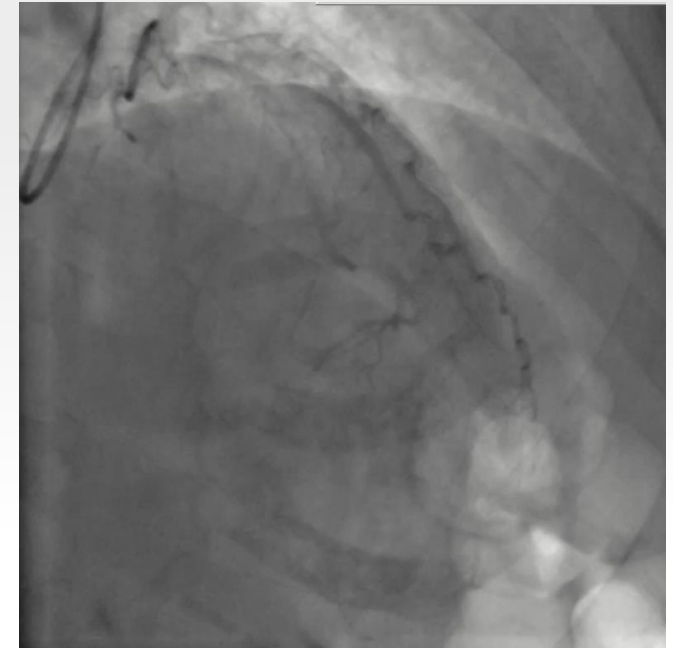
# CASE PRESENTATION



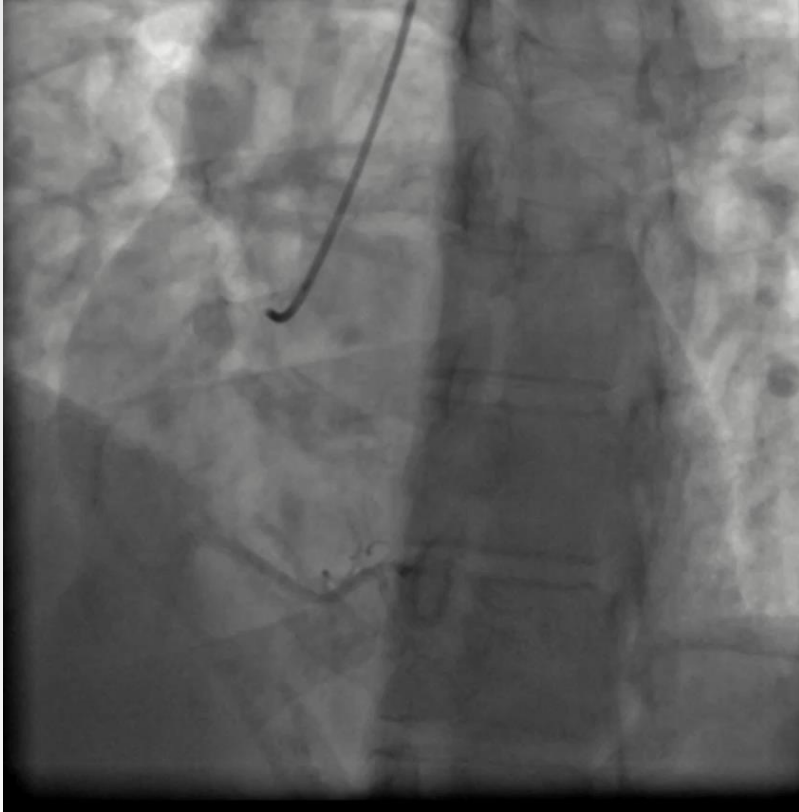
**CRA 28, RAO 31**



**CRA 35, RAO 16**



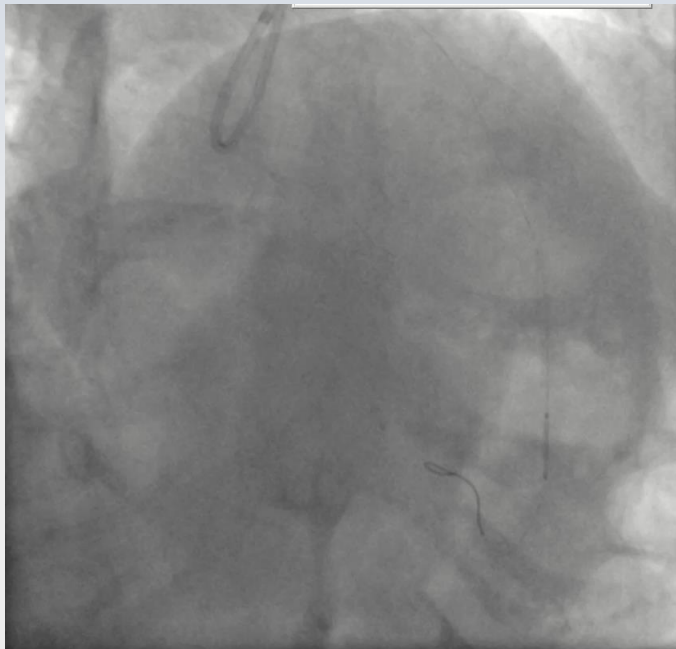
# CASE PRESENTATION



**CRA 2, LAO 29**



**CAU 18, RAO 31**



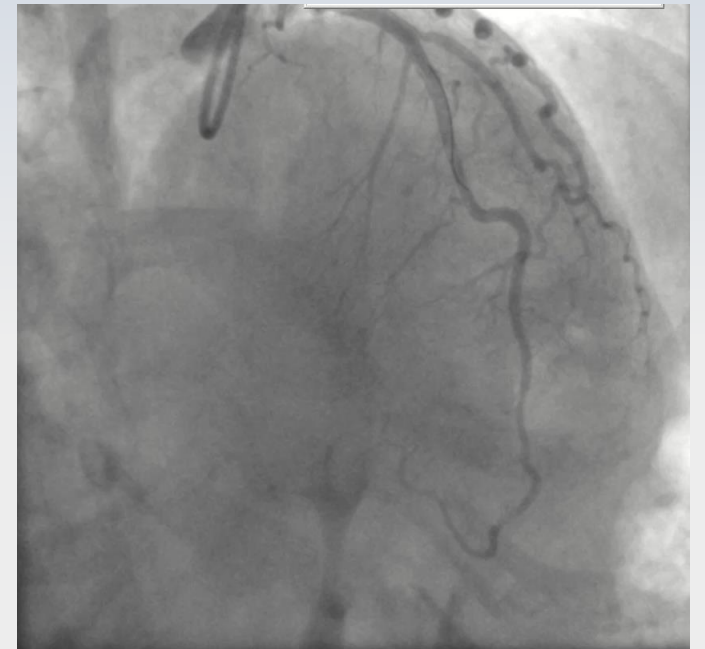
Αναζήτηση για εφαρμογές, ρυθμίσεις και έγγραφα

**Καφιτωμένο**

- Edge
- Αλληλογραφία
- Ημερολόγιο
- Microsoft Store
- Φωτογραφίες
- Microsoft 365 (Office)
- Solitaire & Casual Games
- Xbox
- Spotify
- WhatsApp
- Microsoft Clipchamp
- Prime Video
- TikTok
- Instagram
- Facebook

**Προτεινόμενα**

- SCNI001F 11h πριν
- DICOMDIR 11h πριν
- Autorun 11h πριν
- IMG\_20240401\_090541 13h πριν
- SCAD 13h πριν
- βιθλιογραφια- URL Χθες στις 10:09 πμ

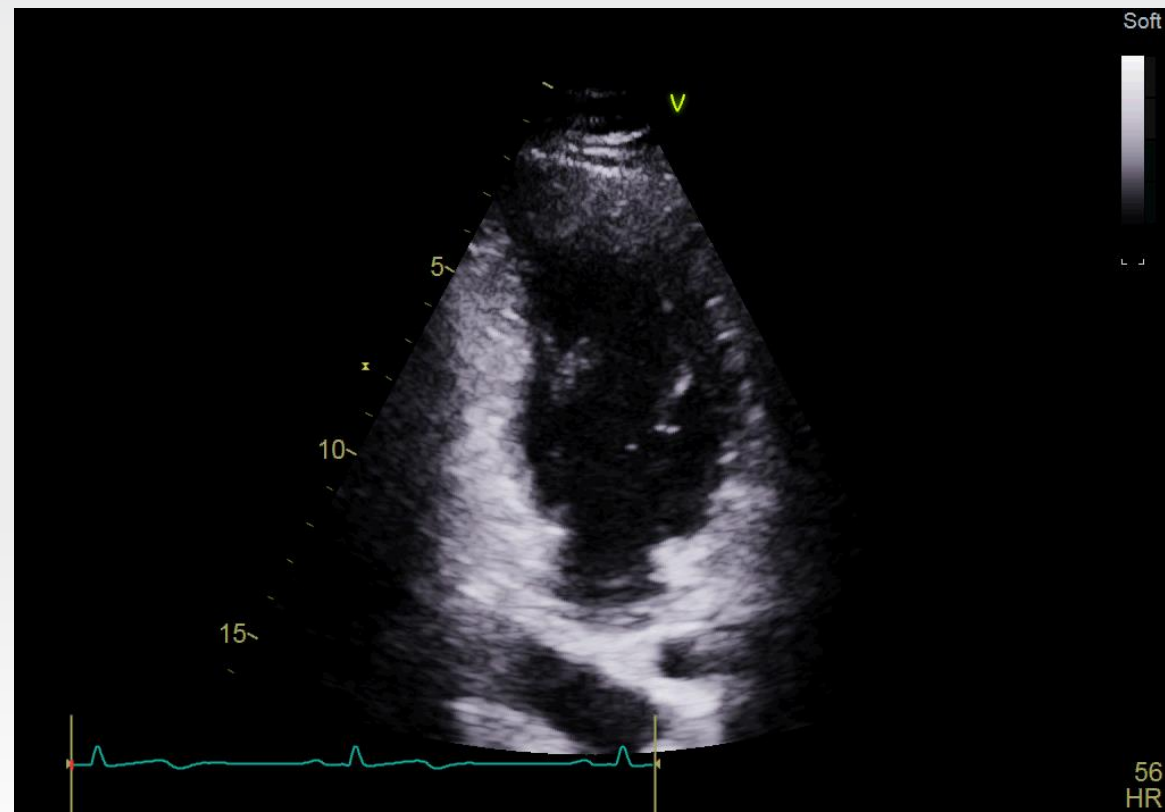
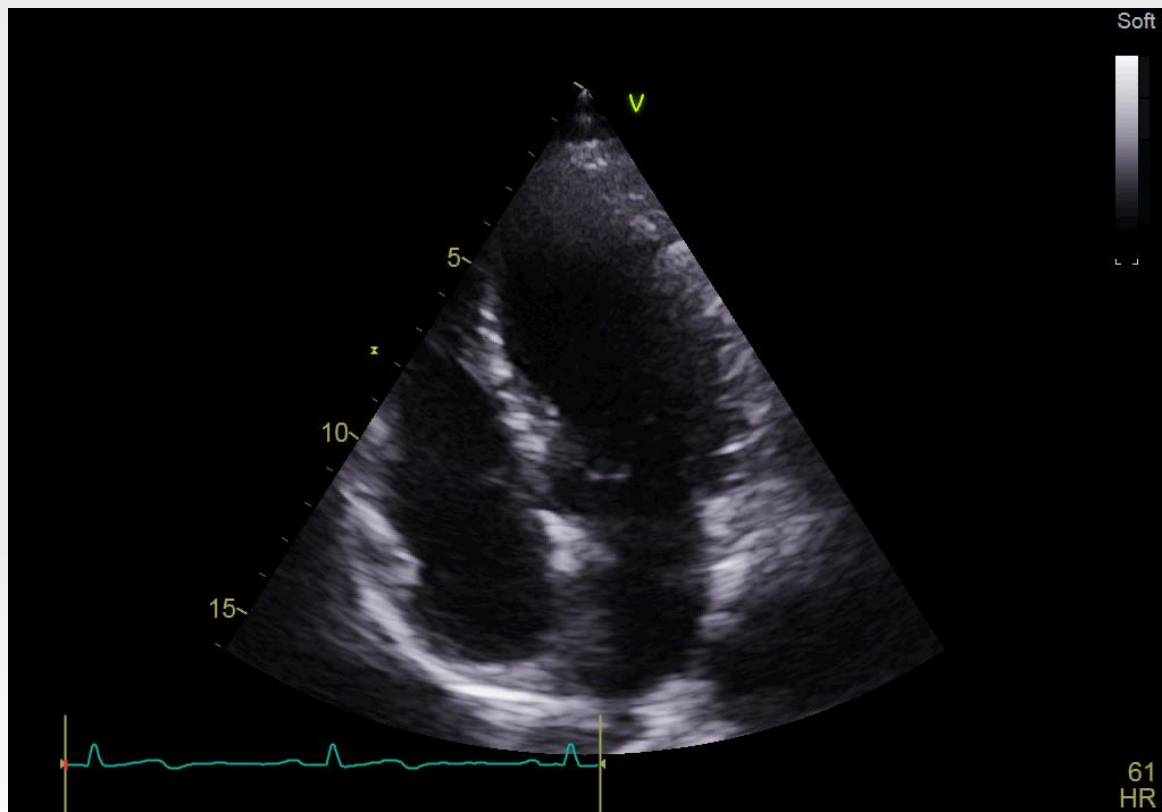


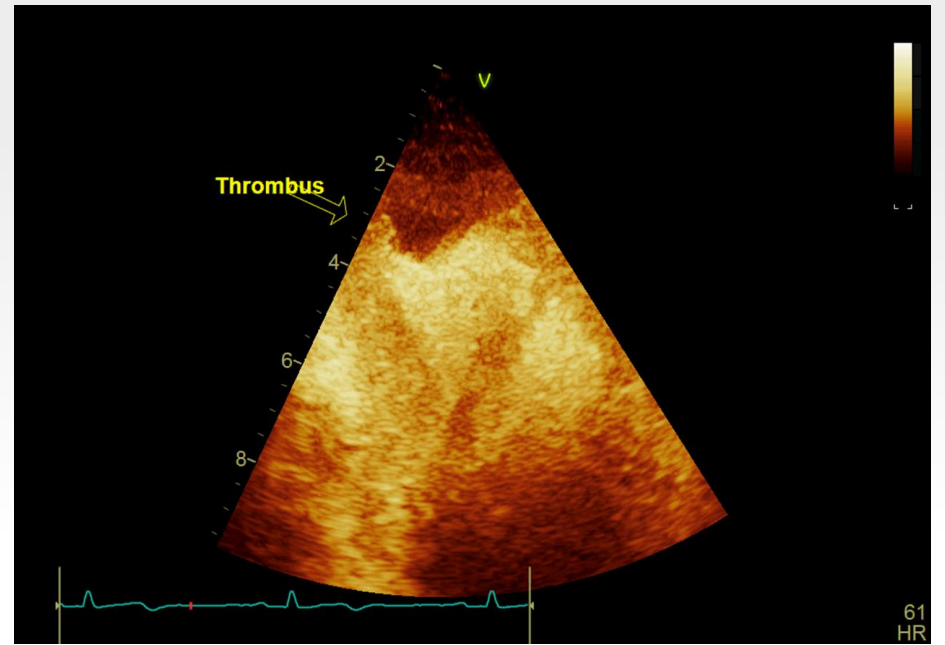
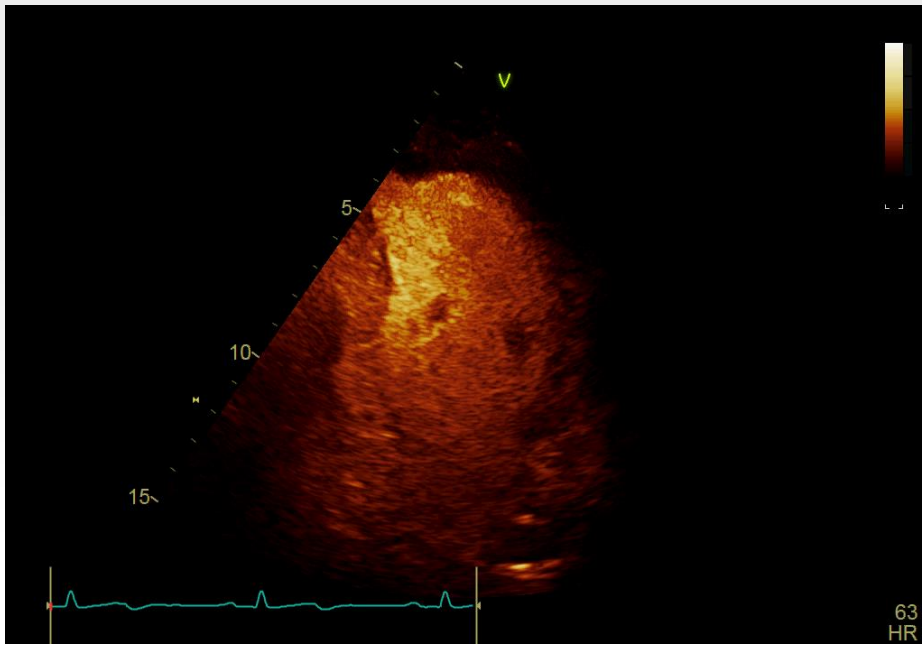
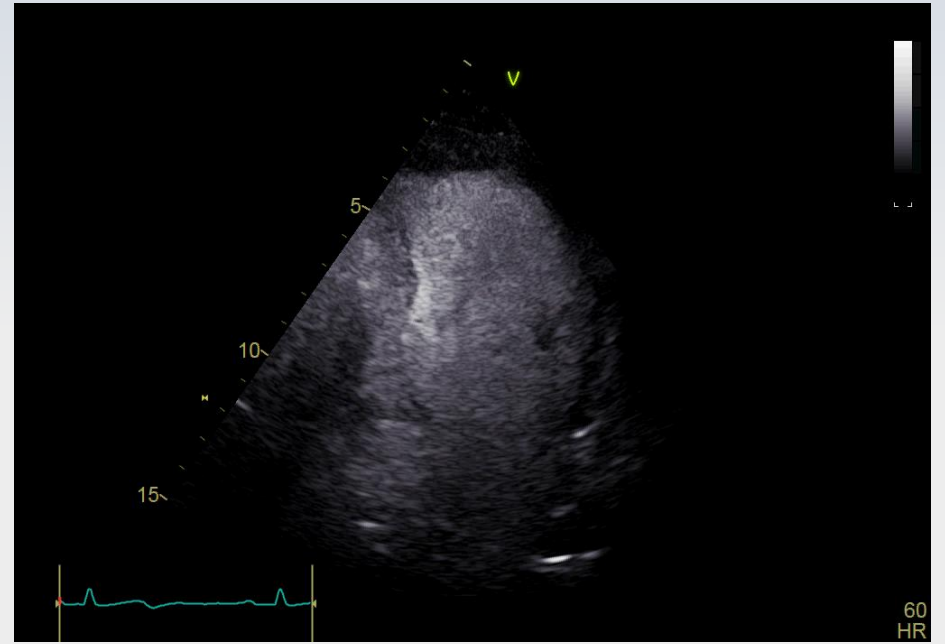
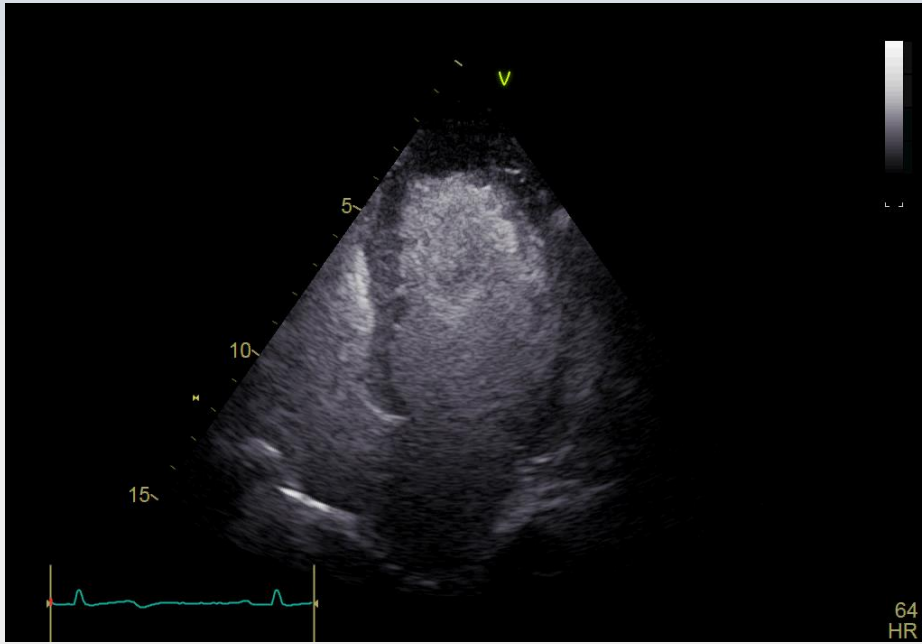
# CASE PRESENTATION

## ***Discharge instructions:***

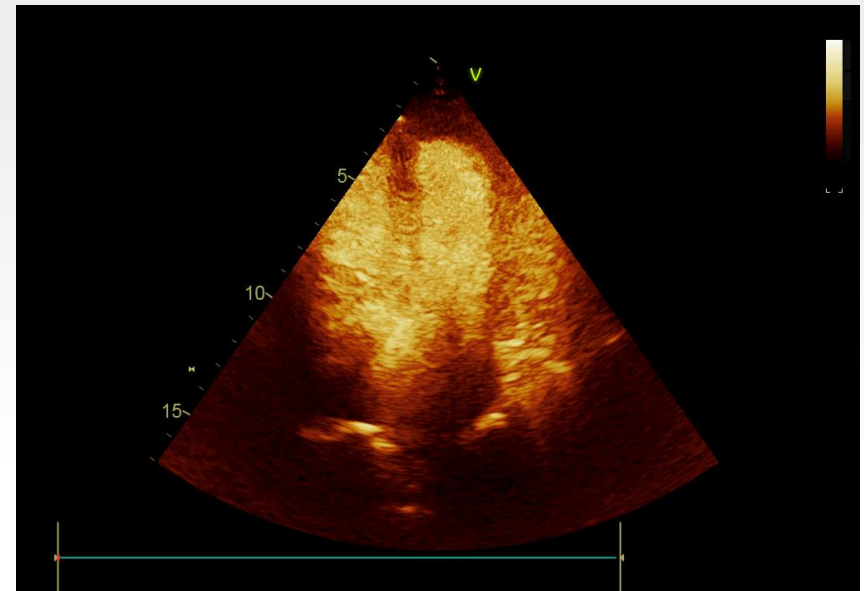
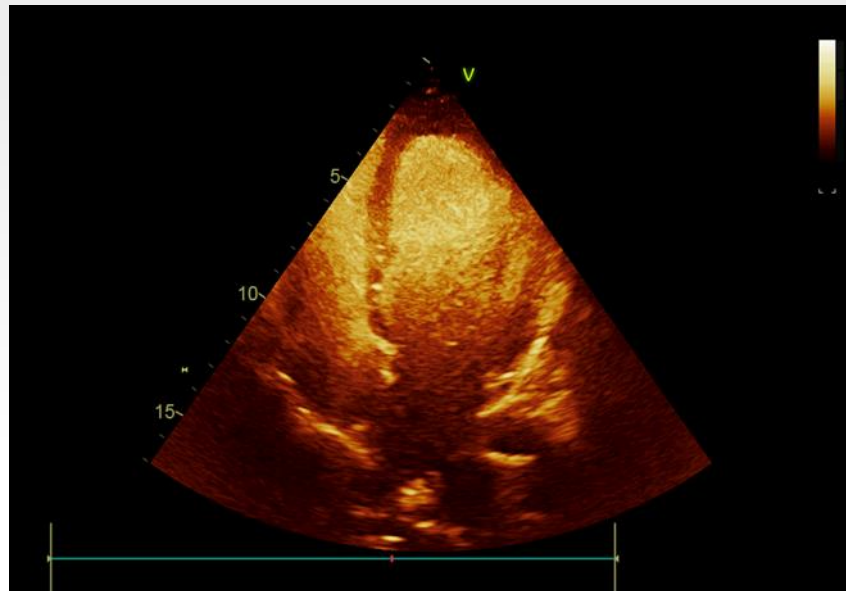
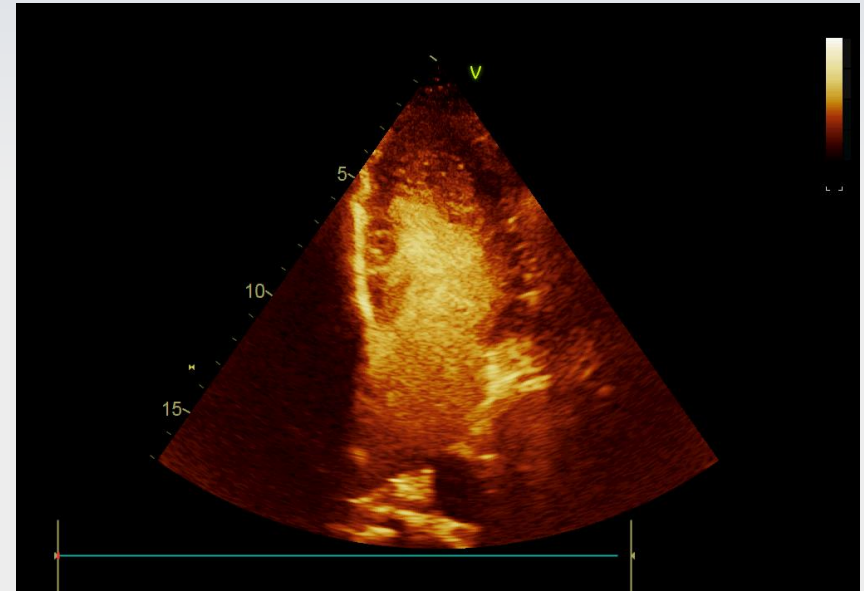
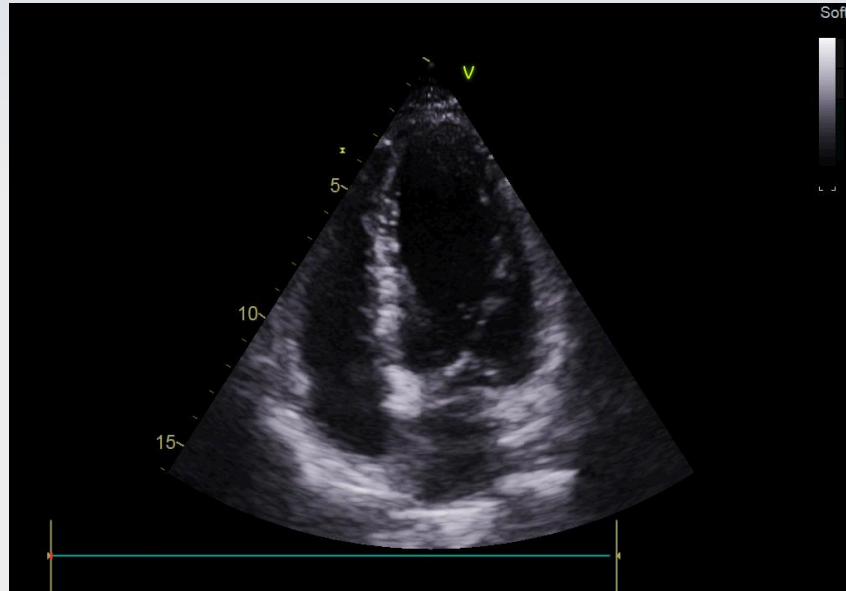
- ***Clopidogrel 75 mg 1x1 pos***
- ***Acetylsalicylic acid 100mg 1x1 pos***
- ***Enoxaparin sodium 60mg 1x2 sc (apical thrombus)***
- ***HF medication (bisoprolol, eplerenone, ramipril,)***
- ***Prazole***
- ***Rosuvastatin/ezetimibe***

# CASE PRESENTATION





# CASE PRESENTATION-AFTER 2 MONTHS OF LMWH



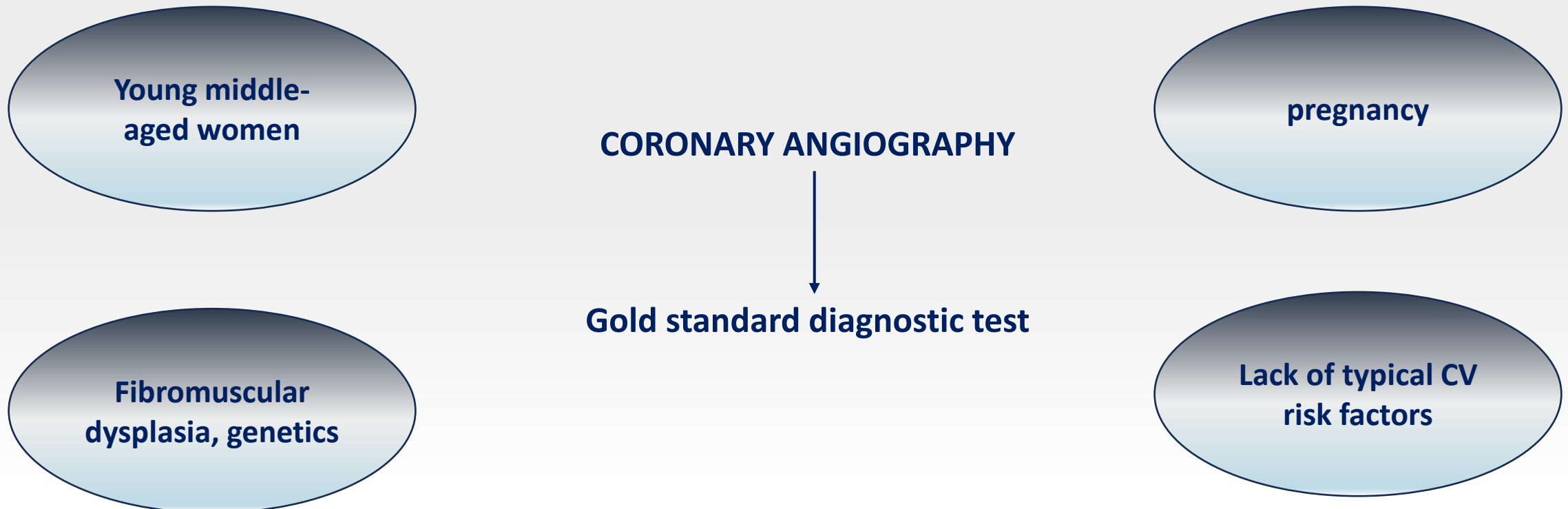
# What are the clinical dilemmas?

- **FMC of a patient with symptoms of ACS and ECG consistent with STEMI at a Non-PCI center and high suspicion of SCAD. What is the next step? Is fibrinolysis safe?**
- **What are the ethical dilemmas?**
- **SCAD and apical thrombus- what is the knowledge of therapy?**

## ***SCAD (spontaneous coronary artery dissection)***

**Non-iatrogenic, non-atherosclerotic coronary artery dissection, resulting in the formation of an intramural hematoma or false lumen in the coronary artery wall.**

**It can lead to acute coronary syndrome (ACS) by compressing the true lumen and obstructing coronary blood flow.**

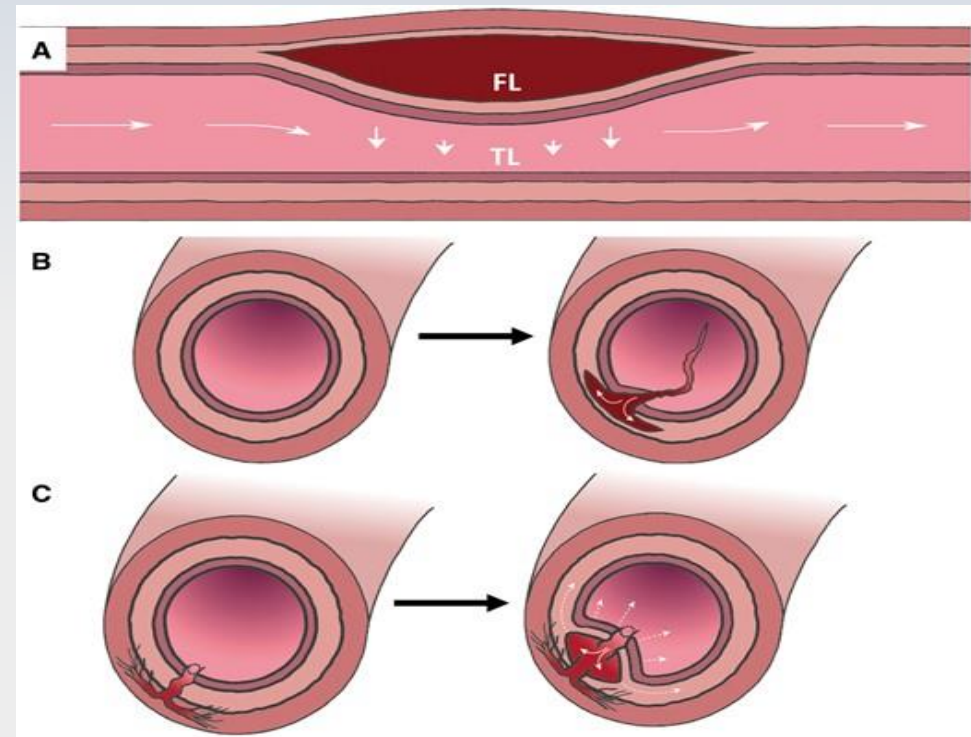


# Epidemiology

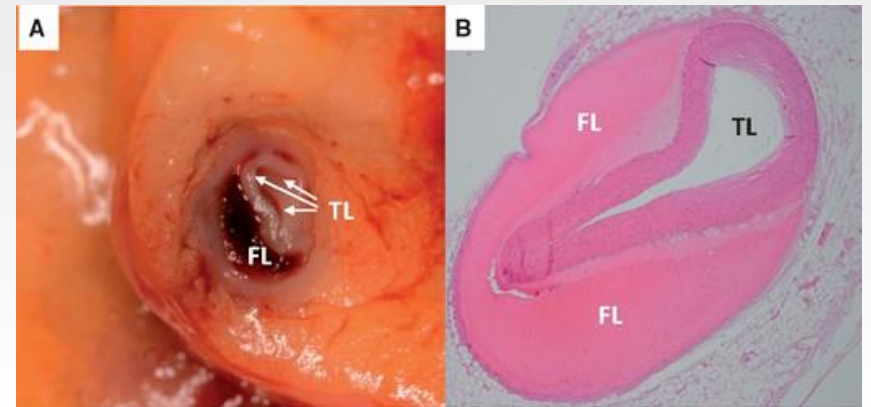
- 87-95% of SCAD are women with mean age 44-53 years old
- Prevalence of HTN is 32-37%
- Prevalence of hyperlipidemia is 20-35%
- Prevalence of SCAD is 4% in patients presenting with ACS
- In women <50 years old SCAD is the underlying cause of 35% of all ACS.
- 10-30% of recurrence

# Pathophysiology - Hypotheses

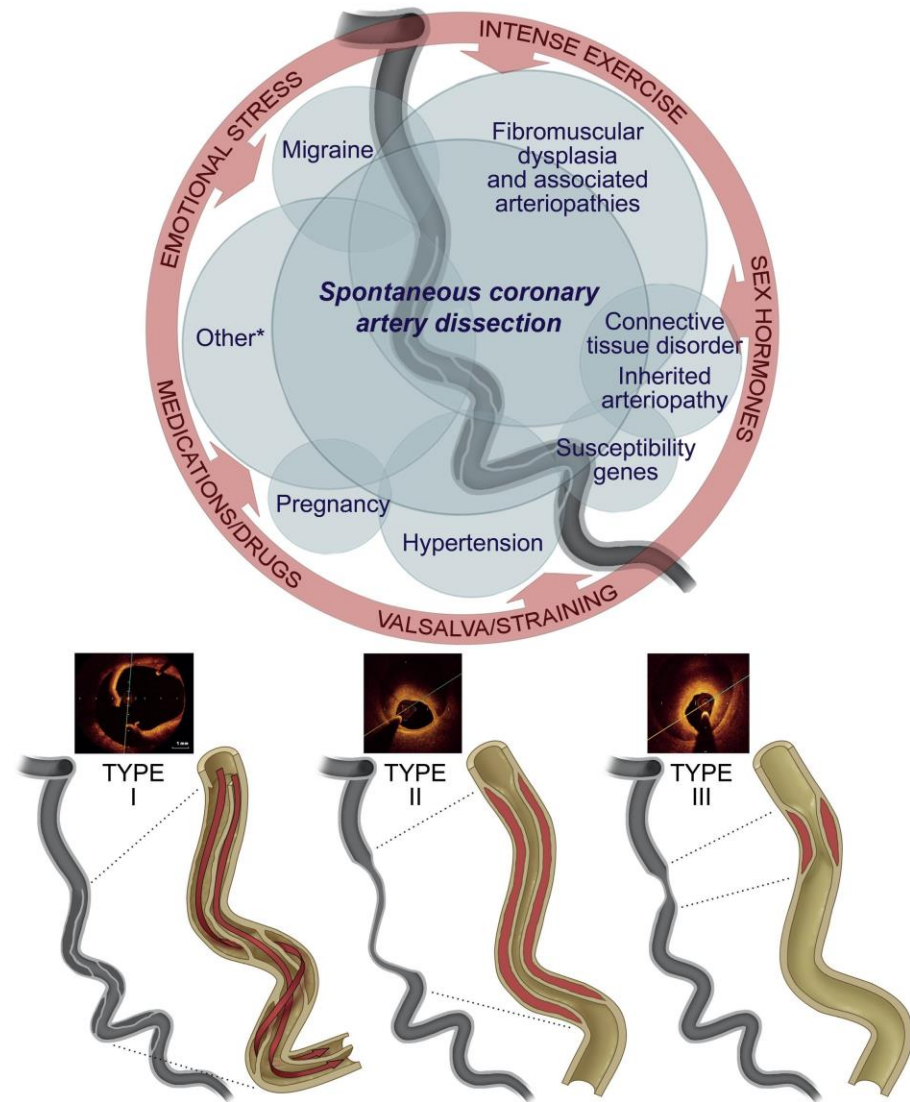
➤ **“inside-out”**: blood enters the subintimal space from the true lumen development of an endothelial-intimal disruption



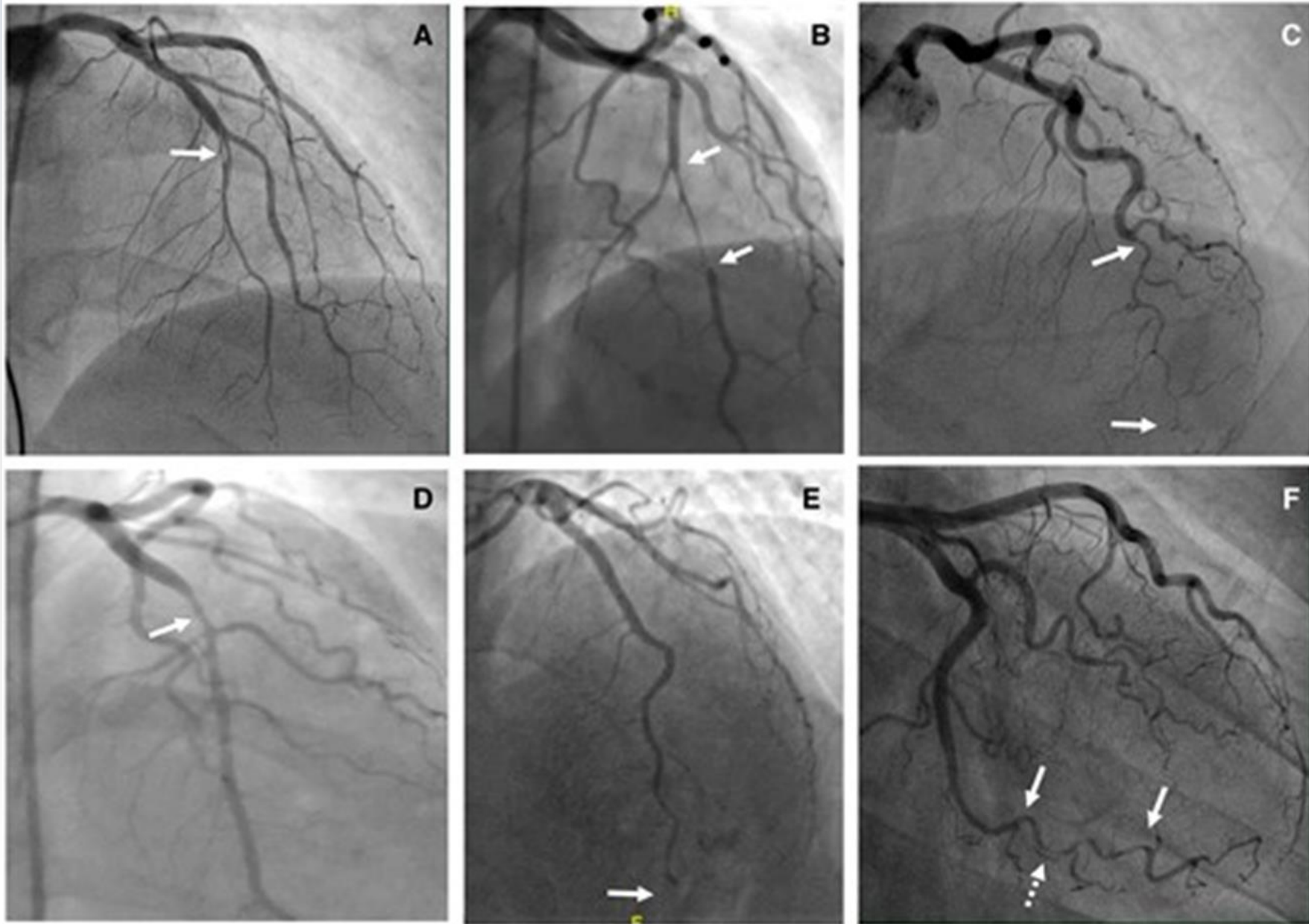
➤ **“outside-in”**: the hematoma arises de novo in the media from disruption of microvessels (main mechanism)

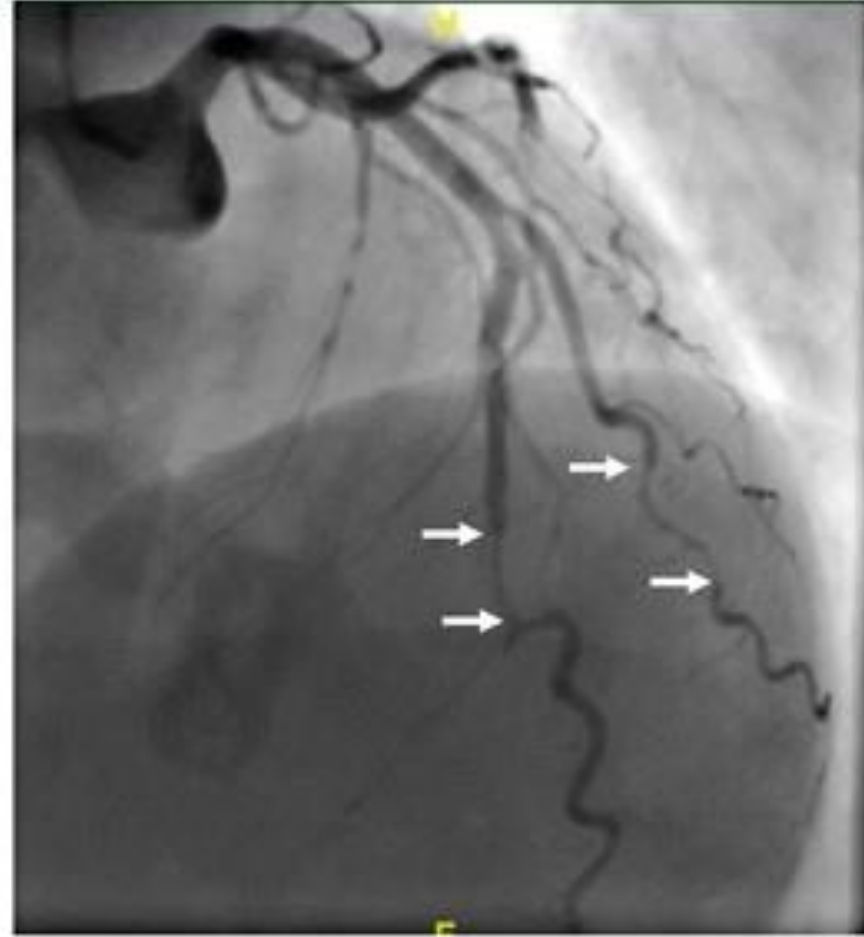
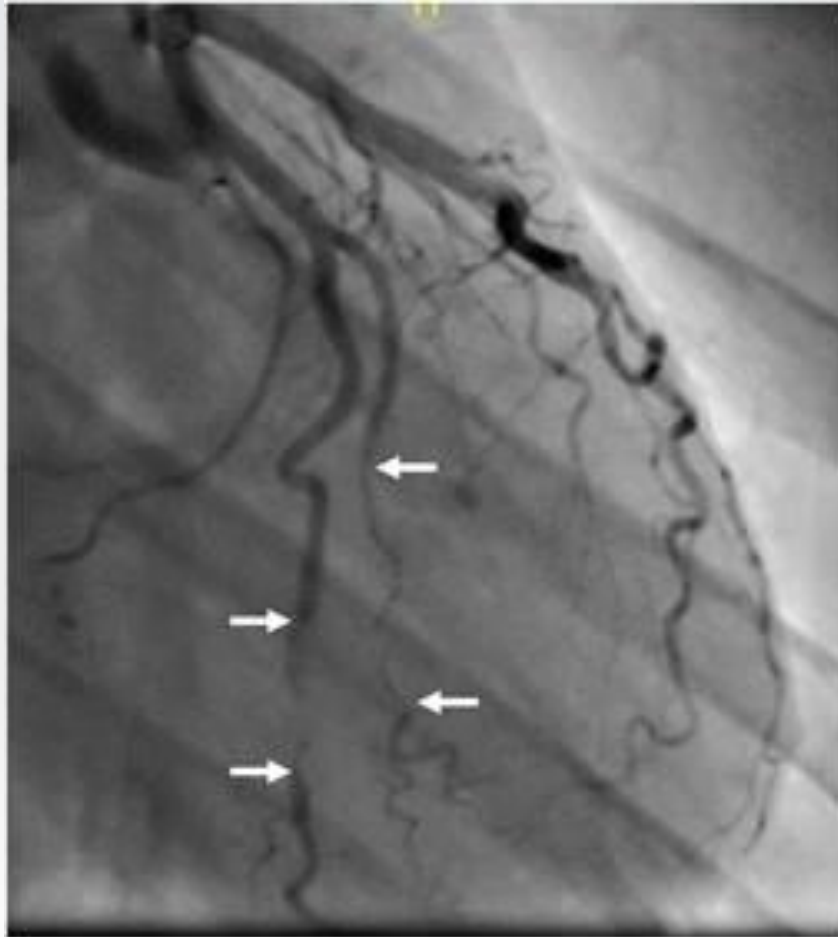


**CENTRAL ILLUSTRATION: Associated Conditions, Inciting Factors, and Angiographic Diagnosis of Spontaneous Coronary Artery Dissection**



Hayes, S.N. et al. J Am Coll Cardiol. 2020;76(8):961-84.



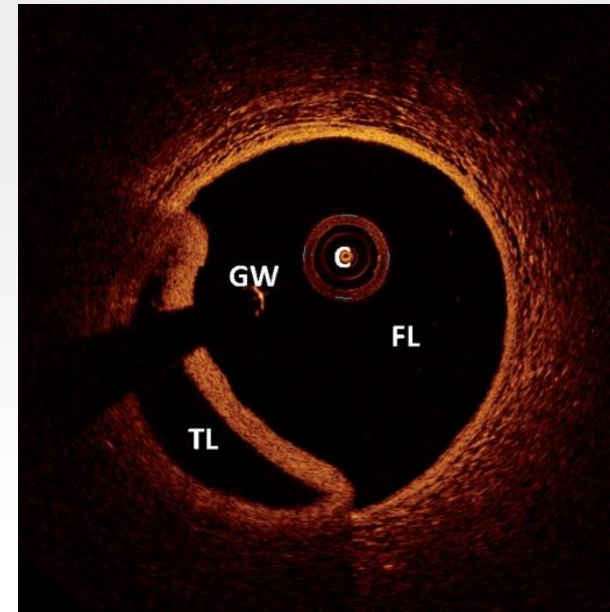


# Clinical presentation

- The majority presenting with **STEMI** Vs **NSTEMI**
- A minority presenting with **ventricular arrhythmia**
- **Differential diagnosis** includes: ACS, coronary artery spasm, Takotsubo cardiomyopathy, coronary thromboembolism, MINOCA

# Diagnosis

- ***Coronary Angiography***
- ***Intravascular Ultrasound (IVUS)***
- ***Optimal Coherence Tomography (OCT)***
- ***Computed tomography coronary angiography***



# Acute management

- Conservative strategy is generally favored if revascularization is not mandatory and heals completely over a few months
- Revascularization is challenging due to the friable vessel wall (SCAD/PCI worse outcomes than atherosclerotic coronary disease/PCI)
- PCI was associated with high complication rates
- CABG as a bail-out strategy

# Medical management

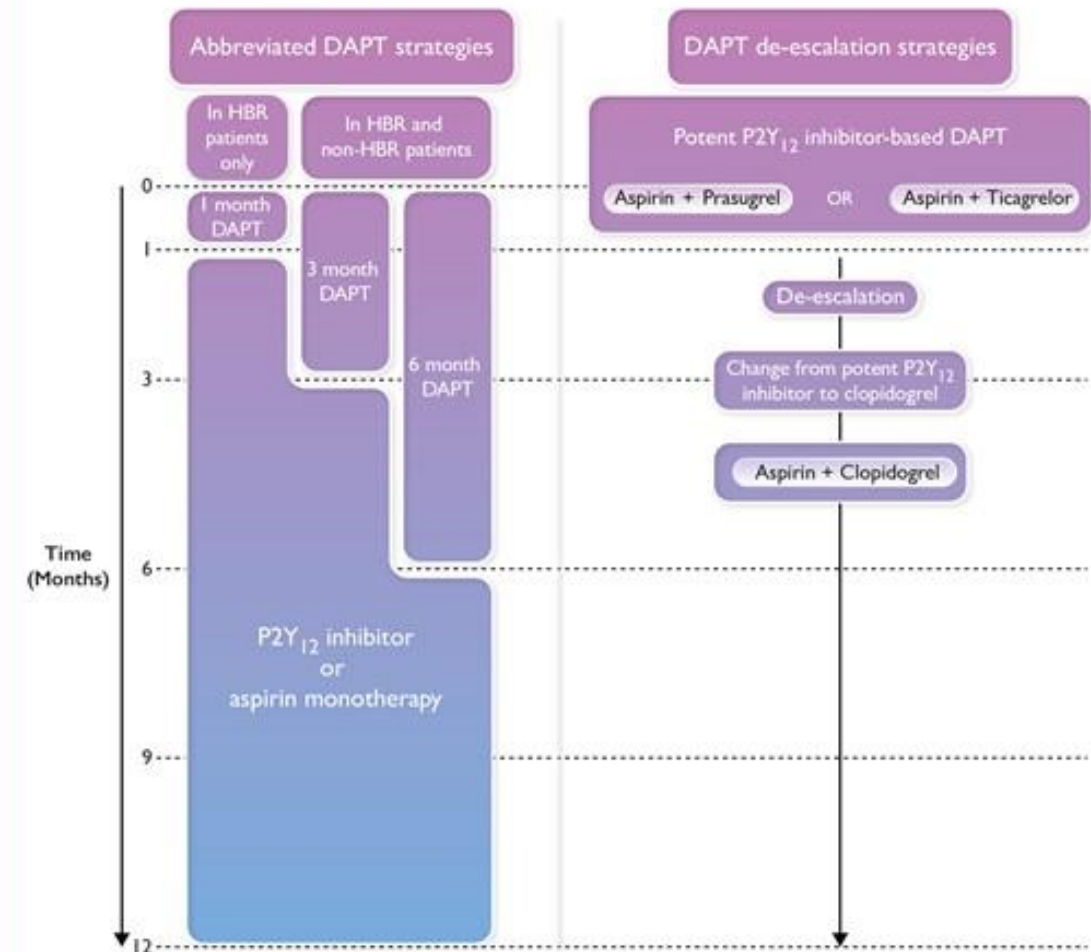
- **Thrombolysis**: successful management of some cases but also reports of dissection extension and even coronary rupture leading to cardiac tamponade
- **Antiplatelet therapies**: conflict of opinions in non-PCI patients. In case of PCI, dual antiplatelet therapy in accordance with current ACS guidelines.
- **Anticoagulation therapies**: should be **limited** to acute phase and chronic use should be restricted to situations with clinical indication (LV **thrombus**, embolism) (can lead to extension of the dissection)

# 2023 ESC Guidelines for the management of acute coronary syndromes

Developed by the task force on the management of acute coronary syndromes of the European Society of Cardiology (ESC)

Once an LV thrombus has been diagnosed, OAC therapy (warfarin or NOAC) should be considered for 3–6 months, guided by repeated echocardiography or CMR and with consideration of bleeding risk and the need for concomitant antiplatelet therapy.<sup>580,581</sup> However, there are a lack of prospective randomized data on the optimal anticoagulation regimen, anticoagulation duration, and the combination of oral anticoagulation with antiplatelet agents in patients with LV thrombus following MI.<sup>581</sup> The choice of therapy should be tailored to the patient's clinical status and the results of follow-up investigations.

Antiplatelet strategies to reduce bleeding risk in the first 12 months after ACS



# Medical management

- **Hypertension** has been associated with recurrent SCAD and should be treated.
- No evidence that **hyperlipidemia** is relevant to the pathophysiology of SCAD recurrence risk

# Conclusions

- Spontaneous coronary dissection is *not a rare condition*, especially to *middle-aged women*
- The *diagnosis is challenging*, especially at a non-PCI center hospital
- There are many *gaps in management*, especially in antithrombotic therapy
- *Further prospective research* is required to better understand vascular healing after SCAD