
Akut Koroner Sendromlarda Yatakbaşı Ekokardiyografi

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ASE ve ACEP

AMERICAN SOCIETY OF ECHOCARDIOGRAPHY CONSENSUS STATEMENT

Focused Cardiac Ultrasound in the Emergent Setting: A Consensus Statement of the American Society of Echocardiography and American College of Emergency Physicians

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The use of ultrasound has developed over the last 50 years into an indispensable first-line test for the cardiac evaluation of symptomatic patients. The technologic miniaturization and improvement in transducer technology, as well as the implementation of educational curriculum changes in residency training programs and specialty practice, have facilitated the integration of focused cardiac ultrasound into practice by specialties such as emergency medicine. In the emergency department, focused cardiac ultrasound has become a fundamental

Acil Ekokardiyografi

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Table 1 Goals of the focused cardiac ultrasound in the symptomatic emergency department patient

Assessment for the presence of pericardial effusion

Assessment of global cardiac systolic function

Identification of marked right ventricular and left ventricular enlargement

Intravascular volume assessment

Guidance of pericardiocentesis

Confirmation of transvenous pacing wire placement

Endikasyonlar

- Kardiyak arrest
 - Perikardiyal effüzyon
 - Masif pulmoner embolizm
 - Sebebi belli olmayan hipotansiyon
 - Santral venöz basıncın tahmini
 - Sol ventrikül fonksiyonlarının değ.
 - Eksternal kardiyak pacing
-

Yeni Konular Dahil Oldu

- Akut Koroner Sendromlar
 - Regional duvar hareket bozuklukları
 - Pulmoner Hipertansiyon
 - Kapak Patolojileri
-

Early echocardiography can predict cardiac events in emergency department patients with chest pain.

Kontos MG¹, Arrowood JB, Paulsen WH, Nixon JV

Ⓔ Author information

Abstract

STUDY OBJECTIVE: Accurate diagnosis in emergency department patients with possible myocardial ischemia is problematic. Two-dimensional echocardiography has a high sensitivity for identifying patients with myocardial infarction (MI); however, few studies have investigated its diagnostic ability when used acutely in ED patients with possible myocardial ischemia. Therefore we investigated the ability of ED echocardiography for predicting cardiac events in patients with possible myocardial ischemia.

METHODS: Echocardiography was performed within 4 hours of ED presentation in 260 patients with possible myocardial ischemia, and was considered positive if there were segmental wall motion abnormalities or the ejection fraction was less than 40%. ECGs were considered abnormal if there was an ST-segment elevation or depression of greater than or equal to 1 mm, or ischemic T-wave inversion. Cardiac events included MI and revascularization.

RESULTS: Of the 260 patients studied, 45 had cardiac events (23 MI, 19 percutaneous transluminal angioplasty, 3 coronary bypass surgery). The sensitivity of echocardiography for predicting cardiac events was 91% [95% confidence interval 79% to 97%], which was significantly higher than the ECG (40% [95% CI 27% to 55%]; $P < .0001$), although specificity was lower (75% [95% CI 69% to 81%] versus 94% [95% CI 90% to 97%]; $P < .001$). Addition of the echocardiography results to baseline clinical variables and the ECG added significant incremental diagnostic value ($P < .001$). With use of multivariate analysis, only male gender ($P < .03$, odds ratio [OR] 2.4 [1.1 to 5.3]), and a positive echocardiographic finding ($P < .0001$, OR 24 [9 to 65]) predicted cardiac events. Excluding patients with abnormal ECGs ($N = 30$) did not affect sensitivity (85%) or specificity (74%) of echocardiography.

CONCLUSION: Echocardiography performed in ED patients with possible myocardial ischemia identifies those who will have cardiac events, is more sensitive than the ECG, and has significant incremental value when added to baseline clinical variables and the ECG.

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EKO Sensitivity %91

Value of regional wall motion abnormality in the emergency room diagnosis of acute myocardial infarction. A prospective study using two-dimensional echocardiography.

Sabia P¹, Afrockich A, Touchstone DA, Keller MW, Esquivel L, Kaul S

Ⓔ Author information

Abstract

Because regional wall motion abnormality (RWMA) is usually noted during ischemia, we hypothesized that the presence of this finding with two-dimensional echocardiography would be superior to conventional methods of diagnosing acute myocardial infarction (AMI) in the emergency room. We also hypothesized that because the absence of RWMA would probably not be associated with AMI, the use of two-dimensional echocardiography would significantly limit unnecessary hospital admissions. To test these hypotheses, we undertook a prospective study that used two-dimensional echocardiography in 180 patients presenting to the emergency room with symptoms suggestive of AMI. The emergency room physicians were not informed of the two-dimensional echocardiography findings, and their decision to admit or not admit to the hospital was based on conventional clinical and electrocardiographic criteria. Forty patients were not admitted to the hospital and 140 were admitted. Of the 30 patients with enzyme-confirmed AMI, nine had typical ST elevation on the ECG that was consistent with acute injury, three had normal ECGs, and eight had ECGs in the presence of which AMI could not have been diagnosed (left bundle branch block, paced rhythm, or repolarization changes); the rest had nonspecific ECG findings. Of the 29 AMI patients with technically adequate two-dimensional echocardiography studies, two did not demonstrate RWMA and 27 had RWMA, compared with nine with diagnostic ECG changes (p less than 0.001). Of the 13 patients with in-hospital complications only four had an initial ECG showing ST elevation, and all 13 had RWMA (p less than 0.001) (ABSTRACT TRUNCATED AT 400 WORDS)

180 hasta

EKO 29 hastada yeterli bulgu +

27 Hasta (+), 2 Hasta (-)

Duvar Hareket Kusuru

- Transmural %90-95
 - Subendokardiyal %80-90

 - Sensitivite %80-90
-

A brief training module improves recognition of echocardiographic wall-motion abnormalities by emergency medicine physicians.

Kacem C¹, Tommaso L, Kustad E.

① Author information

Abstract

Objective. Wall-motion abnormality on echocardiogram is more sensitive in detecting cardiac ischemia than the electrocardiogram, but the use of bedside echocardiography by emergency physicians (EPs) for this purpose does not appear to be widespread, apparently due to limited data on proficiency of EPs for this task. We sought to determine the effect of a brief training module on the ability of EPs to recognize wall motion abnormalities on echocardiograms. **Methods.** We developed a brief training and testing module and presented it to EPs. After baseline testing of 15 echocardiograms, we presented the 30-minute training module, and administered a new test of 15 different echocardiograms. Physicians were asked to interpret the wall motion as normal or abnormal. **Results.** 35 EPs over two separate sessions showed significant improvement recognition of wall-motion abnormalities after the brief training module. Median score on the baseline test was 67%, interquartile range (IQR) 53% to 80%, while the median score on the posttraining test was 87%, IQR 80% to 87%, $P < .001$, independent of time in practice or prior training. **Conclusion.** With only brief training on how to recognize wall motion abnormalities on echocardiograms, EPs showed significant improvement in ability to identify wall motion abnormalities.

- ❑ 35 Acil Tıp Doktoru
 - ❑ 30 dk eğitim
 - ❑ Pretest %67
 - ❑ Posttest %87
-

Duvar hareketleri

- Duvar Kalınlığı 9-11mm, max 14-16mm

 - Duvar hareketleri
 - Normal
 - Hipokinetik
 - Akinetik
 - Diskinetik
-

Duvar hareketleri

LAD:

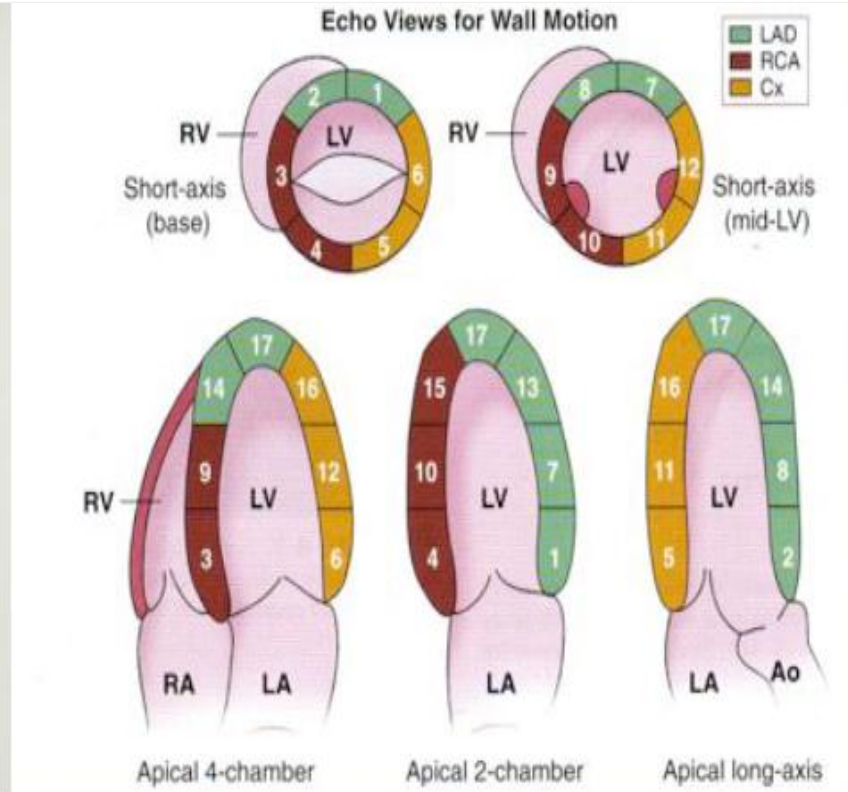
Anterior Wall
Anterior Septum
Mid & Apical Septum
Inferior & Lateral Apical Wall

RCA:

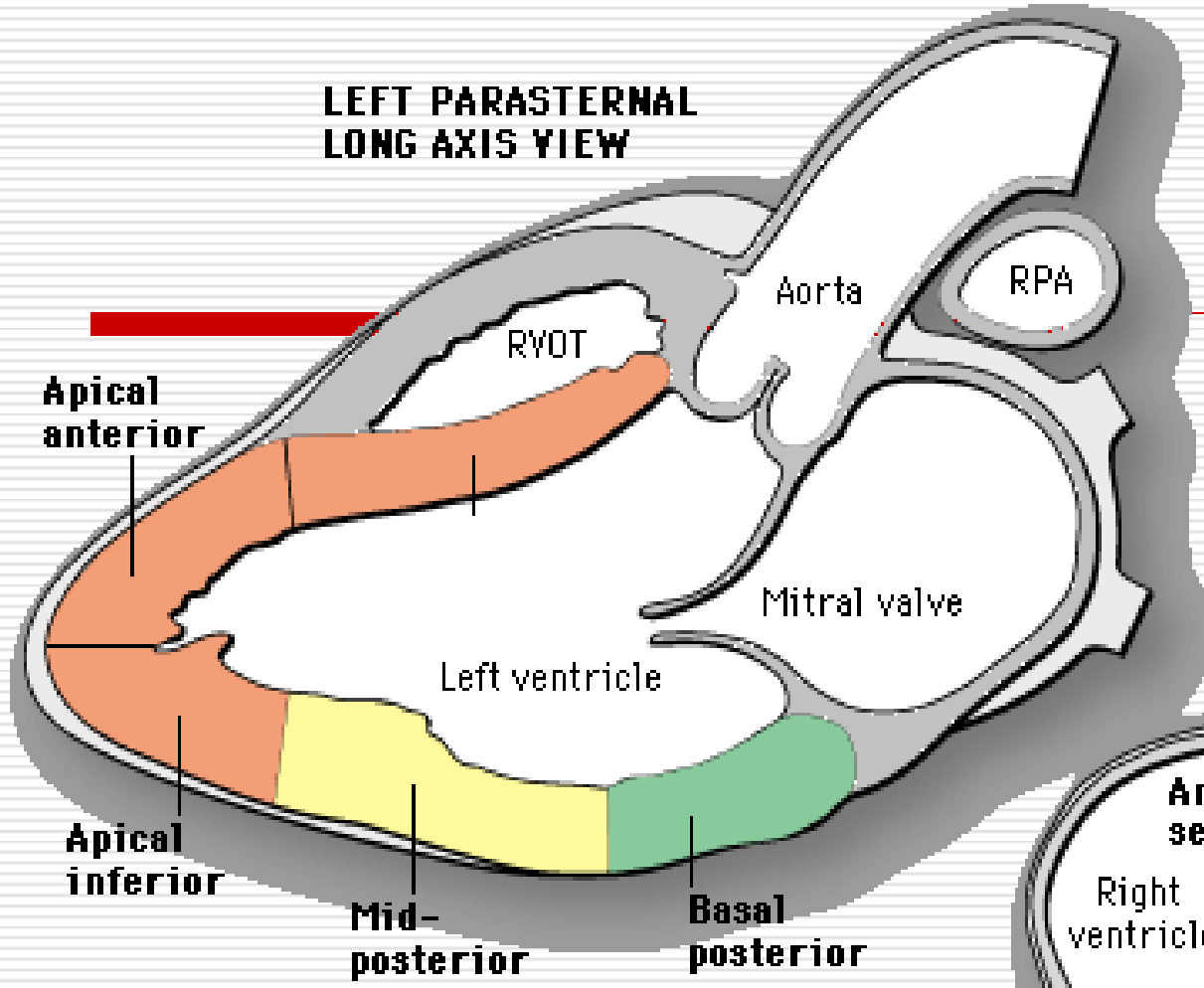
Inferior Wall
Basal Septum

Cx:




Lateral Wall
Posterior Wall



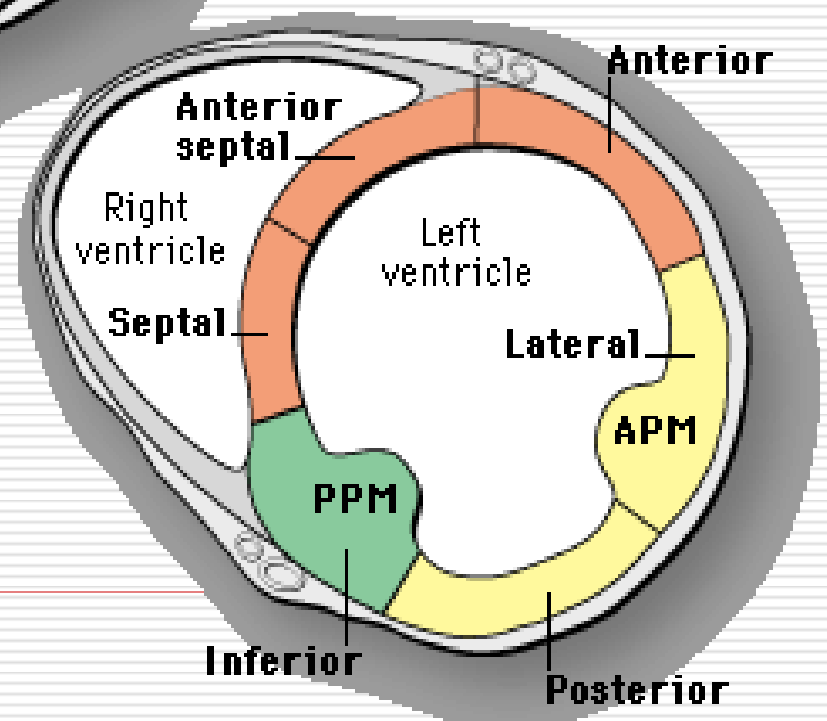
LEFT PARASTERNAL LONG AXIS VIEW

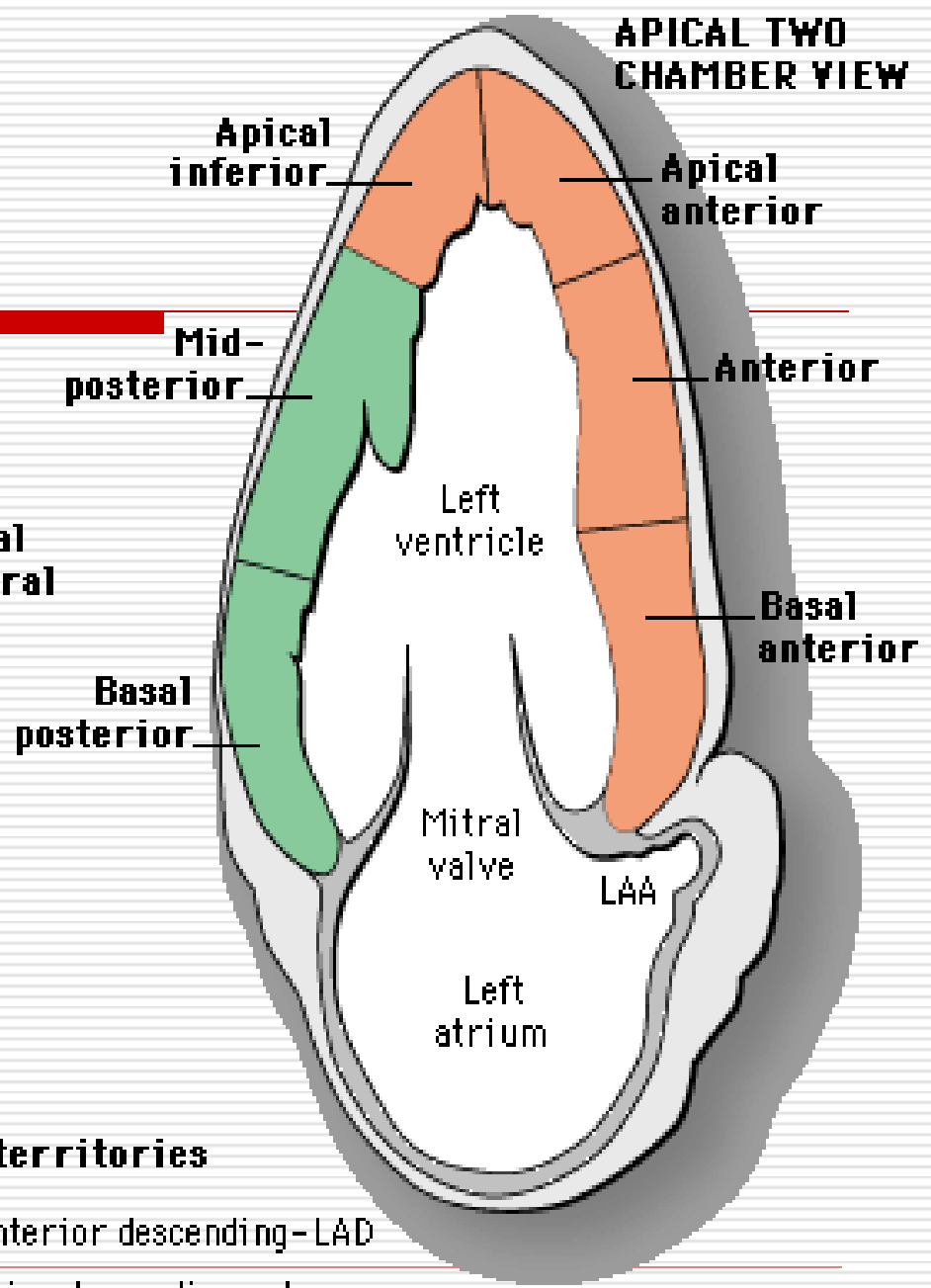
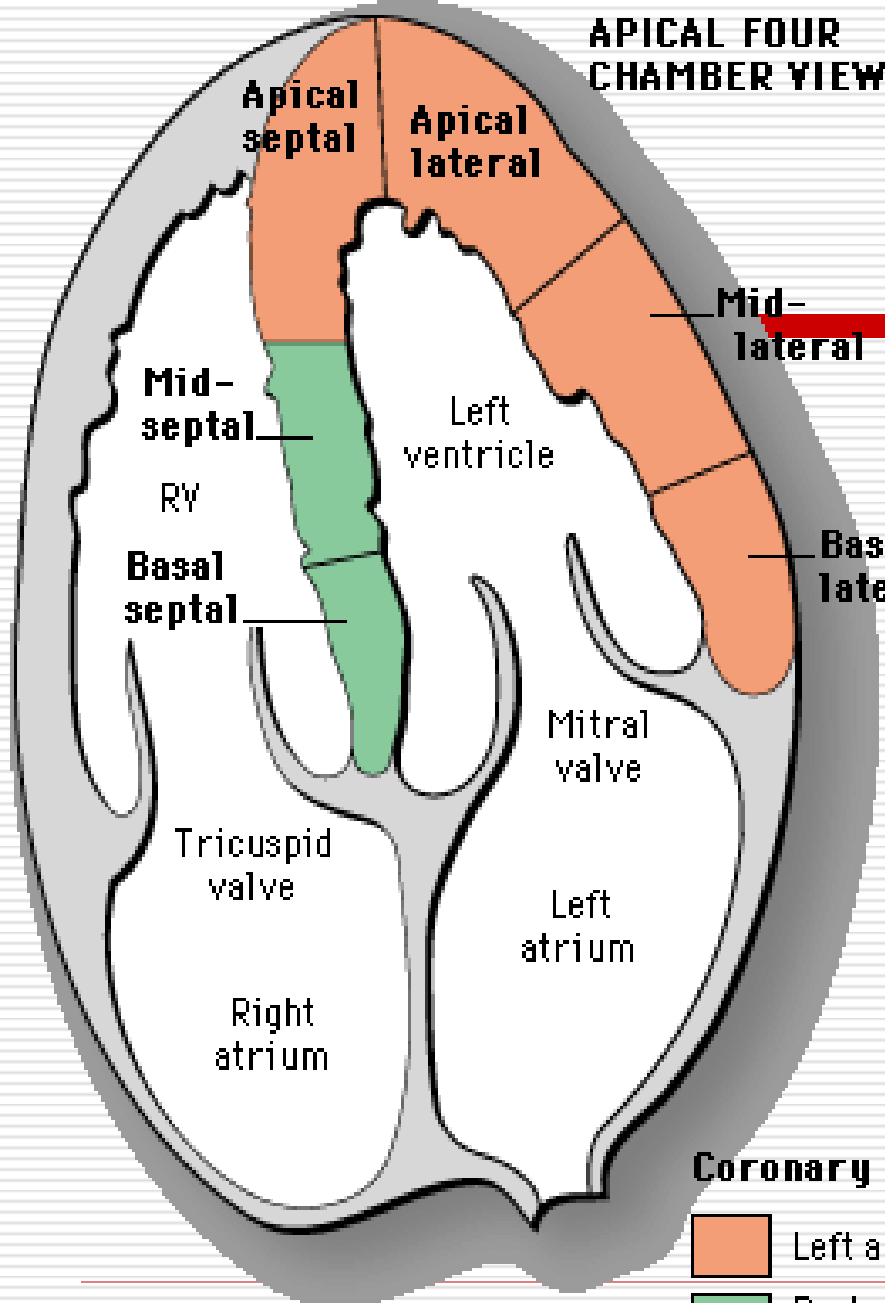


Coronary territories

-  Left anterior descending - LAD
-  Left circumflex artery - LCx
-  Posterior descending artery of RCA, and LCx

SHORT AXIS VIEW

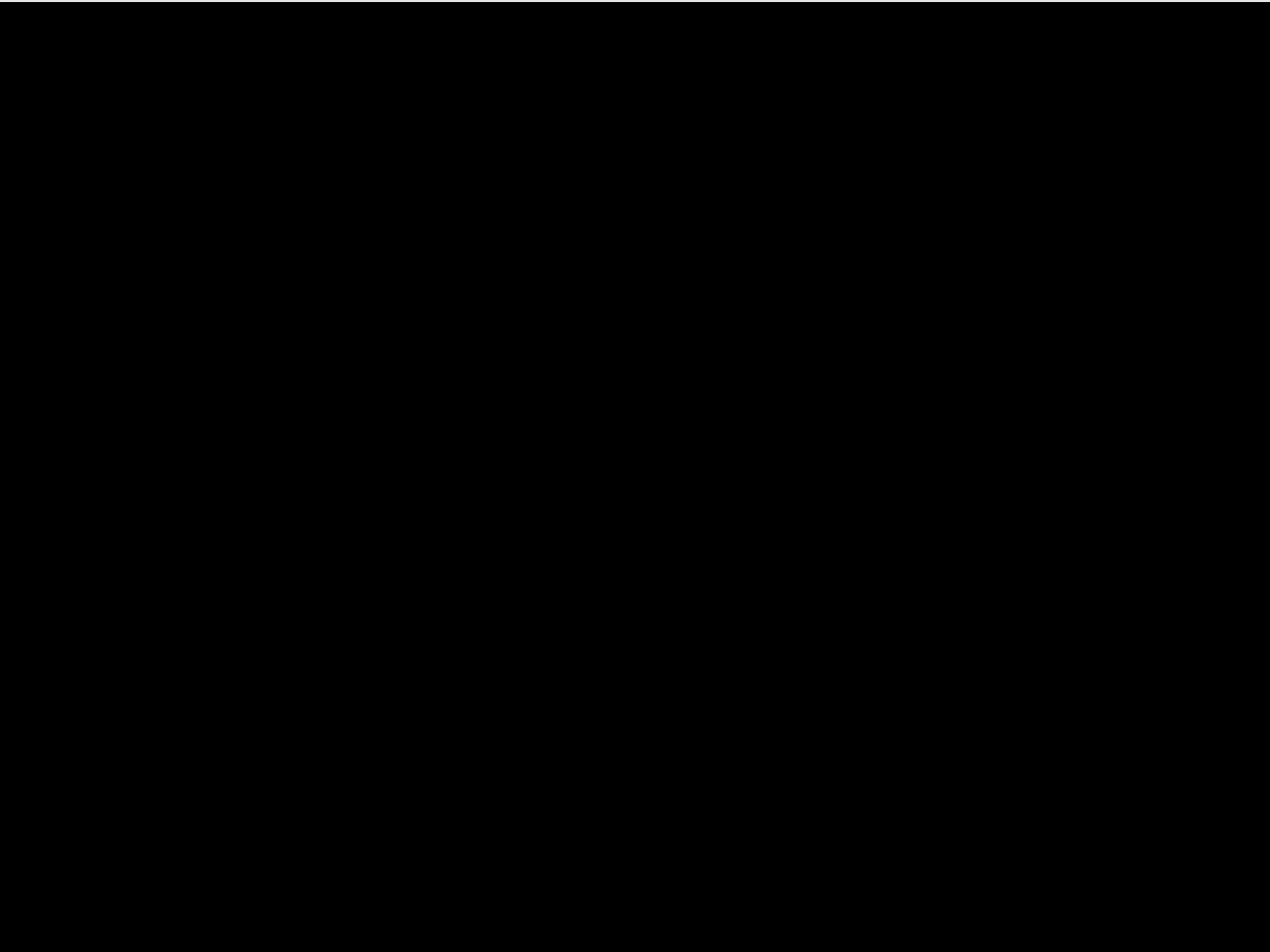




Coronary territories

- Left anterior descending-LAD
- Posterior descending artery of RCA, and LCx





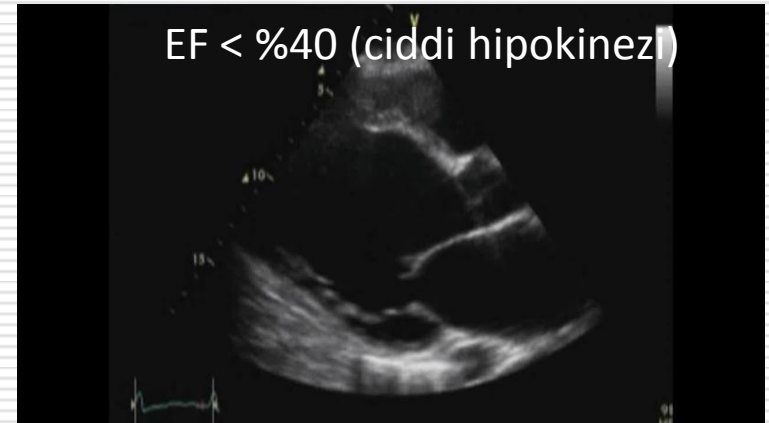
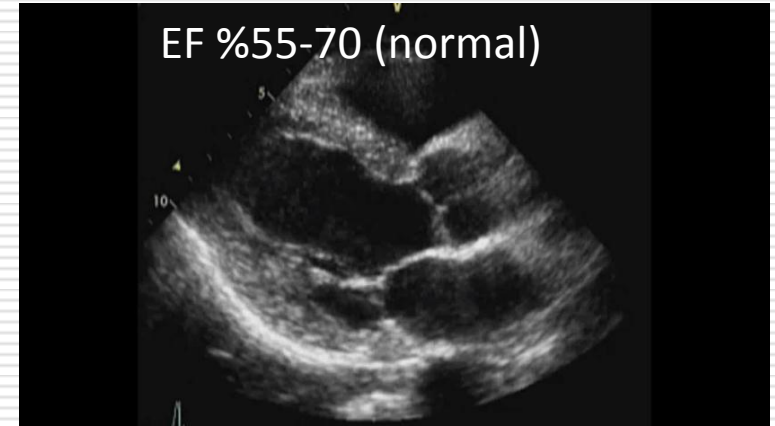
Duvar Hareketleri

- Normal $> \%30$ kalınlık
 - Hipokinetik $\%10-30$
 - Ciddi hipokinetik $< \%10$
 - Akinetik
 - Diskinetik
-

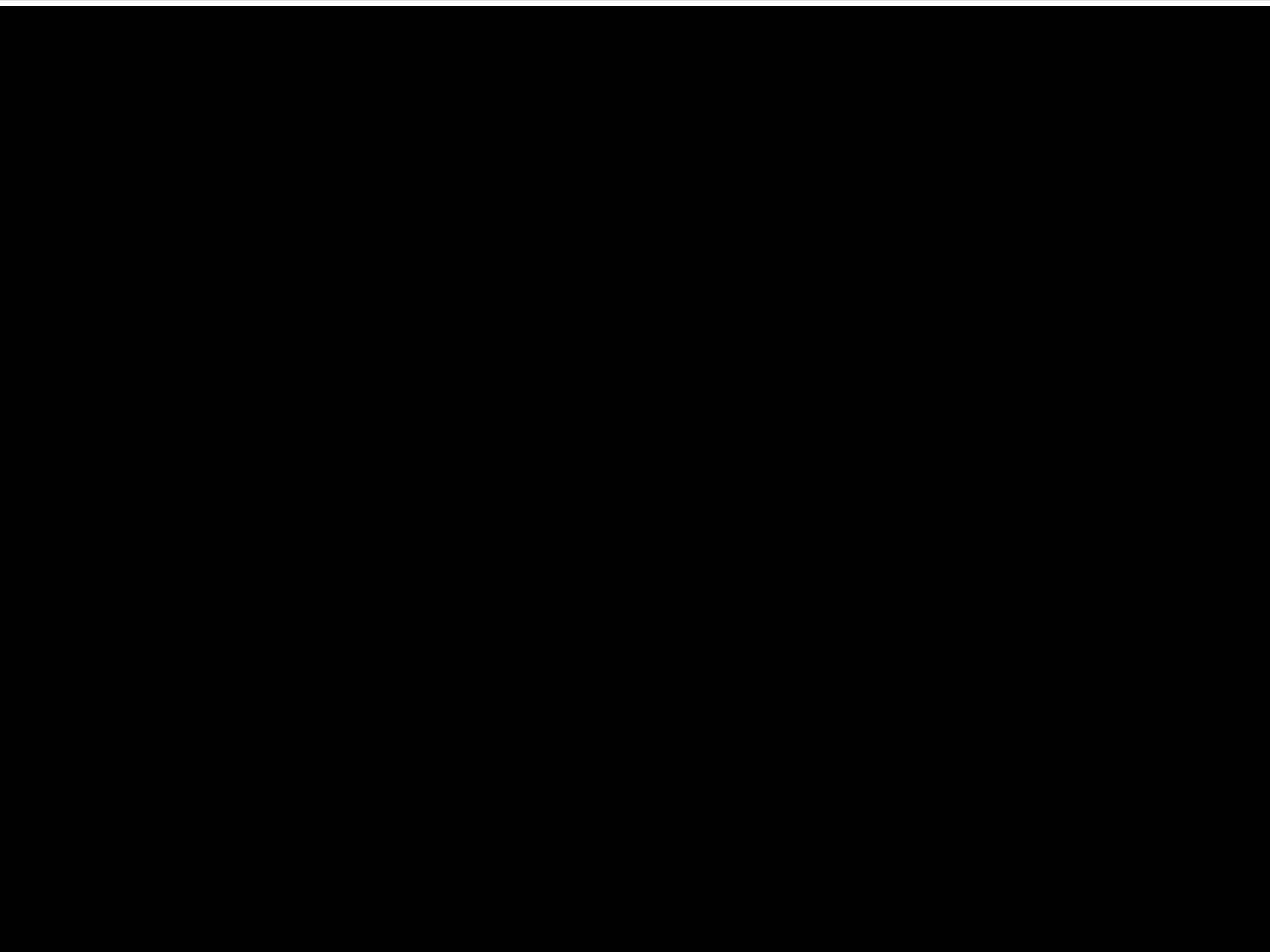
Eski mi? Yeni mi?

	Eski	Yeni
Ventrikül Boyutu	Dilate	Normal
Duvar hareketi	Hipo/Diskinetik	Hipokinetik
Miyaokardiyal Eko	Parlak	Normal
Duvar Kalınlığı	İnce	Normal
Anevrizma	Var	Yok

Sol ventrikül fonksiyonları







Yeni Yaklaşım

Display Settings:  Abstract

Send to: 

Echocardiography, 2014 Oct 7, doi: 10.1111/echo.12794. [Epub ahead of print]

Application of Intravascular Ultrasound in the Emergency Diagnosis and Treatment of Patients with ST-Segment Elevation Myocardial Infarction.

Wang HX¹, Dong PS, Li ZJ, Wang HL, Wang K, Liu XY.

@ Author information

Abstract

PURPOSE: This study aimed to examine the application of intravascular ultrasound (IVUS) in ST-segment elevation myocardial infarction (STEMI) patients with high thrombus burden (thrombus grade ≥ 3) undergoing emergency diagnosis and primary percutaneous coronary intervention.

METHODS: Eighty STEMI patients were enrolled and randomly assigned to the IVUS-guided group (38 patients) or non-IVUS group (42 patients). Stent implantation was performed in non-IVUS group patients. IVUS group patients were further divided into low-risk and high-risk patients on the basis of IVUS evaluation for determining whether stenting should be performed. Major adverse cardiac event (MACE) rates, changes in the left ventricular end-diastolic diameter (LVEDD) and ejection fraction (EF) values, and stent numbers were examined during hospitalization, and follow-up was performed at 1, 3, 6, and 12 months postoperatively.

RESULTS: During hospitalization, there were no significant differences in the MACE rates, LVEDD, and EF values and in the follow-up outcomes at 1, 3, 6, and 12 months postoperatively among the patients in the 2 groups ($P > 0.05$). A significantly lower number of stents were implanted in the IVUS group than in the non-IVUS group patients ($P < 0.05$).

CONCLUSION: During the IVUS-guided emergency intervention, enhanced antithrombotic therapy and best medical care for low-risk STEMI patients may be feasible.

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KEYWORDS: IVUS ; STEMI ; aspiration thrombectomy, stent

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Teşekkürler
