Sol atriyal trombüsü olan ve antikoagülan alan hastada kardiyoversiyon öncesi TEE'de trombüs varlığını devam ettiriyor. Ne yapalım?

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Ankara Üniversitesi Tıp Fakültesi
Kardiyoloji Anabilim Dalı

07.04.2017, 6. AF Zirvesi, ANTALYA

AF Kardiyoversiyonu – TE Riski

- AF x5 TE risk.
  - AF başlangıcı ilk 12 saat plt akt ve trombin generasyonu,
  - İlk 48 saat %4,
  - İlk 72 saat % 14 trombüs oluşumu.
  - Trombüs olanlarda yıllık emboli riski %10,4; ölüm riski %15.

- CV da TE riskini arttırıyor.
  - Mekanizma:
    - Oluşan trombüsün mekanik kuvvetini kazanan atriyum kontraksiyonu ile atılması.
    - Post CV atriyal stunning ile yeni trombüs oluşumu.

Antithrombotic Therapy in Atrial Fibrillation*

and delayed. Therefore, for patients with AF of unknown or long duration, the following is recommended:

1. Anticoagulation should be given for 3 weeks before elective cardioversion.

2. Anticoagulation should be continued for 4 weeks after successful cardioversion for two reasons: It will prevent the

- AF de antitrombotik tedavi; bu konuda ilk guideline denilebilir
  - Bjerkelund ve Orning 1969
    - OAK sız CV % 5,3 emboli
    - OAK lı (Warfarin) CV % 0,8 emboli
  - Mannig ve ark. 1989
    - CV sonrası atriyal fonksiyonlar 3 haftada düzelir

Chest 1995 Oct;108:352-359

2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS

Stroke prevention in patients designated for cardioversion of AF			
Anticoagulation with heparin or a NOAC should be initiated as soon as possible before every cardioversion of AF or atrial flutter.	IIa	B	708, 709
For cardioversion of AF/atrial flutter, effective anticoagulation is recommended for a minimum of 3 weeks before cardioversion.	I	B	648, 708
Transoesophageal echocardiography (TOE) is recommended to exclude cardiac thrombus as an alternative to preprocedural anticoagulation when early cardioversion is planned.	I	B	648, 708
In patients at risk for stroke, anticoagulant therapy should be continued long-term after cardioversion according to the long-term anticoagulation recommendations, irrespective of the method of cardioversion or the apparent maintenance of sinus rhythm. In patients without stroke risk factors, anticoagulation is recommended for 4 weeks after cardioversion.	I	B	353, 710
In patients where thrombus is identified on TOE, effective anticoagulation is recommended for at least 3 weeks.	I	C	
A repeat TOE to ensure thrombus resolution should be considered before cardioversion.	IIa	C	

Erken CV tercih edip TEE yaparsak, trombüs saptadığımız zaman CV'a engel çıkıyor. Biraz sabredersek (3 hafta), trombüs engeli yok…

European Heart Journal (2016) **37**, 2893–2962

Risk for Clinical Thromboembolism Associated with Conversion to Sinus Rhythm in Patients with Atrial Fibrillation Lasting Less Than 48 Hours

Marilyn J. Weigner, MD; Todd A. Caulfield, MD; Peter G. Danias, MD, PhD; David I. Silverman, MD; and Warren J. Manning, MD

- 1997, AF, <48 saat
- 1822 hasta taranmış
  - 375 hasta AF<48 saat
  - 357 (%95,2) hasta sinüse dönmüş
  - 250hasta (%66,7) spontan
  - 107 hasta(28,5) kardiyoversiyon(medikal ve elektriksel)
- 3 hastada tromboemboli
- AF<48 saat , çok düşük emboli riski

Early cardioversion can be performed without TOE in patients with a definite duration of AF <48 hours.	IIa	B	648
In patients at risk for stroke, anticoagulant therapy should be continued long-term after cardioversion according to the long-term anticoagulation recommendations, irrespective of the method of cardioversion or the apparent maintenance of sinus rhythm. In patients without stroke risk factors, anticoagulation is recommended for 4 weeks after cardioversion.	I	B	353,710

Ann Intern Med. 1997;126:615-20.

>48 saat AF'de
KONVANSİYONEL vs. TEE-GUIDED CV

- TEE'nin olası avantajları:
  - LAA'daki trombüsü saptayarak, emboli riskini azaltması,
  - **Erken** CV'a imkan sağlama, böylelikle sinüse dönme şansının artması,
  - Daha kısa süreli OAK kullanımı ve daha az kanama
- Dezavantajları:
  - Maliyet artışı,
  - Deneyimli doktor ihtiyacı,
  - Yanlış (+) sonuçlar.

Role of Transesophageal Echocardiography-Guided Cardioversion of Patients With Atrial Fibrillation

Allan L. Klein, MD, FACC, R. Daniel Murray, PHD, Richard A. Grimm, DO, FACC
Cleveland, Ohio

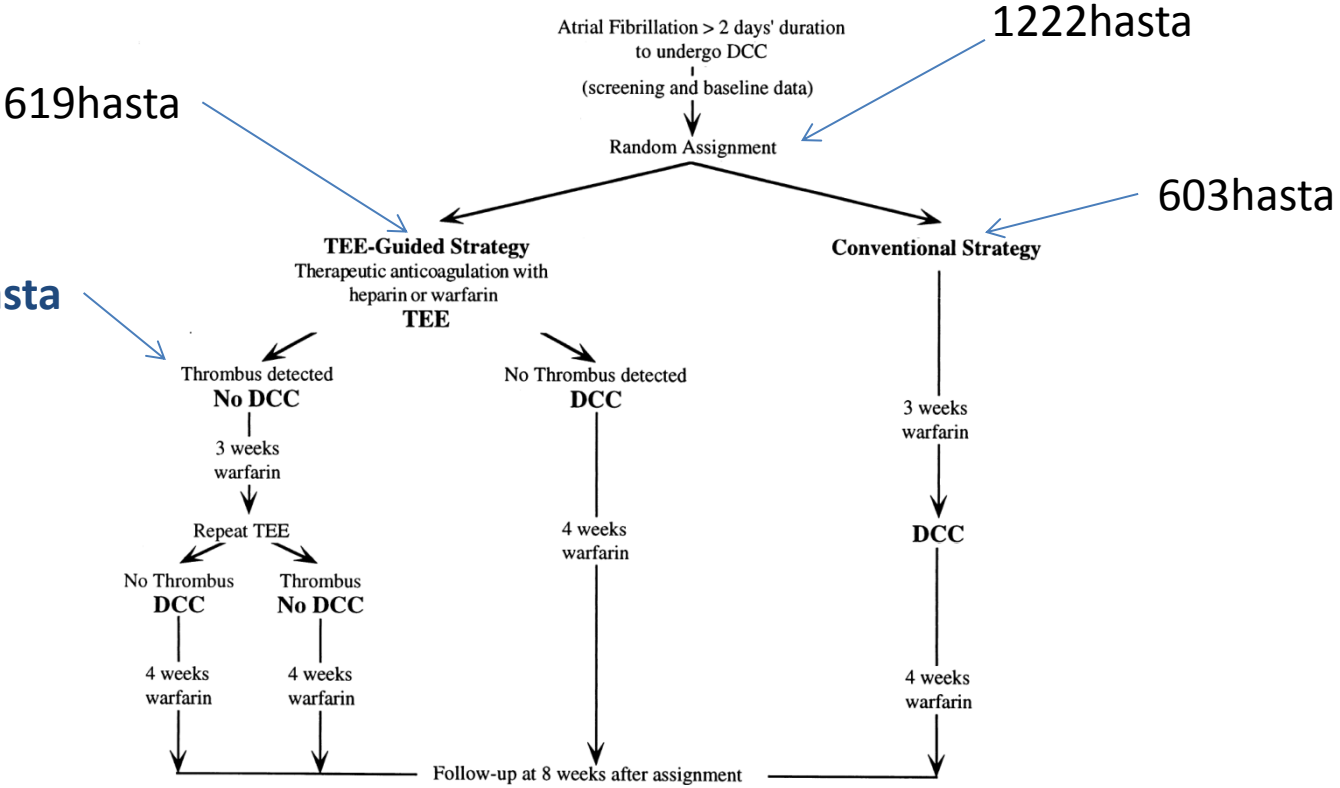
The ACUTE multicenter study

1222hasta

619hasta

603hasta

76(%14)hasta

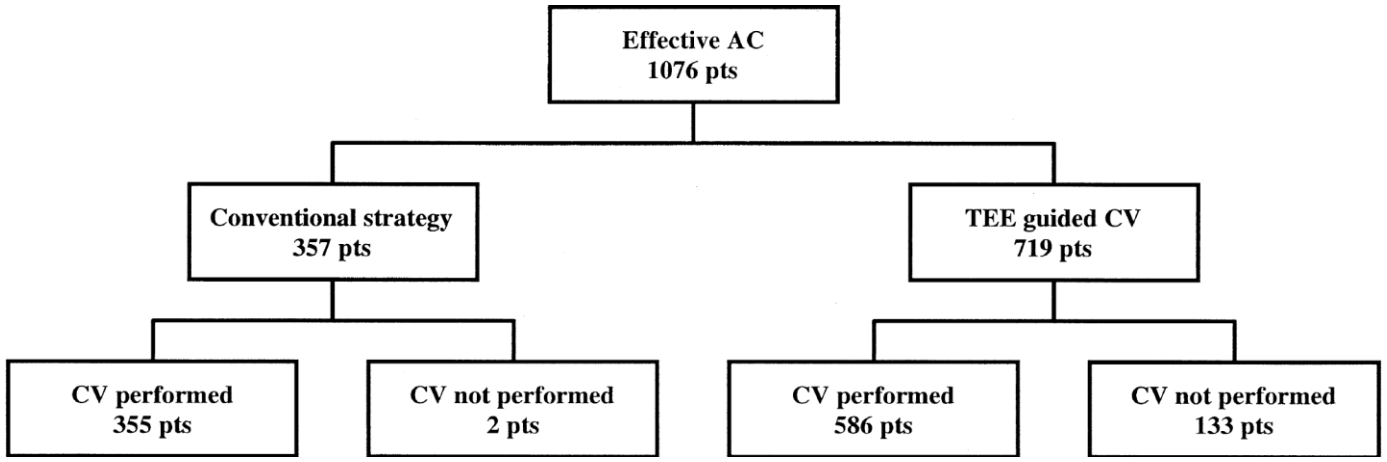


- İnme, TİA, periferik emboli: TEE kolu/Konvansiyonel kol : %0,81/%0,5 p=0,5
- Major ve minör kanama: TEE kolu/Konvansiyonel kol : %2,9/%5,5 p=0,02

J Am Coll Cardiol 2001;37:691–704

Embolic Events in Patients With Atrial Fibrillation and Effective Anticoagulation: Value of Transesophageal Echocardiography to Guide Direct-Current Cardioversion

Final Results of the Ludwigshafen Observational Cardioversion Study



- AF, CV öncesi 3 hafta efektif antikoagülasyon (INR:2-3), 2 grup
- 3 hafta sonrası TEE de trombüs oranı **%7,7** (EFEKTİF ANTİKOAGULASYON)
- **Trombüs olanlarda 4 hf INR hedefi 3-3,5 sonrası % 55 rezolüsyon.*****
- TEE guided CV (719hasta),
  - 6 hastada emboli (%0,8)
- Konvansiyonel strateji (357 hasta)
  - 3 hastada emboli (%0;8)

FARK YOK

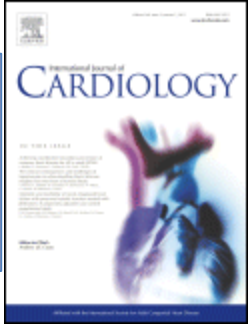
JACC 2002;39:1436-42

HANGİ ANTİKOAGÜLAN ?

- WARFARİN

- NOAK

Efficacy and safety of direct oral anticoagulants in patients undergoing cardioversion for atrial fibrillation: A systematic review and meta-analysis of the literature☆

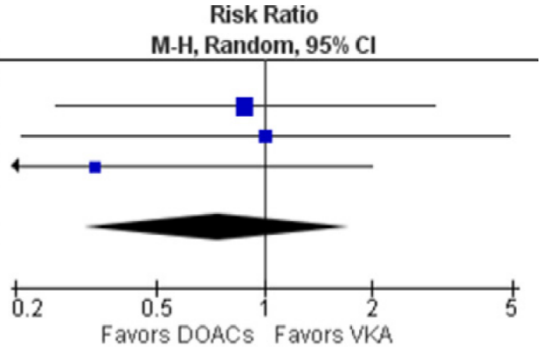


4 büyük randomize çalışma, 4517 CV (2869 NOAC/1648VKA)

A

Study or Subgroup	DOACs Events	DOACs Total	VKA Events	VKA Total	Weight	Risk Ratio M-H, Random, 95% CI
ARISTOTLE	0	412	0	331		Not estimable
RE-LY	7	1319	4	664	48.4%	0.88 [0.26, 3.00]
ROCKET-AF	3	160	3	161	28.9%	1.01 [0.21, 4.91]
X-VeRT	2	978	3	492	22.8%	0.34 [0.06, 2.00]
Total (95% CI)		**2869**		**1648**	**100.0%**	**0.73 [0.31, 1.72]**
Total events	12		10			

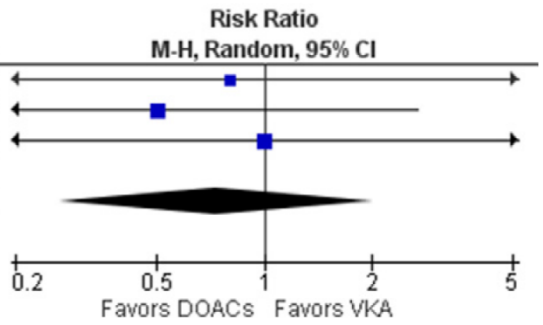
Heterogeneity: Tau² = 0.00; Chi² = 0.98, df = 2 (P = 0.61); I² = 0%
Test for overall effect: Z = 0.71 (P = 0.48)



B

Study or Subgroup	DOACs Events	DOACs Total	VKA Events	VKA Total	Weight	Risk Ratio M-H, Random, 95% CI
ARISTOTLE	2	412	2	331	27.2%	0.80 [0.11, 5.67]
ROCKET-AF	2	160	4	161	36.6%	0.50 [0.09, 2.71]
X-VeRT	4	978	2	492	36.2%	1.01 [0.18, 5.47]
Total (95% CI)		**1550**		**984**	**100.0%**	**0.73 [0.27, 2.03]**
Total events	8		8			

Heterogeneity: Tau² = 0.00; Chi² = 0.33, df = 2 (P = 0.85); I² = 0%
Test for overall effect: Z = 0.59 (P = 0.55)



The ROCKET AF study included also 79 patients undergoing catheter ablation.

Fig. 2. Forest plot of stroke or systemic embolism (Panel A) or cardiovascular death (Panel B) in patients with atrial fibrillation receiving direct oral anticoagulants (DOACs) or vitamin K antagonists (VKAs) and undergoing cardioversion. The ROCKET AF study included also 79 patients undergoing catheter ablation.

İnme/sistemik emboli: %0,41/%0,61 p=0,48

Kardiovasküler ölüm: %0,52/%0,81 p=0,55

International Journal of Cardiology 185 (2015) 72–77

Rivaroxaban vs. vitamin K antagonists for cardioversion in atrial fibrillation

- X-VeRT (n=1504)
  - (Riva=978, W=492)
- Erken CV (1-5gün), Geç CV (3-8hafta)
- İnme, TİA, periferik emboli, MI, ölüm
  - Riva=(n=5)%0,51, W=(n=5)%1,02
  - Riva= 4 erken CV, 1 geç CV
  - W= 3 erken CV, 2 geç CV
  - Riva grubunda erken CV daha fazla (p<0,001)
- Majör kanama
- Riva=(n:6)%0,6, W=(n:4)%0,8
- Erken CV da warfarin kadar efektif

European Heart Journal (2014) 35, 3346–3355

AF KARDİYOVERSİYONUNDA OAK FAYDALARI - Mekanizma

- CV ÖNCESİ
  - Trombüs rezolüsyonu **
    - » Lysis?
    - » Migration?
  - Trombüs organizasyonu
- CV SONRASI
  - Atr. Stunning sırasında yeni trombüs oluşumunun önlenmesi

TROMBÜS REZOLÜSYONU

Study (Reference no.)	n	Frequency of Thrombus	Anticoagulation Duration	Atrial Thrombus Resolved on Second TEE
Stoddard 1995 (106)	21	NA	5 to 17 weeks	9/21 (43%)
Collins 1995 (120)	18	NA	4 weeks (median)	16/18 (89%)
Tsai 1997 (121)	8	10%	NA	6/8 (75%)
Klein 1997 (4)	7	13%	6 weeks	3/7 (43%)
Jaber 2000 (122)	164	NA	6.7 weeks (mean)	131/164 (80%)
Corrado 1999 (116)	11	11%	4 weeks (median)	9/11 (82%)

NA = not available; TEE = transesophageal echocardiography.

Atrial Thrombi Resolution After Prolonged Anticoagulation in Patients With Atrial Fibrillation*

A Transesophageal Echocardiographic Study

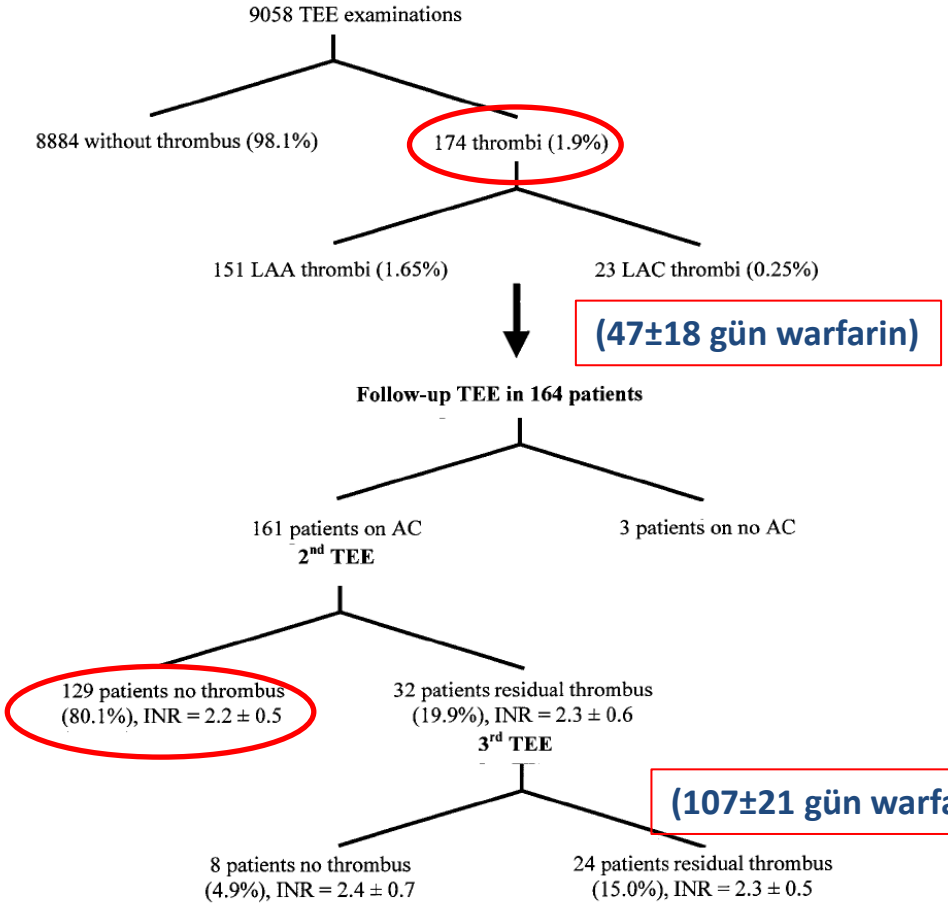
Giovanni Corrado, MD; Giorgio Tadeo, MD; Sandro Beretta, MD;

Background: Cardioversion of atrial fibrillation in nonanticoagulated patients may be associated with clinical thromboembolism. Prolonged anticoagulation with warfarin before cardioversion of atrial fibrillation produces a marked reduction of cardioversion-related thromboembolism. The benefit of anticoagulant therapy is generally believed to be due to atrial thrombi organization.
Patients and methods: Transesophageal echocardiography (TEE) is highly accurate for diagnosis of atrial thrombi and gives the possibility to serially evaluate the effects of anticoagulant therapy. One hundred twenty-three patients with atrial fibrillation lasting longer than 2 days underwent TEE before cardioversion. An atrial thrombus was identified in 11 patients (9%), and was always confined to the left atrial appendage. TEE was repeated after a median of 4 weeks of oral warfarin. Atrial thrombus had completely resolved in 9 of 11 patients (81.8%; 95% CI, 48.2 to 97.7%); in two patients, clot was still present. No patient had clinical thromboembolism between the two TEE studies.
Conclusions: In the population of our study, a prolonged course of warfarin therapy was associated with resolution of atrial thrombi in the majority of patients. According to these data, the mechanism of thromboembolism reduction with 4 weeks of anticoagulation before cardioversion in patients with atrial fibrillation seems to be related mainly to thrombus lysis rather than organization. Due to the possibility of thrombus persistence even after prolonged anticoagulation, follow-up with TEE before cardioversion is necessary to document thrombus resolution.

(CHEST 1999; 115:140–143)

Efficacy of anticoagulation in resolving left atrial and left atrial appendage thrombi: A transesophageal echocardiographic study

Wael A. Jaber, MD, David L. Prior, MBBS, PhD, Maran Thamilarasan, MD, Richard A. Grimm, DO, James D. Thomas, MD, Allan L. Klein, MD, and Craig R. Asher, MD *Cleveland, Ohio*



Daha uzun süreli antikoagülasyon faydası minimal!!!

Algorithm of patient population studied identifying site of thrombi in LAC or LAA and percentage of thrombus resolution. AC, Anticoagulation; *INR*, international normalized ratio; *TEE*, transesophageal echocardiogram.

Am Heart J 2000;140:150-6

Left atrial thrombus resolution in atrial fibrillation or flutter: Results of a prospective study with rivaroxaban (X-TRA) and a retrospective observational registry providing baseline data (CLOT-AF)

Gregory Y. H. Lip, MD,[a,b] Christoph Hammerstingl, MD,[c] Francisco Marin, MD,[d] Riccardo Cappato, MD,[e]

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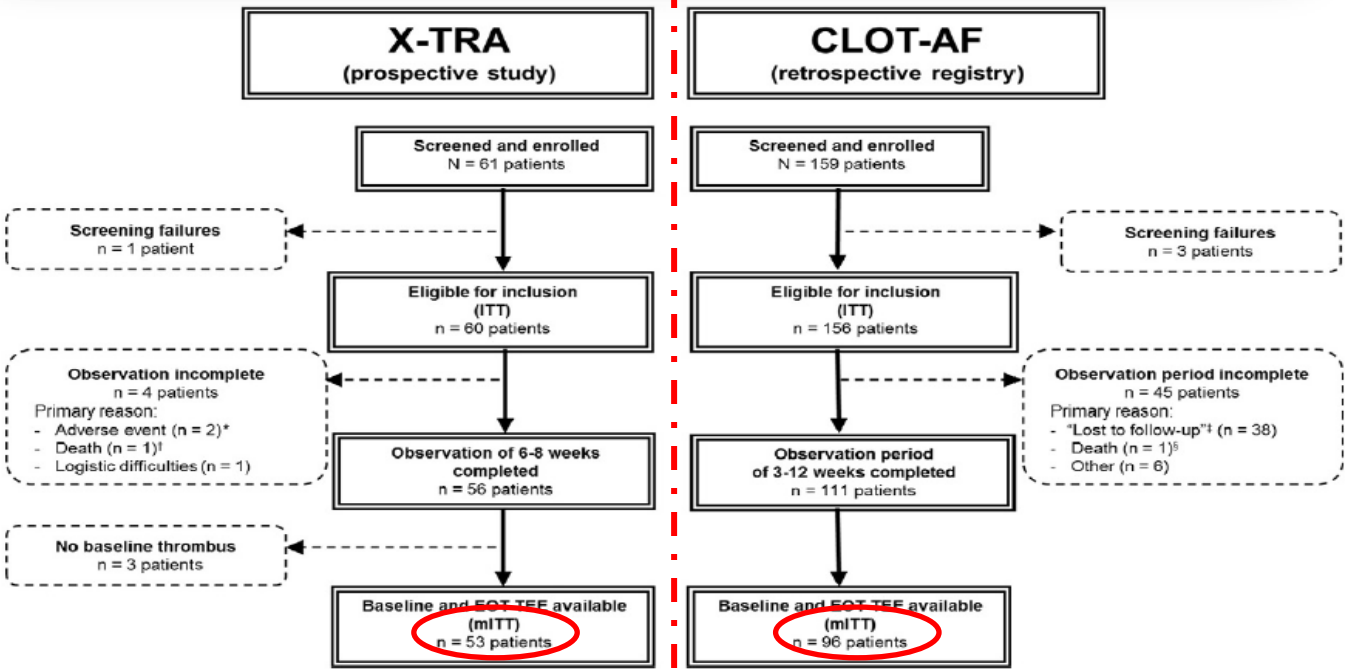
AHJ American Heart Journal



- Doğu Avrupa
- %75 persistan veya permanent AF
- **6 hafta NOAK tedavisi** sonrası kontrol TEE
- Medyan CHADSVSc skoru: 4

- Doğu ve Batı Avrupa
- %56 persistan veya permanent AF
- **3-12 hafta VKA tedavisi** sonrası kontrol TEE
- Medyan CHADSVSc skoru: 3

(Am Heart J 2016;178:126-34.)

Left atrial thrombus resolution in atrial fibrillation or flutter: Results of a prospective study with rivaroxaban (X-TRA) and a retrospective observational registry providing baseline data (CLOT-AF)

Gregory Y. H. Lip, MD,[a,b] Christoph Hammerstingl, MD,[c] Francisco Marin, MD,[d] Riccardo Cappato, MD,[e]

AHJ American Heart Journal

Table II. Resolution rates of LA/LAA thrombi

	Evaluation set	Total n	Thrombus resolution: n thrombus resolved	Thrombus resolution: %	Thrombus resolution: 95% CI
Prospective X-TRA study					
Complete thrombus resolution (assessed by blinded adjudicators)*	mITT	53	22	41.5	28.1-55.9
Complete thrombus resolution (assessed by blinded adjudicators), worst-case scenario considering subjects without EOT TEE as nonresolved	ITT	60	22	36.7	24.6-50.1
Resolved or reduced thrombus (assessed by blinded adjudicators)†	mITT	53	32	60.4	46.0-73.6
Retrospective CLOT-AF registry					
Complete thrombus resolution	mITT	96	60	62.5	52.0-72.2
Complete thrombus resolution by region					
Eastern Europe	mITT	46	26	56.5	41.1-71.1
Western Europe	mITT	50	34	68.0	53.3-80.5
Complete thrombus resolution, worst-case scenario considering subjects without EOT TEE as nonresolved	ITT	156	60	38.5	30.8-46.6
Complete thrombus resolution, best-case scenario considering subjects without EOT TEE as resolved	ITT	156	120	76.9	69.5-83.3

*This includes 2 patients who had 2 thrombi each. Both thrombi were resolved in each case.

(Am Heart J 2016;178:126-34.)

Left atrial thrombus resolution in atrial fibrillation or flutter: Results of a prospective study with rivaroxaban (X-TRA) and a retrospective observational registry providing baseline data (CLOT-AF)

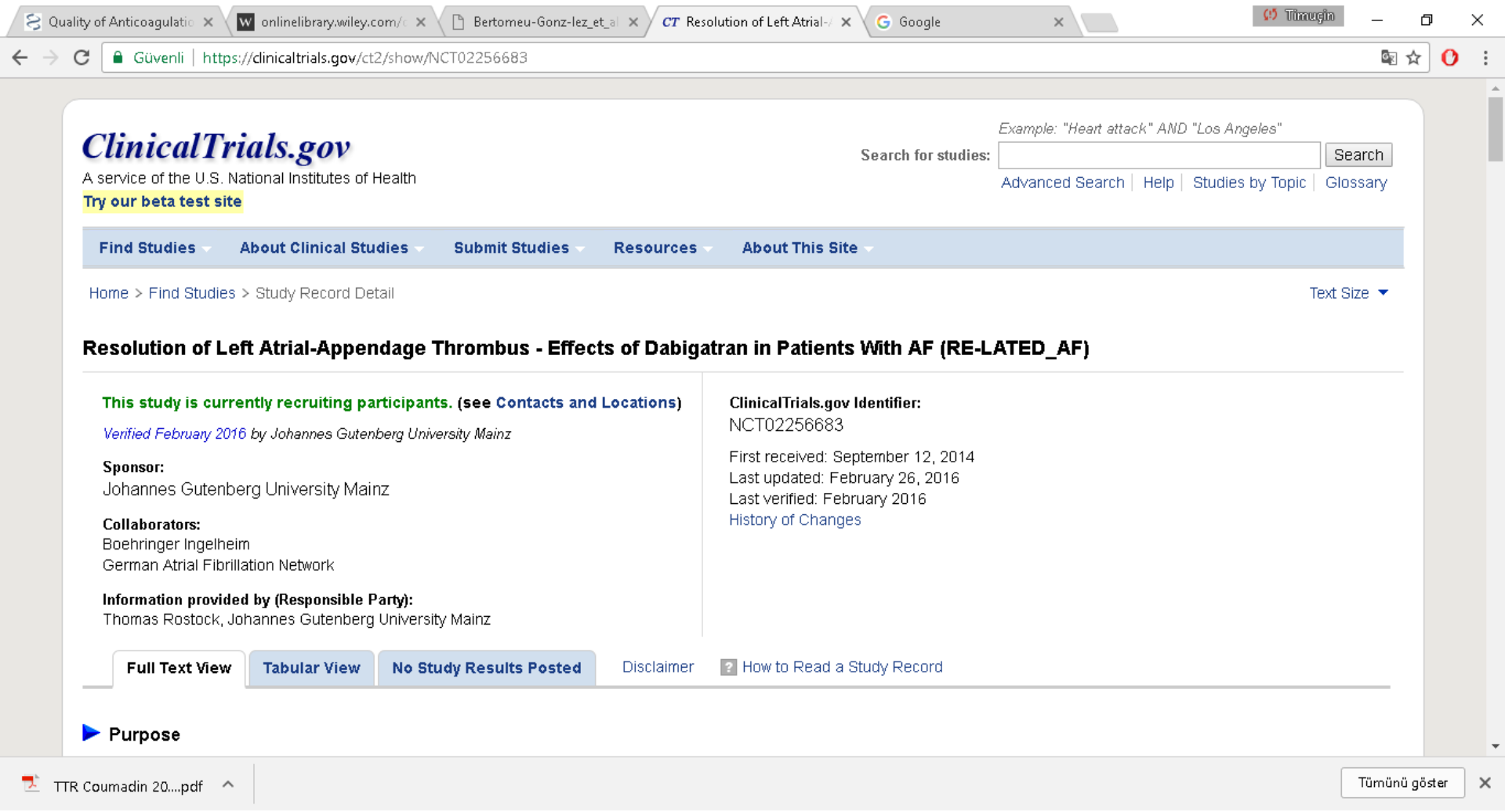
Gregory Y. H. Lip, MD,[a,b] Christoph Hammerstingl, MD,[c] Francisco Marin, MD,[d] Riccardo Cappato, MD,[e]

Table III. Stroke, non-CNS systemic embolism, bleeding, and AE rate (ITT population)

Other outcomes	Total n	n with event	%
Prospective X-TRA study			
Stroke/non-CNS systemic embolism	60	0	0
Bleeding events			
Major bleeding	60	0	0
Nonmajor bleeding	60	5	8.3
TEAEs	60	22	36.7
Related TEAE	60	3	5.0
TEAE causing premature study termination	60	3	5.0
TEAE of special interest*	60	4	6.7
Treatment-emergent serious AE	60	7	11.7
Related treatment-emergent serious AE	60	1	1.7
Death	60	1	1.7
Retrospective CLOT-AF registry			
Stroke/transient ischemic attack or non-CNS systemic embolism†,‡	156	4	2.6
(Major) bleeding events	156	1	0.6

(Am Heart J 2016;178:126-34.)

Dabigatran


Quality of Anticoagulatic
onlinelibrary.wiley.com/
Bertomeu-Gonz-lez_et_al
Resolution of Left Atrial-
Google
Timuçin
Güvenli | https://clinicaltrials.gov/ct2/show/NCT02256683
ClinicalTrials.gov
A service of the U.S. National Institutes of Health
Try our beta test site
Example: "Heart attack" AND "Los Angeles"
Search for studies:
Search
Advanced Search | Help | Studies by Topic | Glossary
Find Studies
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Submit Studies
Resources
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Home > Find Studies > Study Record Detail
Text Size
Resolution of Left Atrial-Appendage Thrombus - Effects of Dabigatran in Patients With AF (RE-LATED_AF)
This study is currently recruiting participants. (see Contacts and Locations)
Verified February 2016 by Johannes Gutenberg University Mainz
Sponsor:
Johannes Gutenberg University Mainz
Collaborators:
Boehringer Ingelheim
German Atrial Fibrillation Network
Information provided by (Responsible Party):
Thomas Rostock, Johannes Gutenberg University Mainz
ClinicalTrials.gov Identifier:
NCT02256683
First received: September 12, 2014
Last updated: February 26, 2016
Last verified: February 2016
History of Changes
Full Text View
Tabular View
No Study Results Posted
Disclaimer
How to Read a Study Record
Purpose
TTR Coumadin 20....pdf
Tümünü göster

Left atrial thrombus formation and resolution during dabigatran therapy: A Japanese Heart Rhythm Society report

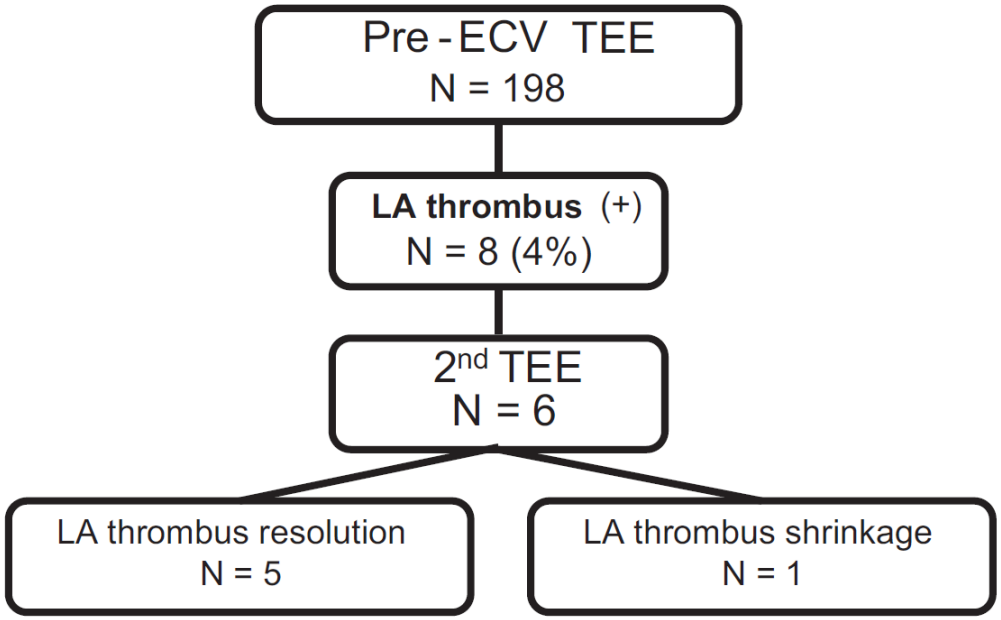
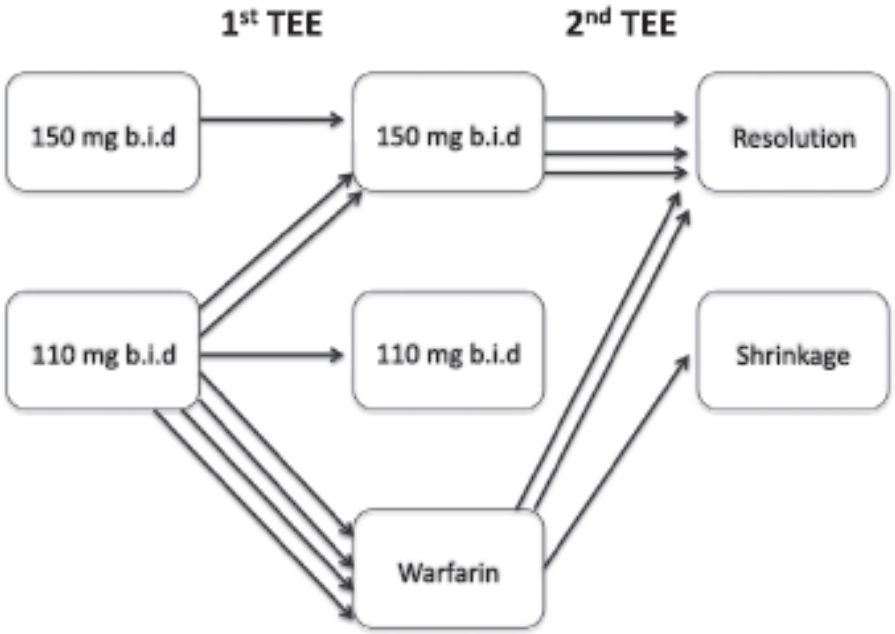


Fig. 1. Summary of serial TEE findings. ECV, electrical cardioversion; TEE, transesophageal echocardiography; LA, left atrial.

- Trombüs olan 8 hasta: yaşlı, CHADS2 yüksek, eski inmesi olanlarda trombüs riski daha fazla.

Journal ofArrhythmia31(2015)226–231

Left atrial thrombus formation and resolution during dabigatran therapy: A Japanese Heart Rhythm Society report



- 6 hastaya 2. kontrol TEE yapılıyor.
- Kontrol TEE de 5 hastada trombüs rezolüsyonu izleniyor
- Toplam 2 hasta (%1) inme geçiriyor, ikisi de TEE'de trombüs (-) hastalar.

Journal ofArrhythmia31(2015)226–231

Updated European Heart Rhythm Association Practical Guide on the use of non-vitamin K antagonist anticoagulants in patients with non-valvular atrial fibrillation

Management of a patient with documented left atrial appendage thrombus

Patients in whom TOE identifies a left atrial thrombus should not undergo cardioversion. Observational and prospective data did not show a different thrombus incidence in patients treated with NOAC or VKA.[237–240] There are no data on the best strategy when a thrombus is detected on either form of anticoagulant, but there may be a preference to treat the patient with rigorously followed-up INR monitoring under VKA therapy until resolution of the thrombus (with heparin bridging if necessary). Trials are ongoing to address this clinical scenario, such as RE-LATED_AF (with dabigatran; NCT02256683) and X-TRA (with rivaroxaban; NCT01839357)[244] the latter of which will report first.

Europace Advance Access published August 31, 2015

Fate of Left Atrial Thrombi in Patients With Atrial Fibrillation Determined by Transesophageal Echocardiography and Cerebral Magnetic Resonance Imaging

Peter Bernhardt, MD, Harald Schmidt, MD, Christoph Hammerstingl, MD, Matthias Hackenbroch, MD, Torsten Sommer, MD, Berndt Lüderitz, MD, PhD, and Heyder Omran, MD

- n: 43 hasta, AF.

	Trombüs rezolüsyon oranı
1. ay	% 16
3. ay	% 42
6. ay	% 49
12. ay	% 56

Uzun süreli antikoagülasyon faydalı olabilir??

Trombüs rezolüsyonu:

-Küçük trombüs

-Düşük ekojenite

-Küçük sol atriyum

Am J Cardiol 2004;94:801–804

Efficacy and Safety of Apixaban in Patients After Cardioversion for Atrial Fibrillation

Insights From the ARISTOTLE Trial

- ARISTOTLE (n=18 201)
  - 540 DC CV APİX=265, W=275

- Pre DC CV tedavi:
  - APİX 243±231gün
  - W 251±248gün

Uzun süreli antikoagülasyon faydalı olabilir??

- 30. gün kontrolde 2 grupta da inme yok

Table 2 Clinical Outcomes After Any Cardioversion, Within 30 Days, in Patients Assigned to Either Warfarin or Apixaban

Outcomes	Warfarin (n = 412)	Apixaban (n = 331)	Total (n = 743)
Stroke or systemic embolism	0	0	0
Myocardial infarction	1 (0.2)	1 (0.3)	2 (0.2)
Major bleeding	1 (0.2)	1 (0.3)	2 (0.2)
Death	2 (0.5)	2 (0.6)	4 (0.5)

J Am Coll Cardiol 2014;63:1082–7

Sol atriyal trombüsü olan ve antikoagülan alan hastada kardiyoversiyon öncesi TEE'de trombüs varlığını devam ettiriyor. Ne yapalım? -

Vaka

- G. O., 74 y, K
- Çarpıntı ve nefes darlığı.
- HT, KKY ve rekürren persistan AF.
- CHADSVASc: 4,
- EKO: LA çap 5,3 cm

	Girişim	Antikoagülan	
Ocak 2016	Farmakolojik KV-SR	Apiksaban 2x2,5 mg	
Şubat 2016	Elektriksel KV-SR	Apiksaban 2x5 mg	
Eylül 2016	Elektriksel KV-SR	Apiksaban 2x5 mg	
Kasım 2016	Ablasyon planı	Apiksaban 2x5 mg	TROMBÜS
Mart 2017	KV planı	Apiksaban 2x5 mg	TROMBÜS

Sol atriyal trombüsü olan ve antikoagülan alan hastada kardiyoversiyon öncesi TEE'de trombüs varlığını devam ettiriyor. Ne yapalım? -

2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS

In patients where thrombus is identified on TOE, effective anticoagulation is recommended for at least 3 weeks.	I	C
A repeat TOE to ensure thrombus resolution should be considered before cardioversion.	IIa	C

European Heart Journal (2016) **37**, 2893–2962

Role of transesophageal echocardiography guided cardioversion in patients with atrial fibrillation, previous left atrial thrombus and effective anticoagulation

n= 520 (TEE) (CV planı)

n= 453 (tr (-))

n= 67 (tr (+))

4 hf efektik OAK

TEE kılavuzlu CV
n=20

Blinded CV
n= 47

tr (-)
n=18

tr (+)
n=2

CV

3. TEE

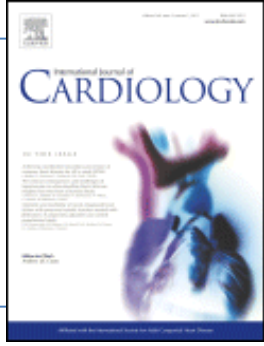
tr (+) n=2

8 hf efektik OAK

Daha uzun süreli antikoagülasyon faydası minimal!!!

International Journal of Cardiology 113 (2006) 401–405

Role of transesophageal echocardiography guided cardioversion in patients with atrial fibrillation, previous left atrial thrombus and effective anticoagulation



	Embolik olay (TİA)		
	72. saat	4. hafta	5. hafta
TEE-kılavuzlu		1	
Blind		1	1

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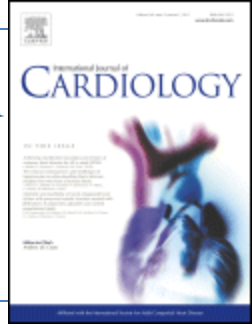


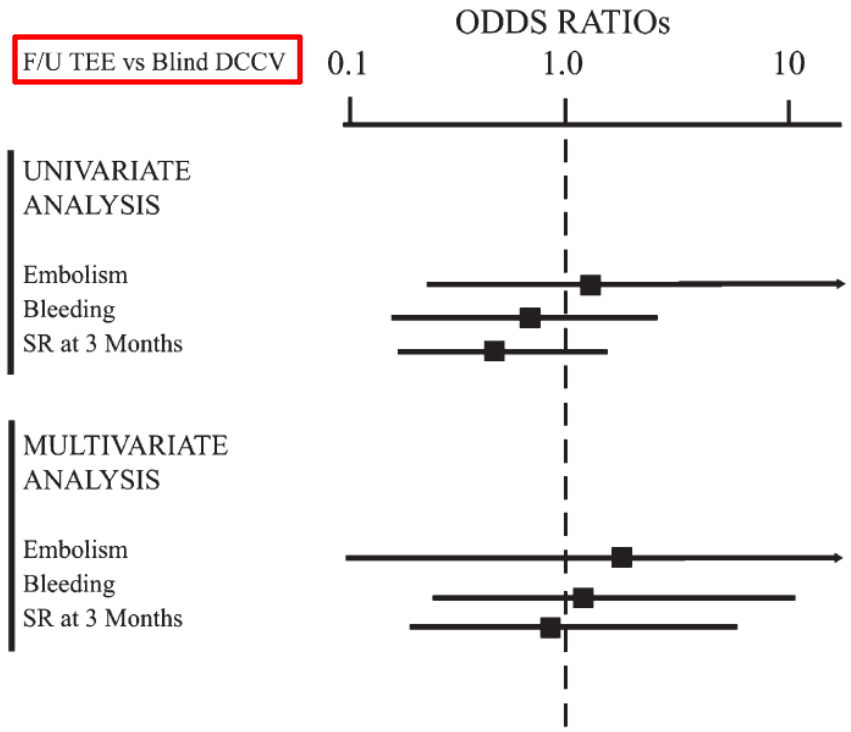
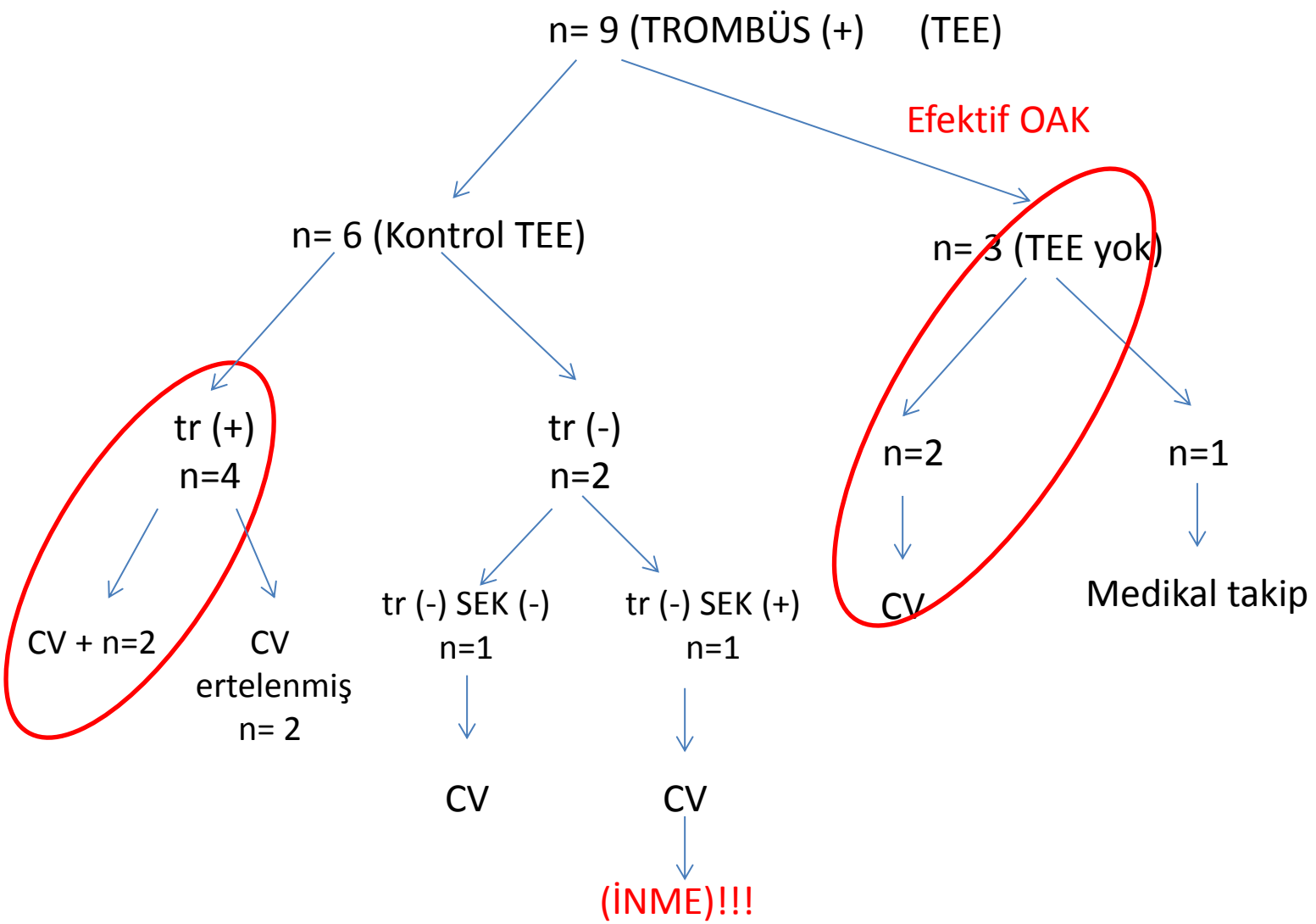


Fig. 1. Logistic regression model showing the association between the strategies of follow-up (F/U) transesophageal echocardiography (TEE) guided-versus that of blind direct-current cardioversion (DCCV). The odds ratios for embolic and bleeding complications after a median of 4 weeks of effective anticoagulation as well as for the maintenance of sinus rhythm (SR) at 3 months are reported. Horizontal lines are 95% confidence intervals.

International Journal of Cardiology 113 (2006) 401–405

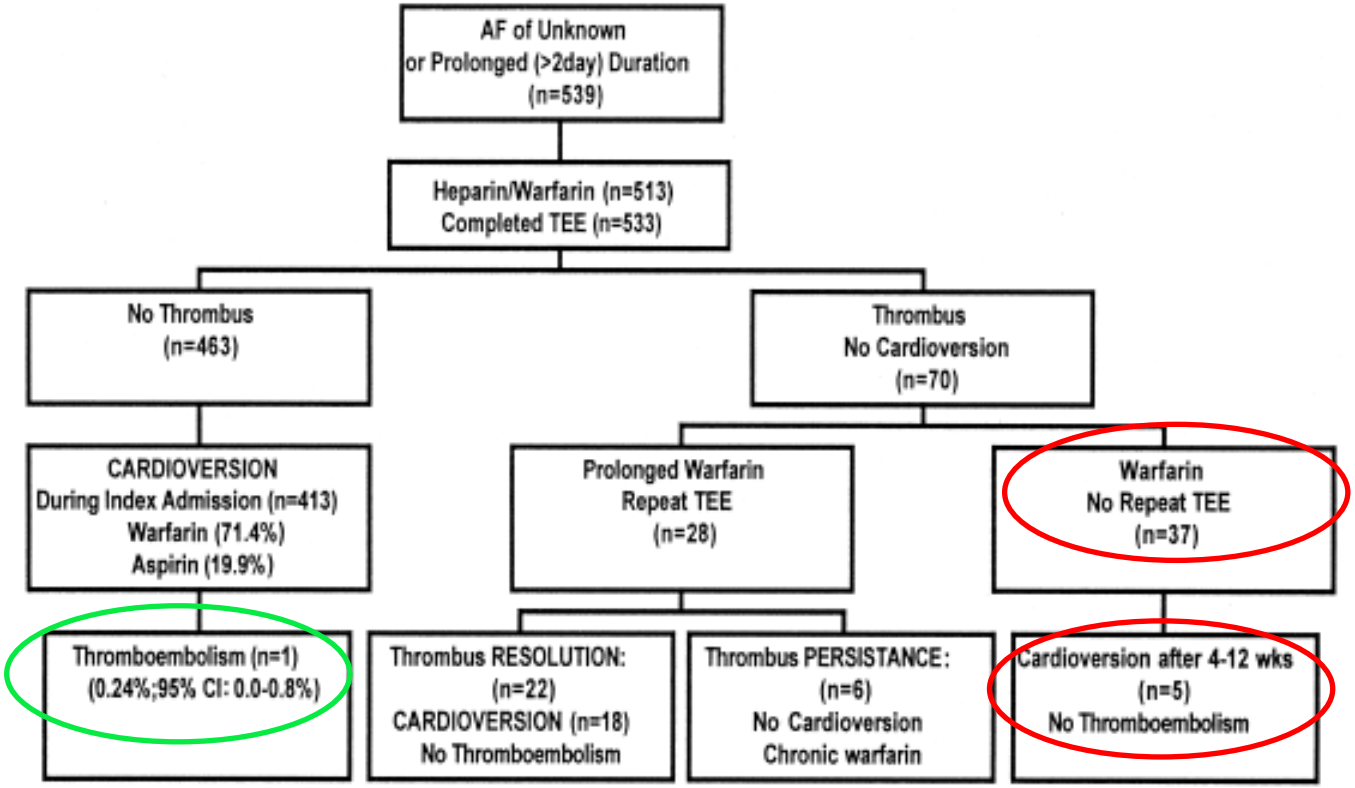
Usefulness of Transesophageal Echocardiography to Screen for Left Atrial Thrombus Before Elective Cardioversion for Atrial Fibrillation

David A. Orsinelli, MD, and Anthony C. Pearson, MD



Early Cardioversion of Atrial Fibrillation Facilitated by Transesophageal Echocardiography: Short-term Safety and Impact on Maintenance of Sinus Rhythm at 1 Year

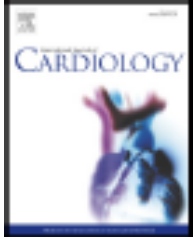
Marilyn J. Weigner, MD, Lisa R. Thomas, MD, Ujjaval Patel, MD, Jeffrey G. Schwartz, MD, Andrew J. Burger, MD, Pamela S. Douglas, MD, David I. Silverman, MD, Warren J. Manning, MD



Am J Med. 2001;110:694–702.

A fortunate outcome after electrical cardioversion with a giant persistent left atrial thrombus. Is TOE-guided strategy more preferable in high risk patients?

Elena Efimova *, Laura Ueberham, Kerstin Bode, Arash Arya



- 75 y, K hasta, D-KMP, sık AF ve uygunsuz ICD şokları.
- Son 6 hf efektif antikoagulasyon (INR: 2-3)
- CHADSVASc: 6
- 120/dk AF ile acil servise başvuruyor. Acil CV yapılıyor.
- 4 gün sonra AD şüphesi ile TEE --- "BÜYÜK LA TROMBÜS"
- INR 3-3,5 HEDEFLE VERİLİYOR.
- 14. GÜN TEE: TROMBÜS YOK.

International Journal of Cardiology 208 (2016) 1–3

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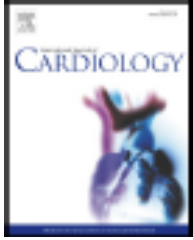
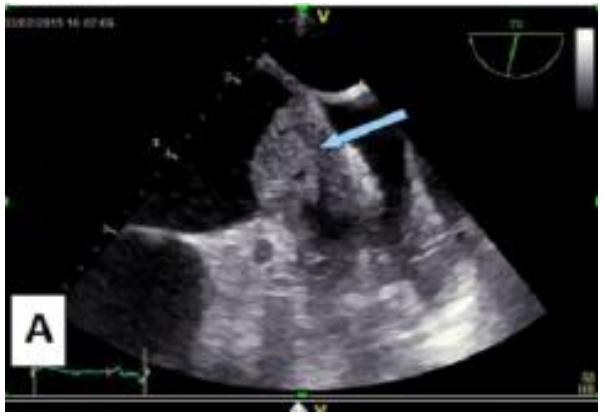
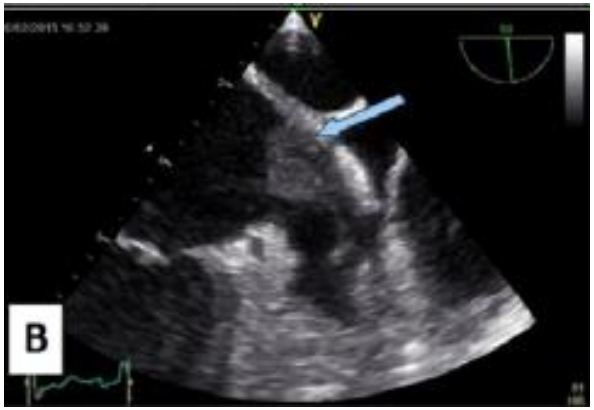


4. GÜN



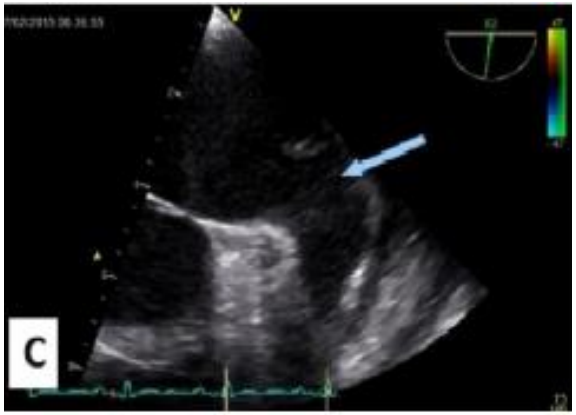
INR 2-3 → INR 3-3,5

7. GÜN



INR 3-3,5

14. GÜN



INR 3-3,5

International Journal of Cardiology 208 (2016) 1–3

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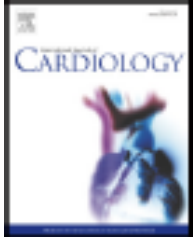
Elena Efimova *, Laura Ueberham, Kerstin Bode, Arash Arva

International Journal of Cardiology 208 (2016) 1–3



- Bu hastada INR efektif idi, ama hangi sıklıkla bakılıyordu?
  - 6 haftada 2 kez.

Quality of Anticoagulation With Vitamin K Antagonists

Vicente Bertomeu-González, MD, PhD; Manuel Anguita, MD, PhD; José Moreno-Arribas, MD; Ángel Cequier, MD, PhD; Javier Muñiz, MD, PhD; Jesús Castillo-Castillo, MD; Juan Sanchis, MD, PhD; Inmaculada Roldán, MD, PhD; Francisco Marin, MD, PhD; Vicente Bertomeu-Martínez, MD, PhD; on behalf of the FANTASIIA Study Investigators

Clin. Cardiol. 38, 6, 357–364 (2015)

- Çok merkezli gözlemsel çalışma.
- n= 948 (Kumadin kullanan)

- TTR > %65 iyi antikoagülasyon,
- TTR < %65 kötü antikoagulasyon

- Aylık INR kontrolü ile hastaların %54'ü kötü antikoagülasyona sahip (TTR <%65)

Bu çalışmalar ve vaka takdimine göre:

- Eğer takipte TEE yapılırsa, trombüs saptanması durumunda CV gecikebilir;

- TEE kılavuzlu yaklaşım, konvansiyonel yaklaşıma göre daha maliyetli olabilir;

- LAA trombüsü olan non-valvüler AF'li hastalarda uzun süreli OAK verilince, takipte TEE kontrolü gerekmeden CV yapılabilir mi ?

?

ÇOĞU ÇALIŞMADA OAK KULLANIMINA RAĞMEN LAA TROMBÜS ORANI %10-15. AMA CV SONRASI TE ORANI % 1'İN ALTINDA. NEDEN?

- Tüm trombüsler embolize olmaz, özellikleri ve LAA'deki yerleşimine göre farklılık gösterebilir.

- Sessiz emboliler olabilir.

- TEE yanlış pozitif sonuçlar veriyor olabilir.

GÖRÜNTÜLEME YÖNTEMİMİZ %100 DOĞRU SONUÇ VERİYOR MU ?

- **LA ve LAA trombüs açısından görüntülenmesi için TEE altın standart!!!!**
- **Sensitivite: %92**
- **Spesifisite: %98**
- **PPV: %86**

Intracardiac echocardiography for verification for left atrial appendage thrombus presence detected by transesophageal echocardiography: the ActionICE II study

WILEY CLINICAL CARDIOLOGY

Jakub Baran | Beata Zaborska | Roman Piotrowski | Malgorzata Sikora-Frąc | Ewa Pilichowska-Paszkiet | Piotr Kułakowski

Background: Transesophageal echocardiography (TEE) remains the gold standard for exclusion of left atrial appendage (LAA) thrombus in patients scheduled for direct electrical cardioversion (DEC) or atrial fibrillation (AF) ablation. Recently, intracardiac echocardiography (ICE) of the pulmonary artery (PA) has been shown to provide excellent LAA images and to be useful in verification of equivocal TEE findings.

Hypothesis: ICE of the PA may have a role in detecting false-positive TEE results.

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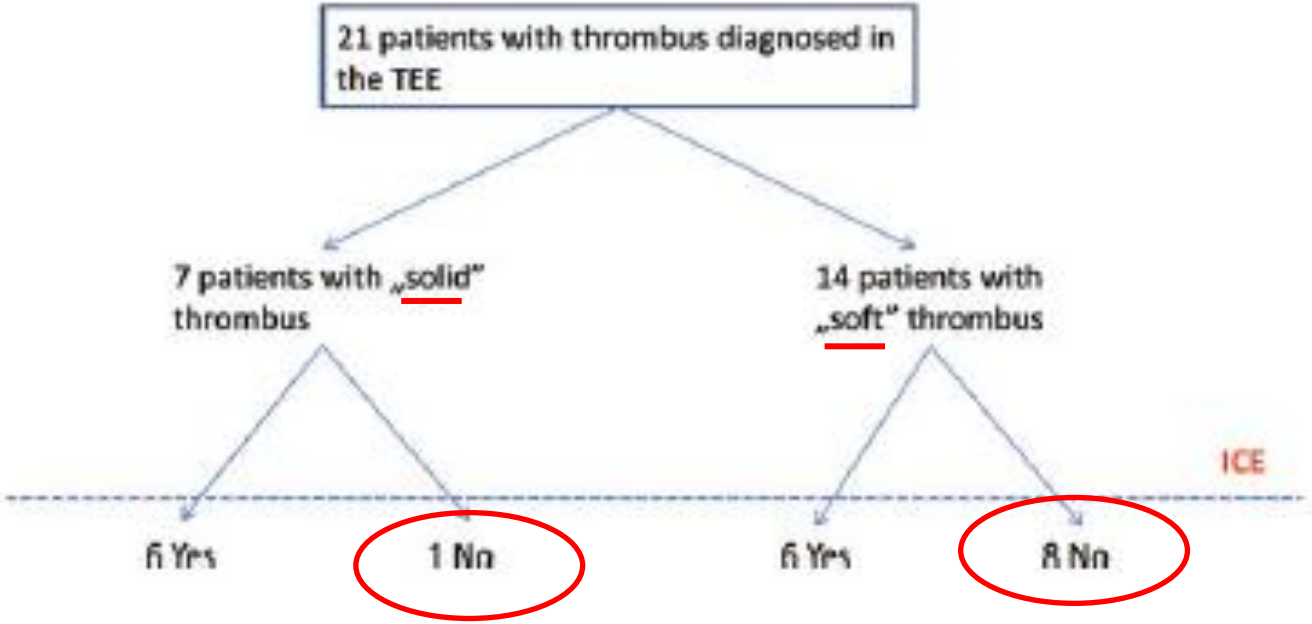

FIGURE 1 Flowchart of the patients in the trial.

Intracardiac echocardiography for verification for left atrial appendage thrombus presence detected by transesophageal echocardiography: the ActionICE II study

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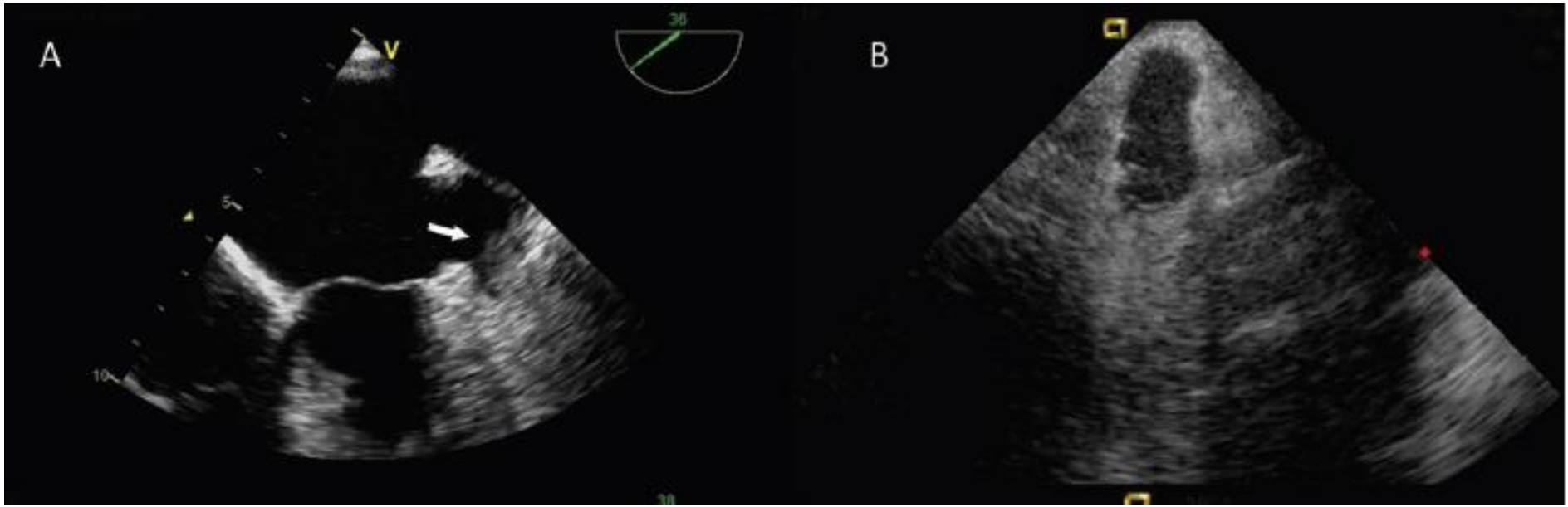
TEE **ICE**



Clinical Cardiology 2017; 1–5

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ABLE 1 Comparison of demographic and clinical parameters etween patients with or without thrombus in the LAA detected y ICE

	ICE Positive	ICE Negative	*P* Value
N	12	9	
Age, y	64 ± 8	65 ± 8	0.7799
CHADS2VASC2	2 ± 1.7	3 ± 1.6	0.1875
Heart failure	3 (25%)	1 (11.1%)	0.6030
Hypertension	7 (58.3%)	8 (88.9%)	0.1778
Diabetes mellitus	2 (16.7%)	4 (44.4%)	0.3310
Stroke/TIA	0	2 (22.2%)	0.1714
Cardiovascular disease	2 (16.7%)	1 (11.1%)	1.000
Female gender	4 (33.3%)	5 (55.6%)	0.3964
HAS-BLED	0.9 ± 0.93	1.6 ± 0.9	0.0998
Liver/kidney dysfunction	2 (16.7%)	2 (22.2%)	1.000
Major bleeding	1 (8.3%)	2 (22.2%)	0.5534
Unstable INR	1 (8.3%)	0	1.000
Alcohol/drug overtake	0	1 (11.1%)	0.4286
AF type			
Paroxysmal	4 (33.3%)	5 (55.6%)	0.3964
Persistent	2 (16.7%)	4 (44.4%)	0.3310
Persistent longstanding	6 (50%)	0	0.0186

Clinical Cardiology 2017; 1–5

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- **PEKİ; ICE, LAA TROMBÜSÜNÜ GERÇEKEN DOĞRU BİR ŞEKİLDE DIŞLIYOR MU?**

- ICE (-) OLAN 4 HASTA; 2'Sİ CV, 2'Sİ AF ABLASYONU UYGULANMIŞ; HERHANGİ BİR EMBOLİ GELİŞMEMİŞ

Clinical Cardiology 2017; 1–5

Sol atriyal trombüsü olan ve antikoagülan alan hastada kardiyoversiyon öncesi TEE'de trombüs varlığını devam ettiriyor. Ne yapalım? -

- ANTİKOAGÜLASYON DOZ VE SÜRE YETERLİ Mİ?
  - –WARFARİN:
    - •INR efektif mi? (2-3 arası VEYA DAHA YÜKSEK?? –DAHA SIK INR TAKİBİ??)
  - –NOAK:
    - •Hasta düzenli kullanıyor mu?

- BAŞKA BİR ANTİKOAGULANA GEÇELİM Mİ?
  - –WARFARİN ------→ NOAK ?
  - –NOAK----→ DOZ ARTTIRIMI, BAŞKA NOAK VEYA WARFARİN (Sık INR takibi) ?

- PIHTI OLMASINA RAĞMEN CV YAPALIM MI?

- YA DA BAŞTAN HİÇ TEE YAPMAYALIM ???? VEYA;
- •BAŞKA GÖRÜNTÜLEME YÖNTEMİ KULLANALIM???

- HIZ KONTROLÜ İLE DEVAM EDELİM Mİ?

Sol atriyal trombüsü olan ve antikoagülan alan hastada kardiyoversiyon öncesi TEE'de trombüs varlığını devam ettiriyor. Ne yapalım? -

- Rezolüsyon ihtimali fazla olan KÜÇÜK LA, KÜÇÜK TROMBÜS, DAHA AZ EKOJEN TROMBÜSLERDE DAHA ISRARCI OLUNABİLİR..., bu hastalarda yüksek INR ve daha uzun süre OAK denenebilir.

- UZUN SÜRELİ PLAN (ABLASYON)**?? : Eğer ufukta ablasyon gibi nihai bir planımız varsa, CV için (veya trombüsü eritmek için) daha ısrarcı olunabilir.

Teşekkür ederim