5. Atriyal Fibrilasyon Zirvesi 2016
12 - 14 Şubat 2016
Cornelia Hotel, Antalya

# AF Ablasyonu Sonrasında Antikoagülasyon:Kime ne kadar süreyle

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# Antikoagülasyon

- AF ablasyonundan önce
- AF ablasyonu sırasında
- AF ablasyonu sonrası
  - Erken dönemde işlemin etkileri için
  - Uzun dönemde AF'nin ortadan kalkması sonrası ne yapalım?

# Ablasyon Öncesi Antikoagülasyon

- İşlem öncesi TEE
  OAK stoplanmadan teropatik dozda işleme devam edilmesi,mümkünse 3-4 hafta önceden başlanılması (hedef INR 2.1-2.4)
- Hastanın tromboemboli riski CHADS2 ile değerlendirilmelidir.

# AF Ablasyonu Sırasında Tromboembolizm Nedenleri

- Atriyal “stunning”
- Çok sayıda intraatriyal kateter ve sheatler
- Endoteliyal bozulma,fibrozis ,skar
- Koagulasyon faktörlerinin aktivasyonu

# Increased anticoagulation intensity reduces thrombus risk during AF ablation

Ren et al, J Cardiovasc electrophysiol 2005

## Incidence of ICE detected mobile thrombus
(on sheath/catheter after T/septal)

| | ACT 250-300 | ACT >300 | p |
|---|---|---|---|
| All pts (n=511) | 11.2% | 2.8% | <0.05 |
| Pts with SEC (n=179) | 44.9% | 4.6% | <0.0001 |

# Ablasyon Sırasında Antikoagülasyon

- Başarılı transseptal septostomiden sonra ACT 300 - 400 saniye olacak şekilde heparin başlanılmalıdır.
- İşlemden sonra heparinin etkisini geri çevirmek için protamin sülfat kullanılabilir.

# AF Ablasyon Sonrası Tromboemboli

- RF enerjisi verilen lezyon tam endotelizasyonuna kadar koagülasyon kaynağı
  - Tam süresi bilinmemekle beraber 3 ay yeterli bir süre olarak değerlendirilebilir
- Atriyumların mekanik kontraktilitesini kazanması
  - Oluşan fibrozis ve yaralanan atriyal dokunun iyileşmesi (3 ay yeterli süre)
- Atriyal kontraktilitenin taşikardi sonlanmasından sonra azalması (atrial stunning) haftalar veya aylar sürebilir
  - Atrimi nüks ederse “atrial stunning” uzun sürebilir

# Ablasyon Sonrası Antikoagülasyon

- Tüm kılıflar çıkarıldıktan sonra 4-6 saat içinde warfarin ve LMWH (enoxaparin 0.5 – 1.0 mg/kg, günde iki kez) tekrar başlanır.
- İntravenöz heparin international normalized ratio (INR) hedef 2.0 – 3.0 olana kadar başlanabilir.
- Alternatif olarak direkt trombin yada Faktör Xa inhibitörler ablasyon sonrası başlanabilir.

- AF Ablasyonu yapılan tüm hastalara en az 2-3 ay boyunca OAK verilmelidir (INR:2-3)
- Direk trombin inhibitörleri yada Faktör Xa inhibitörleri ile de devam edilebilir.

# Tromboemboli Riski

- AF ablasyonu sonrası
- Erken dönemde işlemin etkileri
- Uzun dönemde AF'nin ortadan kalkması

Başarılı PV izolasyonundan sonra

Oral Antikoagülasyon ilaçlarını keselim mi?

# The Risk of Thromboembolism and Need for Oral Anticoagulation After Successful Atrial Fibrillation Ablation

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AF Ablasyonundan Sonra 3355 hasta

- Non-OAK: OAK 3 ile 6 ay sonra kesildi: 2,692 hasta (%79 erkek, ort yaş 57±11 yıl) Aspirin devam edilmiş.
- On-OAK: OAK almaya devam etti: 663 hasta (%70 erkek,ort yaş 59±11 yıl).

(J Am Coll Cardiol 2010;55:735–43)

# 3-6 ay Oral AntiKoagülan devam. Ne zaman Oral AntiKoagülanları keselim?

- Hastada
  - Atriyal aritmi (>1 dk.) rekürrensi
  - Pulmoner ven stenozu (>%70)
  - Ciddi atriyal mekanik disfonksiyon (Mitral Doppler akımda A dalgası olmayışı)

**YOKSA**

**AF yok kabul edilmiş ve CHADS skoruna bakılmaksızın OAK kesilmiş**

- Erken tekrarlayan AF/AFL varlığında CHADS2 ≥1 ise 6 ay OAK almış
- Antiaritmik ilaçsız 3 aydan fazla aritmik olayı olmayanlar OAK kesilmiş, Aspirin 81-325 mg
- OAK kesilenlerden aritmisi tekrar başlayan ve CHADS2 ≥1 olanlar tekrar OAK'a başlamış

(J Am Coll Cardiol 2010;55:735–43)

# Atrial Aritmi/rekürrens var mı?

- Her merkezin farklı bir rekürrens takip politikası
- Transtelefonik monitorizasyon (%90)
- İlk 5 ay devamlı – 1 aylık bloklar halinde günde 2-3 defa veya semptomatik olduklarında
- 1. 3. ve 6. aylarda Holter (%86)
- İmplante edilmiş cihaz varsa yararlanılmış
- Hastalara nabızlarını alma öğretilmiş ve düzensizlik saptarlarsa bildirmeleri istenmiş.
- 3. ayda EKO ile LA fonksiyonu, spiral CT ile pulmoner ven stenozu değerlendirilmiş.

(J Am Coll Cardiol 2010;55:735–43)

**Table 4** Incidence of Thromboembolic Events and Major Hemorrhage According to $CHADS_2$ Score in Off- and On-OAT Groups

| | $CHADS_2 = 0$ | | $CHADS_2 = 1$ | | $CHADS_2 \geq 2$ | |
|---|---|---|---|---|---|---|
| | Off-OAT | On-OAT | Off-OAT | On-OAT | Off-OAT | On-OAT |
| Patients, n | 1,622 | 155 | 723 | 261 | 347 | 247 |
| TE, n (%) | 1 (0.06) | 0 | 1 (0.14) | 1 (0.38) | 0 | 2 (0.81) |
| Major hemorrhage, n (%) | 0 | 1 (0.64) | 1 (0.14) | 2 (0.8) | 0 | 10 (4) |

- AF ablasyonu 3-6 ay sonrası OAK almakla almamak arasında tromboemboli yönünden fark yoktu
- Aksine majör kanama riski artmaktadır
- Risk/yarar oranı değerlendirildiğinde CHADS2 skoru yüksek olan hastalarda bile OAK kullanmamanın daha iyi olacağı yönündedir
- Ancak daha büyük prospektif randominize çalışmalar gerekir.

(J Am Coll Cardiol 2010;55:735–43)

# Do Not Stop the Warfarin Until . . .*

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- AF tam olarak tedavi edildiyse OAK kesilebilir
- AF'nin tedavi edildiğinden nasıl emin olabilirsiniz
- Yüz yüze görüşme yeterli değil (Ablasyon yapıldığı yerde 1 yılda en az bir kere görülmüş (%79)
- Takipler çok aralıklı (1,3,6,12nci ay sonra senede 1 defa)
- Takip süresi 2 yıldan biraz uzun (yeterli değil)
- 1. yılda rekürrens olmayanlarda 2nci yılda %5-13 rekürrens
- 6. yılda %55 oranında
- AF ablasyonundan sonra pil ile devamlı monitörizasyonda asemptomatik AF atakları fazladır (başarı oranı%70'den %43)
- AF süresi: 1 dakika
- CHADS2 skoru 2 üzerinde olan 347 kişide ne kadar emin olabiliriz.

European Heart Journal (2015) **36**, 307–314
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# Oral anticoagulation therapy after radiofrequency ablation of atrial fibrillation and the risk of thromboembolism and serious bleeding: long-term follow-up in nationwide cohort of Denmark

**Deniz Karasoy[1]*, Gunnar Hilmar Gislason[1,2], Jim Hansen[1], Arne Johannessen[1], Lars Køber[3], Morten Hvidtfeldt[1], Cengiz Özcan[1], Christian Torp-Pedersen[1,4], and Morten Lock Hansen[1]**

**Aim** To investigate the long-term risk of thromboembolism and serious bleeding associated with oral anticoagulation (OAC) therapy beyond 3 months after radiofrequency ablation (RFA) of atrial fibrillation (AF).

**Methods and results** Linking Danish administrative registries, 4050 patients undergoing first-time RFA (2000–11) were identified. Risk of thromboembolism and serious bleeding according to OAC therapy were analysed by incidence rates (presented per 100 person-years) and Cox proportional-hazard models. The median age was 59.5 years (interquartile range, IQR: 52.8–65.2); 26.5% were females. During a median follow-up of 3.4 years (IQR: 2.0–5.6), 71 (1.8%) thromboembolism cases were identified, where incidence rates with and without OAC were 0.56 $(0.40–0.78)_{95\%CI}$ and 0.64 $(0.46–0.89)_{95\%CI}$, respectively. Oral anticoagulation discontinuation remained insignificant [hazard ratio 1.42$(0.86–2.35)_{95\%CI}$] in multivariable analysis. Beyond 3 months after RFA 87 (2.1%) serious bleedings occurred; incidence rates with and without OAC were 0.99 $(0.77–1.27)_{95\%CI}$ and 0.44 $(0.29–0.65)_{95\%CI}$, respectively. Oral anticoagulation therapy was significantly associated with serious bleeding risk [hazard ratio 2.05$(1.25–3.35)_{95\%CI}$]. In an age- and gender-matched cohort (1 : 4) of 15 848 non-ablated AF patients receiving rhythm-control therapy, thromboembolic rates with and without OAC were 1.34 $(1.21–1.49)_{95\%CI}$ and 2.14 $(1.98–2.30)_{95\%CI}$, respectively. Adjusted incidence rate ratio was 0.53 $(0.43–0.65)_{95\%CI}$ favouring RFA cohort.

**Conclusion** Thromboembolic risk beyond 3 months after RFA was relatively low compared with a matched non-ablated AF cohort. With cautious interpretation due to low number of events, serious bleeding risk associated with OAC seems to outweigh the benefits of thromboembolic risk reduction. Randomized studies are warranted to test our results.

**Keywords** Oral anticoagulation • Radiofrequency ablation • Atrial fibrillation • Risk • Thrombosis • Bleeding

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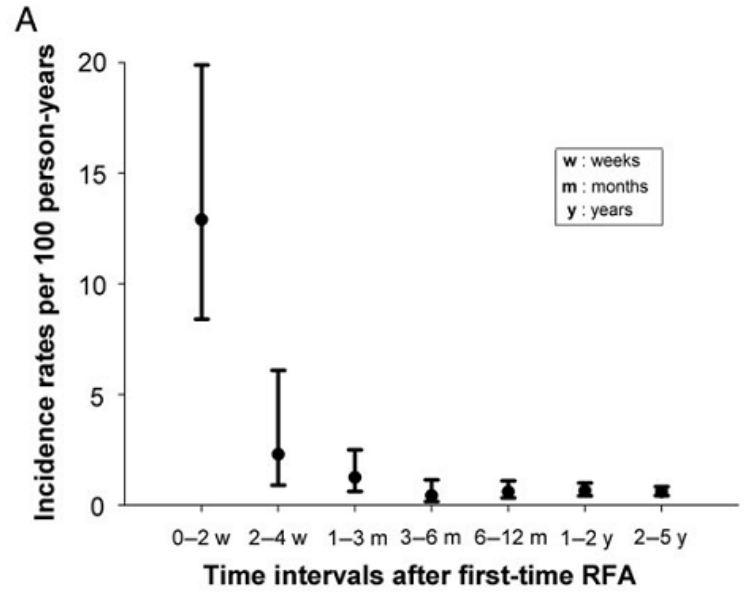
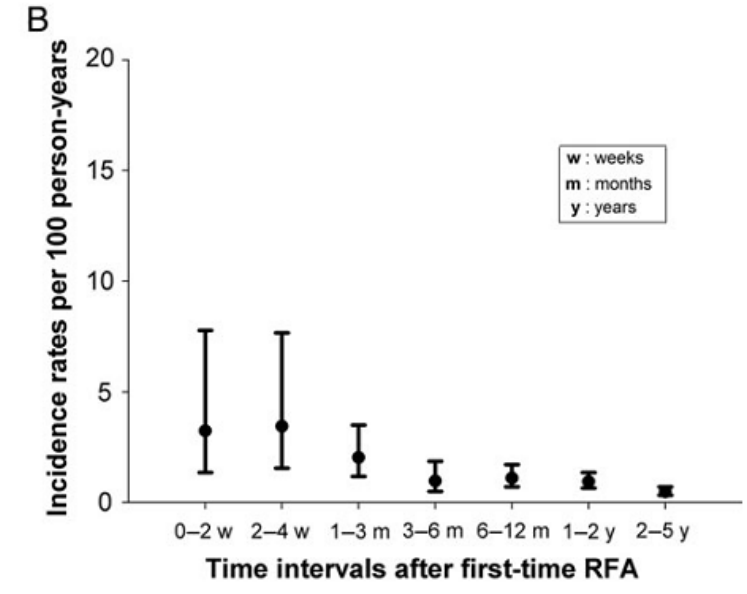



| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Incidence rates | 12.9 | 2.30 | 1.25 | 0.43 | 0.60 | 0.65 | 0.60 |
| 95% lower CI | 8.35 | 0.86 | 0.63 | 0.16 | 0.34 | 0.42 | 0.43 |
| 95% upper CI | 20.0 | 6.11 | 2.50 | 1.15 | 1.10 | 1.00 | 0.83 |
| Number of events | 20 | 4 | 8 | 4 | 11 | 20 | 36 |
| Person-years | 154 | 174 | 639 | 926 | 1809 | 3092 | 5995 |




| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Incidence rates | 3.24 | 3.44 | 2.03 | 0.97 | 1.10 | 0.93 | 0.48 |
| 95% lower CI | 1.35 | 1.55 | 1.18 | 0.50 | 0.71 | 0.65 | 0.33 |
| 95% upper CI | 7.77 | 7.66 | 3.50 | 1.86 | 1.71 | 1.35 | 0.70 |
| Number of events | 5 | 6 | 13 | 9 | 20 | 29 | 29 |
| Person-years | 154 | 174 | 639 | 926 | 1809 | 3092 | 5995 |

**Figure 2** Incidence rates of (*A*) thromboembolism and (*B*) serious bleeding according to time intervals after first-time radiofrequency ablation.

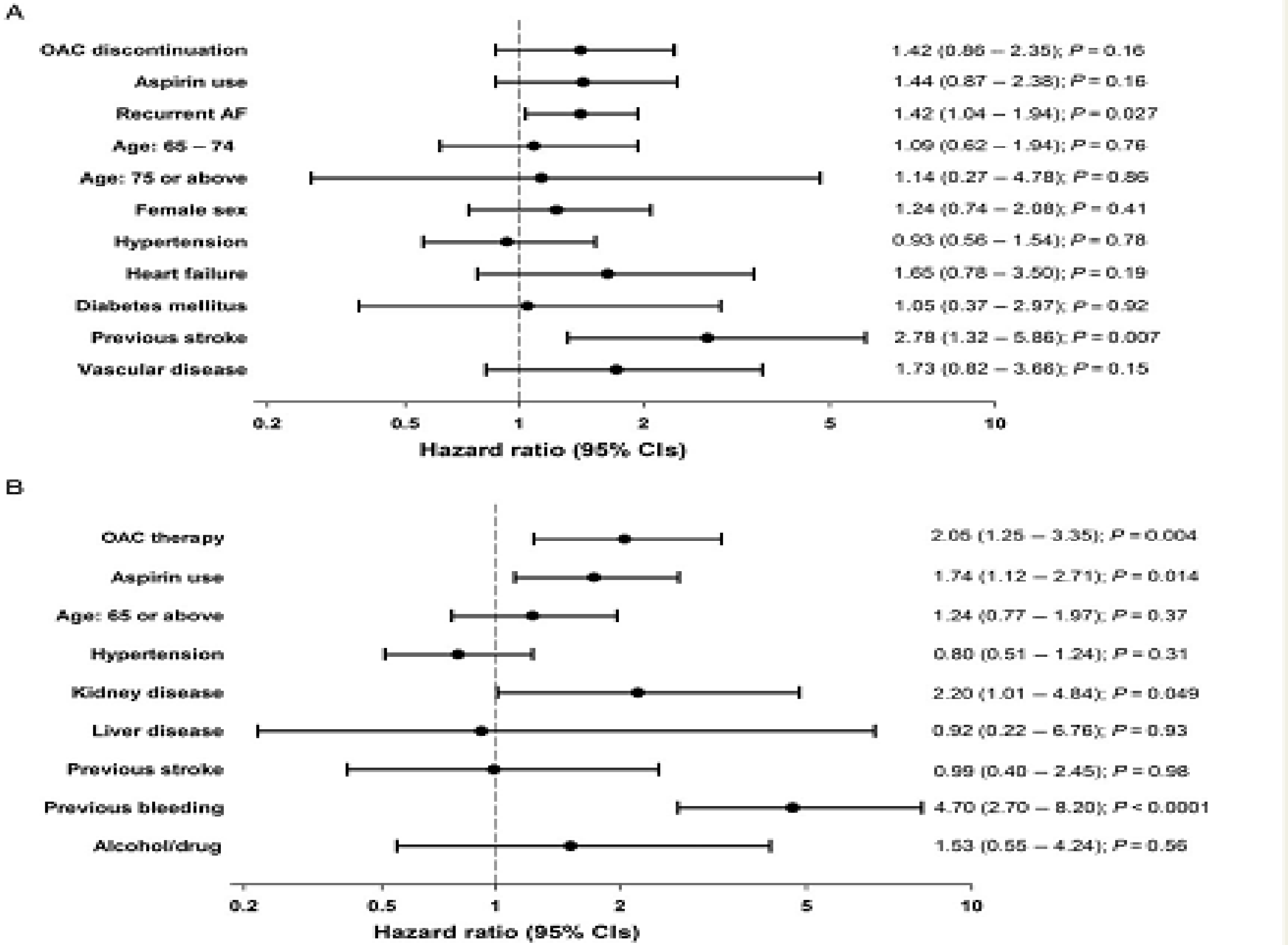



**Figure 4** Individual predictors associated with thromboembolism and serious bleeding after first-time radiofrequency ablation. (*A*) Thromboembolism, HR (95% CIs) and (*B*) serious bleeding, HR (95% CIs).

| Author [year] | Patient number and characteristics | Use of anticoagulants after catheter ablation | Event rate | Main findings | Limitations |
|---|---|---|---|---|---|
| Oral *et al*. [2006] (9) | Paroxysmal AF: 490<br>Chronic AF: 265<br>55±11 years<br>56% had ≥1 risk factor for stroke | Warfarin was used for 3 months after catheter ablation. Among 522 patients who remained in sinus rhythm, warfarin was discontinued in 79% of patients without risk factors and in 68% of patients with ≥1 risk factor of stroke after 3 months | Rate of TEs : 0.9% within 30 days of ablation procedure; 0.3% beyond 30 days after the procedure | Discontinuation of warfarin appears to be safe after successful ablation | The authors continued OATs for patients with an age of >65 years or a prior history of stroke/TIA after successful ablation |
| Themistoclakis *et al*. [2010] (31) | A total of 3,355 patients (60% paroxysmal AF)<br>57±11 years<br>$CHADS_2$ score: 0 in 53%, 1 in 29%, ≥2 in 18% | Off-OAC group: 2,692 patients discontinued OACs 3 to 6 months after ablation<br>On-OAC group: 663 patients remained on OACs after 3 to 6 months post ablation | During follow-up (mean 28±13 *vs*. 24±15 months), 2 (0.07%) off-OAC group patients and 3 (0.45%) on-OAC group patients had an ischemic stroke (P=0.06)<br>A major hemorrhage was observed in 1 (0.04%) off-OAC group patient and 13 (2%) on-OAC group patients (P<0.0001) | The risk-benefit ratio favored the suspension of OACs after successful AF ablation even in patients at moderate-high risk of TE | The authors kept their patients on OACs when any arrhythmic recurrences, left atrial dysfunction, or severe PV stenosis were observed |
| Yagishita *et al*. [2011] (12) | A total of 524 patients (16% had a $CHADS_2$ score of >2) underwent AF ablation and were followed up for at least 24 months | Warfarin was discontinued in 400 (93%) of 429 patients without AF recurrence | None of the patients without AF recurrence suffered from TE events, where 3 of 95 patients (3%) with AF recurrence did (P<0.001) | Neither a TE nor hemorrhagic events occurred in patients who were AF-free and off warfarin | The authors continued warfarin in 29 patients without an AF recurrence due to the concern about undetected AF recurrences |

OACs, oral anticoagulants; AF, atrial fibrillation; TE, thromboembolic; TIA, transient ischemic attack; PV, pulmonary vein.

# Patterns of Anticoagulation Use and Cardioembolic Risk After Catheter Ablation for Atrial Fibrillation

Peter A. Noseworthy, MD; Xiaoxi Yao, PhD; Abhishek J. Deshmukh, MBBS; Holly Van Houten, BA; Lindsey R. Sangaralingham, MPH, PhD; Konstantinos C. Siontis, MD; Jonathan P. Piccini, Sr, MD, MHSc; Samuel J. Asirvatham, MD; Paul A. Friedman, MD; Douglas L. Packer, MD; Bernard J. Gersh, MB, ChB, DPhil; Nilay D. Shah, PhD

***Background*—**There is significant practice variation in oral anticoagulation (OAC) use following catheter ablation for atrial fibrillation. It is not clear whether the risk of cardioembolism increases after discontinuation of OAC following catheter ablation.

***Methods and Results*—**We identified 6886 patients within a large national administrative claims database who underwent catheter ablation for atrial fibrillation between January 1, 2005, and September 30, 2014. We assessed the effect of time off of OAC by $CHA_2DS_2$-VASc score (after adjusting for other comorbidities) on risk of cardioembolism, using Cox proportional hazards models. There was an increase in the use of non–vitamin K OAC after ablation from 0% in 2005 to 69.8% in 2014. OAC discontinuation was high, with only 60.5% and 31.3% of patients remaining on OAC at 3 and 12 months, respectively. The rate of discontinuation was higher in low-risk patients (82% versus 62.5% at 12 months for $CHA_2DS_2$-VASc 0–1 versus $\geq$2, respectively; $P<0.001$). Stroke occurred in 1.4% of patients with $CHA_2DS_2$-VASc $\geq$2 and 0.3% of those with $CHA_2DS_2$-VASc 0 or 1 over the study follow-up. The risk of cardioembolism in the first 3 months after ablation was increased among those with any time off OAC (hazard ratio 8.06 [95% CI 1.53–42.3], $P<0.05$). The risk of cardioembolism beyond 3 months was increased with OAC discontinuation among high-risk patients (hazard ratio 2.48 [95% CI 1.11–5.52], $P<0.05$) but not low-risk patients.

***Conclusion*—**The overall risk of stroke in postablation patients is low; however, OAC discontinuation after ablation is common and is associated with increased risk of cardioembolism for all patients within the first 3 months and for high-risk patients in the long term. Continuing OAC for at least 3 months in all patients and indefinitely in high-risk patients appears to be the safest strategy. **(*J Am Heart Assoc*. 2015;4:e002597 doi: 10.1161/JAHA.115.002597)**

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- Hastalar 1.7±1.6 yıl takip edilmiş
- 15 hastada hemorajik inme(14 warfarin grubunda)
- Total izlem süresinde 246 major kanama
- 73 Trombo-embolik olay(TIA,iskemik, inme,sistemik emboli)
  - %24,6 ablasyondan sonraki ilk 3 ay içinde
  - %21,9 3. ay ile 1 yıl içinde
  - %53,5 1 yıl sonrası

**Table 2.** Multivariable Predictors of Risk of Stroke or Systemic Embolism in the First 3 Months After Ablation (n=6886)

| Risk Factor | HR (95% CI) |
|---|---|
| Time not on OAC | |
| 0 day | Reference |
| ≥1 day | 8.06* (1.53–42.31) |
| $CHA_2DS_2$-VASc | |
| 0 to 1 | Reference |
| 2 | 2.12 (0.43–10.46) |
| 3 | 2.85 (0.56–14.47) |
| ≥4 | 3.96 (0.84–18.72) |
| Index medication | |
| Warfarin | Reference |
| NOAC | 1.79 (0.71–4.50) |
| Charlson comorbidity index | |
| 0 | Reference |
| 1 | 0.42 (0.10–1.80) |
| ≥2 | 0.62 (0.19–1.96) |
| Race | |
| White | Reference |
| Nonwhite | 1.94 (0.70–5.36) |

Omnibus *P* values for $CHA_2DS_2$-VASc and Charlson comorbidity index were both insignificant. HR indicates hazard ratio; NOAC, non–vitamin K oral anticoagulant; OAC, oral anticoagulation.
*P<0.05.

**Table 3.** Multivariable Predictors of Risk of Stroke or Systemic Embolism Beyond 3 Months After Ablation (n=6238)

| Risk Factor | HR (95% CI) |
|---|---|
| Time not on OAC | |
| 0 to 3 months | Reference |
| 3 to 6 months | 1.69 (0.60–4.78) |
| 6 months to 1 year | 2.74* (1.12–6.74) |
| >1 year | 3.98** (1.56–10.12) |
| $CHA_2DS_2$-VASc | |
| 0 to 1 | Reference |
| 2 | 0.82 (0.16–4.14) |
| 3 | 2.41 (0.62–9.37) |
| ≥4 | 8.50** (2.30–31.36) |
| Index medication | |
| Warfarin | Reference |
| NOAC | 0.83 (0.37–1.86) |
| Charlson comorbidity index | |
| 0 | Reference |
| 1 | 1.71 (0.44–6.57) |
| ≥2 | 2.85 (0.78–10.37) |
| Race | |
| White | Reference |
| Nonwhite | 2.17** (1.21–3.91) |

Omnibus *P* values for length of time not on OAC, $CHA_2DS_2$-VASc, and Charlson comorbidity index were <0.05, <0.001, and not significant, respectively. HR indicates hazard ratio; NOAC, non–vitamin K oral anticoagulant; OAC, oral anticoagulation.

Canadian Journal of Cardiology 29 (2013) 219–223

Clinical Research

# Anticoagulation Management Pre- and Post Atrial Fibrillation Ablation: A Survey of Canadian Centres

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**Methods:** A Web-based national survey of electrophysiologists performing AF ablation in Canada collected data regarding anticoagulation practice prior to ablation, periprocedural bridging, and duration of postablation anticoagulation.

**Results:** The survey was completed by 36 (97%) of the 37 electrophysiologists performing AF ablation across Canada. Prior to AF ablation, 58% of electrophysiologists started anticoagulation for patients with paroxysmal AF $CHADS_2$ scores of 0 to 1, 92% for paroxysmal AF $CHADS_2$ scores $\geq$ 2, 83% for persistent AF $CHADS_2$ scores of 0 to 1, and 97% for persistent AF $CHADS_2$ scores $\geq$ 2. For patients with $CHADS_2$ 0 to 1, warfarin was continued for at least 3 months by most physicians (89% for paroxysmal and 94% for persistent AF). For patients with $CHADS_2 \geq 2$ and with no recurrence of AF at 1 year post ablation, 89% of physicians continued warfarin.

**Conclusions:** Although guidelines recommend long-term anticoagulation in patients with $CHADS_2 \geq 2$, 11% of physicians would discontinue warfarin in patients with no evidence of recurrent AF 1 year post successful ablation. Significant heterogeneity exists regarding periprocedural anticoagulation management in clinical practice. Clinical trial evidence is required to guide optimal periprocedural anticoagulation and therapeutic decisions regarding long-term anticoagulation after an apparently successful catheter ablation for AF.

# Warfarin Is Not Needed in Low-Risk Patients Following Atrial Fibrillation Ablation Procedures

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**Warfarin Is Not Needed in Low-Risk Patients.** ***Background:*** **The recently published HRS/EHRA/ECAS AF Ablation Consensus Statement recommended that warfarin should be used for at least 2 months following an AF ablation in all patients regardless of stroke risk factors. The objective of the study was to assess outcomes based upon anticoagulation practice after atrial fibrillation (AF) ablation to determine relative risk of a strategy of aspirin only in low-risk patients.**

***Methods:*** **A total of 630 consecutive patients who underwent 934 ablation procedures using an open irrigated tip catheter for symptomatic AF were evaluated. Outcomes were compared between patients treated with warfarin (goal INR: 2–3) versus aspirin only (325 mg/day) in CHADS2 0–1 patients after ablation.**

***Results:*** **Of the 690 patients, 123 (20%) were treated with aspirin and 507 (80%) with warfarin. Prevalences of the CHADS2 scores of patients on aspirin were (0: 40.7%, 1: 59.3%) and on warfarin (0: 13.6%, 1: 31.6%, ≥2: 54.8%), $P < 0.0001$. Patients in the warfarin group were older, had on average a lower ejection fraction, and had higher rates persistent/permanent AF, repeat ablations, hypertension, prior stroke/TIA, and diabetes. The 1-year survival free of AF for the total study population was 71.6%. There were no strokes/TIA in the aspirin group and 4 events (4 strokes, 0 TIAs) in the warfarin group. Two patients in the warfarin group died of fatal hemorrhage (1 intracranial, 1 gastrointestinal).**

***Conclusion:*** **Select low-risk patients with a low CHADS2 (0–1) score who undergo left atrial ablation with an aggressive anticoagulation strategy with heparin and use of an open irrigated tip catheter with low CHADS2 scores can safely be discharged following their procedure on aspirin alone.** *(J Cardiovasc Electrophysiol, Vol. 20, pp. 988-993, September 2009)*

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# Safety and Efficacy of Switching Anticoagulation to Aspirin Three Months after Successful Radiofrequency Catheter Ablation of Atrial Fibrillation

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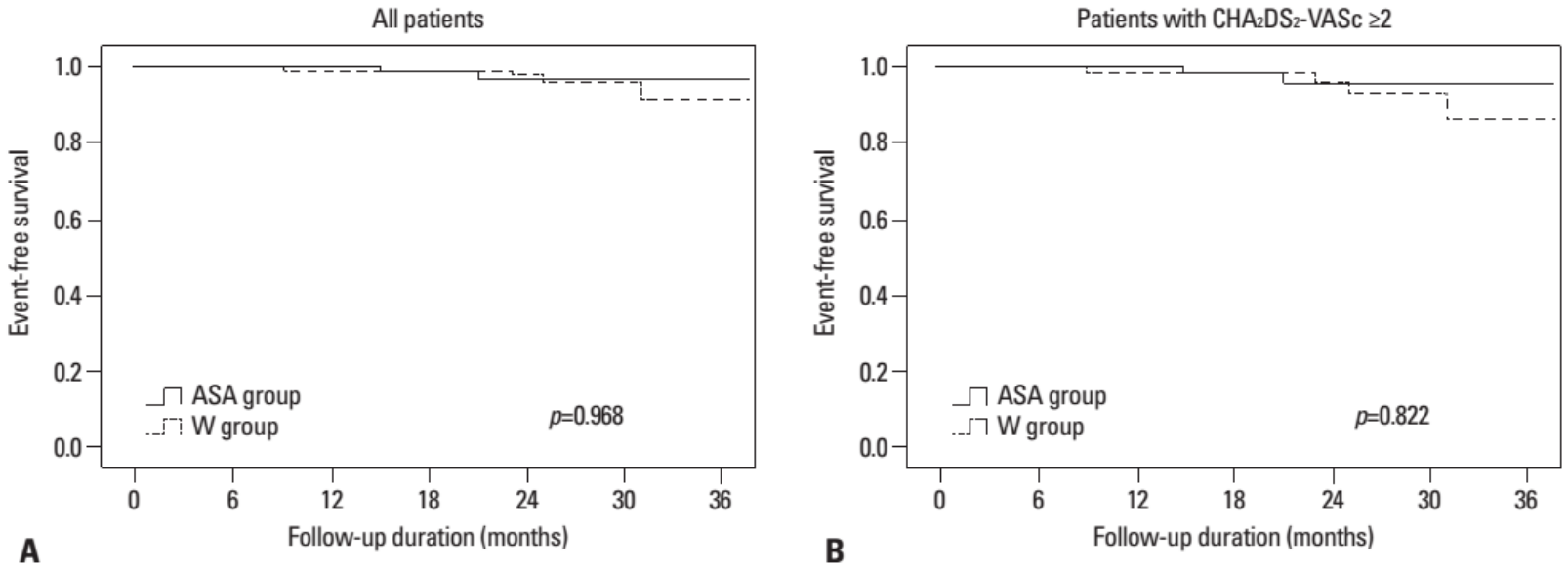


**Fig. 2.** Thromboembolic and major bleeding event-free survival by Kaplan-Meier method in all patients (A) and the patients with $CHA_2DS_2$-VASc score ≥2 (B) in ASA (solid line) and W (dotted line) groups.

Switching warfarin to aspirin 3 months after successful RFCA of AF could be as safe and efficacious as long-term anticoagulation even in patients with $CHA_2DS_2$-VASc score ≥2. However, strict rhythm monitoring cannot be overemphasized.

# 2012 HRS/EHRA/ECAS Expert Consensus Statement on Catheter and Surgical Ablation of Atrial Fibrillation: Recommendations for Patient Selection, Procedural Techniques, Patient Management and Follow-up, Definitions, Endpoints, and Research Trial Design

***A report of the Heart Rhythm Society (HRS) Task Force on Catheter and Surgical Ablation of Atrial Fibrillation. Developed in partnership with the European Heart Rhythm Association (EHRA), a registered branch of the European Society of Cardiology (ESC) and the European Cardiac Arrhythmia Society (ECAS); and in collaboration with the American College of Cardiology (ACC), American Heart Association (AHA), the Asia Pacific Heart Rhythm Society (APHRS), and the Society of Thoracic Surgeons (STS). Endorsed by the governing bodies of the American College of Cardiology Foundation, the American Heart Association, the European Cardiac Arrhythmia Society, the European Heart Rhythm Association, the Society of Thoracic Surgeons, the Asia Pacific Heart Rhythm Society, and the Heart Rhythm Society***

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# Sonuç Olarak Ablasyon Sonrası Antikoagülasyon;

- AF ablasyonu sonrasında warfarin ile terapötik düzeyde antikoagüle olmamış hastalarda sistemik antikoagülasyon zamanına kadar düşük moleküler ağırlıklı heparin veya IV heparin kullanılması gerekir.
- Alternatif olarak ablasyondan sonra antikoagülasyon için Direk Trombin inhibitörleri yada Faktör Xa inhibitörleri başlanabilir.
- Post ablasyon dönemde kanama riski artmış olduğu için full doz düşük moleküler ağırlıklı heparin dozunun (1 mg/kg ) azaltılması önerilmektedir (0.5 mg/kg)
- AF ablasyonu işleminden sonra warfarin yada direkt trombin inhibitörleri yada Faktör Xa inhibitörlerinin en az 2 ay kullanılması önerilmektedir.
- Ablasyon işleminden 2 aydan sonrası için antikoagülasyonun devamına karar verirken;Hastada AF varlığına veya AF tipine göre değil;tromboemboli riskine göre karar verilmelidir.
- AF ablasyonundan sonra CHADS2 skoru 2 ve üzeri olanlarda OAK kesilmesi genellikle tavsiye edilmez
- Asemtomatik AF/AFL/ AT hastalarda antikoagülasyonun devamına yada kesilmesine karar vermek için bu hastaların EKG monizörizasyonu önerilmektedir.

Teşekkürler