

# Trattamento delle arteriopatie periferiche: AVK versus antiaggregante

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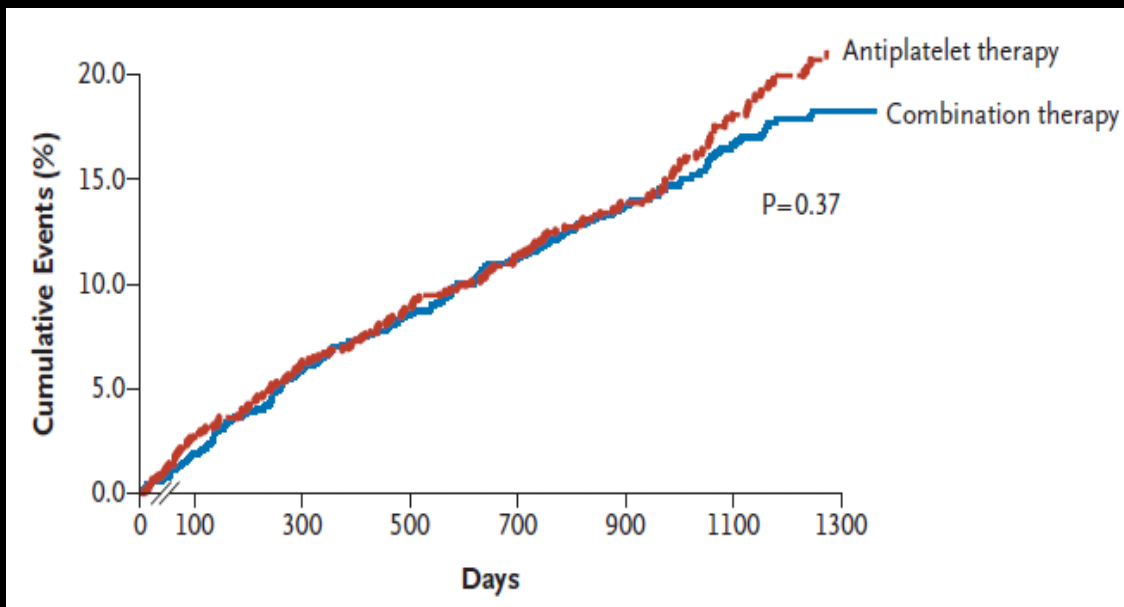
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## Oral Anticoagulant and Antiplatelet Therapy and Peripheral Arterial Disease

The Warfarin Antiplatelet Vascular Evaluation Trial Investigators\*

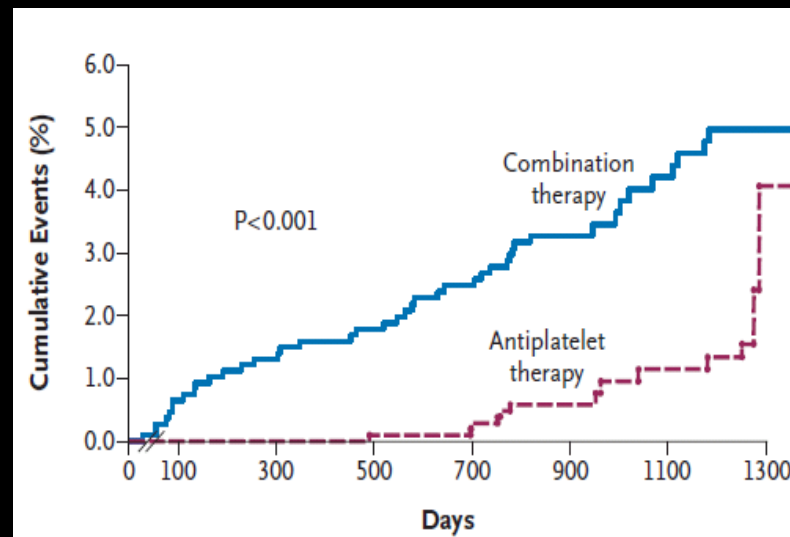
**Table 1.** Baseline Characteristics of the Patients.\*

Characteristic	Oral Anticoagulant plus Antiplatelet Therapy (N=1080)	Antiplatelet Therapy Alone (N=1081)	P Value
Age — yr	63.9±9.4	63.8±9.5	0.88
Male sex — no. (%)	796 (73.7)	795 (73.5)	0.93



*The WAVE  
Study  
NEJM 2007*

**Cumulative Incidence of the Coprimary End Points**



**Cumulative Incidence of Life-Threatening Bleeding**

# Wave study: conclusions

## Combination of VKAs and ASA in patients with PAD

- **No more effective** than ASA alone in preventing major cardiovascular complications
- Associated with an **increase in life-threatening bleeding**

# Anticoagulants: heparin, LMWH and VKAs for intermittent claudication

Cochrane Database of Systematic Reviews 2001, Issue 2. Art.  
Publication status and date: (No change to conclusions),  
published in Issue 1, 2009.

- No significant effect on overall mortality or cardiovascular events
- No benefit for intermittent claudication
- Increased risk of major bleeding, especially with VKAs

**Use of anticoagulants for intermittent claudication is not recommended**

- *Warfarin added to antiplatelet therapy is of no benefit and potentially harmful*
- ✓ We recommend against the use of warfarin plus aspirin in patients with symptomatic PAD (Grade 1B). ***Antithrombotic Therapy in PAD. ACCP guidelines. CHEST 2012***





# Antithrombotics for preventing thrombosis after infrainguinal arterial bypass surgery (Review)

## Conclusions

- Patients undergoing infrainguinal **venous graft** are more likely to benefit from treatment with VKAs than platelet inhibitors
- Patients receiving an **artificial graft** benefit from platelet inhibitors (aspirin)
- However, the evidence is not conclusive
- Randomised controlled trials with larger patient numbers are needed in the future to compare antithrombotic therapies with either placebo or antiplatelet therapies.

*Geraghty AJ, Welch K, 2011*



# Targets of therapy in patients with Peripheral Artery Disease (PAD)

- **To lower the rate of cardiovascular complications**
- To hinder the worsening of the disease
- To avoid thrombosis after revascularization
- To improve walking capacity

# Indications for VKA in PAD

Patients already on AVK, or with a “new” indication for:

- Prosthetic heart valves
- Atrial fibrillation
- Venous thromboembolism

# VKA + ASA: in quali pazienti?

- Una metanalisi evidenzia che:
  - il vantaggio clinico riguarda i pazienti con protesi valvolari meccaniche
  - non vi sono vantaggi per i pazienti con sola FA (OR 0.99, 95% CI 0.47-2.07)
  - VKA+ASA determina un aumentato rischio emorragico (OR 1.43, 95% CI 1.00-2.02)

*Dentali F et al. Arch Intern Med 2007;167:117-124*

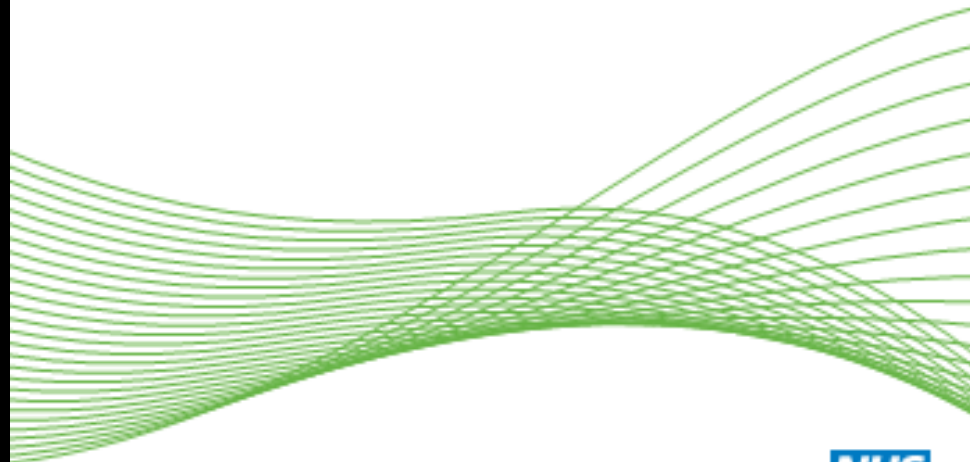
# Antiplatelet and anticoagulation for patients with prosthetic heart valves

*Massel DR & Little SH, Cochrane Syst Rev. 2013*

- In total, 4122 patients, 13 studies (published between 1971 and 2011)
- The addition of an antiplatelet agent:
  - reduced thromboembolic events (OR 0.43, CI 0.32-0.59;  $P < 0.00001$ ) and total mortality (OR 0.57, CI 0.42-0.78;  $P = 0.0004$ )
  - increased major bleeding (OR 1.58, 95% CI 1.14 to 2.18;  $P = 0.006$ )

**Combined anticoagulation and antiplatelet therapy  
for high-risk patients with atrial fibrillation:  
a systematic review**

*DA Lane, S Raichand, D Moore, M Connock, A Fry-Smith and DA Fitzmaurice  
on behalf of the Steering Committee*



# Conclusions

- There are not sufficient data from the 5 randomised comparisons and 18 non-randomised comparisons to conclude whether or not there are patients with AF who would benefit from combined ACT and APT compared with ACT alone

# Terapia combinata nei pazienti con FA

- Nonostante non vi sia dimostrazione di una migliore efficacia, rispetto alla sola anticoagulazione, si assiste ad un progressivo aumento del numero di pazienti con FA trattati con VKA+ASA

# **Trials con i DOAC nella FA: % di pazienti trattati con ASA (anche nel braccio di controllo)**

<b>DOAC</b>	<b>Studio, anno</b>	<b>% ASA +</b>
ximelagatran	SPORTIF III, 2003	10
ximelagatran	SPORTIF V, 2005	15
idraparinux	Amadeus, 2008	20
dabigatran	RE-LY, 2009	21
rivaroxaban	ROCKET, 2011	18
apixaban	ARISTOTLE, 2011	31
edoxaban	Engage AF, 2013	29



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Risk of bleeding in patients with acute myocardial infarction  
treated with different combinations of aspirin, clopidogrel,  
and vitamin K antagonists in Denmark: a retrospective  
analysis of nationwide registry data



*Rikke Sørensen, Morten L Hansen, Steen Z Abildstrom, Anders Hvelplund, Charlotte Andersson, Casper Jørgensen, Jan K Madsen, Peter R Hansen, Lars Køber, Christian Torp-Pedersen, Gunnar H Gislason*

*Lancet 2009; 374: 1967–74*

	Incidence (% per person-year)	Unadjusted risk ratio (95% CI)	Number needed to harm <sup>§</sup>	
			Unadjusted	Adjusted <sup>¶</sup>
<b>Monotherapy</b>				
Aspirin alone	2.6%	Reference	Reference	Reference
Clopidogrel alone	4.6%	1.75 (1.75-1.76)	50.8	115.7
Vitamin K antagonist alone	4.3%	1.63 (1.62-1.65)	60.2	165.9
<b>Dual therapy</b>				
Aspirin plus clopidogrel	3.7%	1.43 (1.43-1.43)	89.3	81.2
Aspirin plus vitamin K antagonist	5.1%	1.94 (1.94-1.95)	40.5	45.4
Clopidogrel plus vitamin K antagonist	12.3%	4.68 (4.64-4.74)	10.4	15.2
<b>Triple therapy</b>				
Aspirin, clopidogrel, and vitamin K antagonist	12.0%	4.57 (4.55-4.61)	10.7	12.5

# Antithrombotic regimens in patients with indication for long-term anticoagulation undergoing coronary interventions-systematic analysis, review of literature, and implications on management.

*Deshmukh A et al, Am J Ther 2013;20:654-63*

- Ten retrospective studies, 1 post hoc analysis of a major registry, and 2 prospective studies
- Major bleeding at 1 year:
  - Triple antithrombotic therapy: 5,2 %
  - Dual antiplatelet therapy: 2,4 %

*un indizio è un indizio,  
due indizi sono una  
coincidenza, ma  
tre indizi fanno una  
prova*



*Agatha Christie*

# Dual or single antiplatelet therapy with anticoagulation?

- Clinicians are becoming increasingly aware of the importance of reducing bleeding risk
- “More potent is not always better”

*Keith A A Fox*

*Centre for Cardiovascular Science,  
University of Edinburgh, UK*

*Lancet, 2013*