



北京大学第一医院
PEKING UNIVERSITY FIRST HOSPITAL

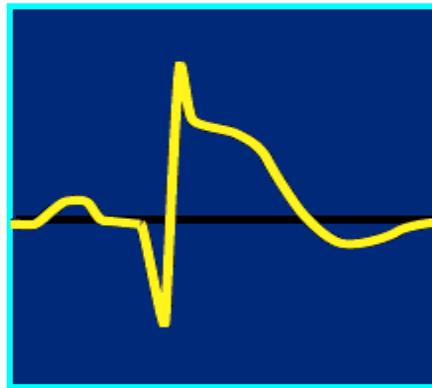
ACS指南更新--药物治疗进展

北京大学第一医院 刘梅林



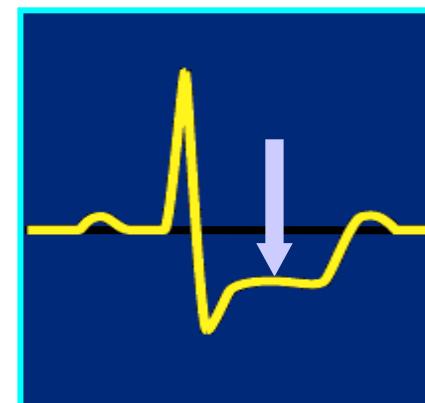
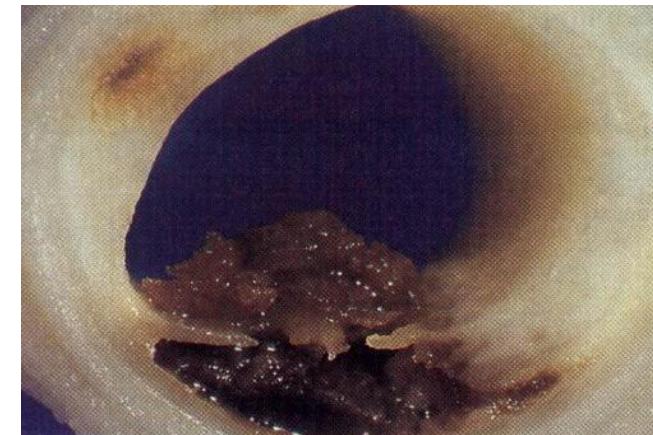
急性冠状动脉综合征

ST 段持续抬高的ACS



CK- MB or Troponin升高

非ST段持续抬高的ACS



Troponin 升高或不升高



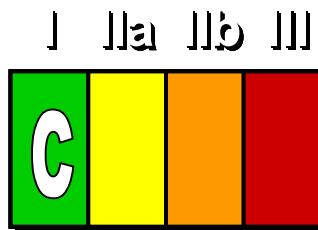
2012 ACCF/AHA Focused Update Incorporated Into the ACC/AHA 2007 Guidelines for the Management of Patients With Unstable Angina/Non-ST-Elevation Myocardial Infarction

Developed In Collaboration with the American College of Emergency Physicians, the Society for Cardiovascular Angiography and Interventions, and the Society of Thoracic Surgeons

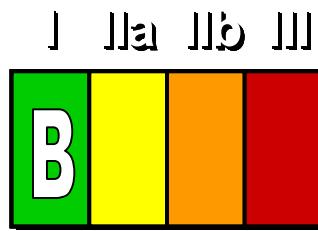
Endorsed by the American College of Emergency Physicians, Society for Cardiovascular Angiography and Interventions, and Society of Thoracic Surgeons.



抗缺血治疗



UA/NSTEMI 患者缺血症状发作舌下含服 NTG (0.4 mg) 每5 min 重复 3 次, 之后评估是否静注

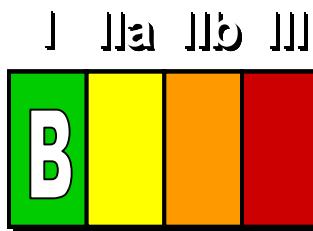


持续缺血, 心衰或高血压, 前48 h 应静注NTG。使用不应影响降低死亡率的 β -阻滞剂或ACEI



抗缺血治疗

前24 h 内口服 β -阻滞剂治疗，需除外以下情况：



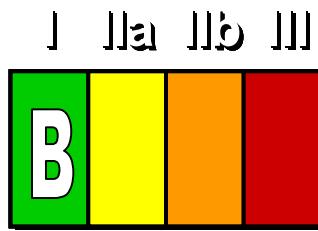
- 1) HF
- 2) 低心排状态
- 3) 心源性休克风险增加
- 4) 其他 β -阻滞剂相对禁忌证($PR > 0.24$ s, II、III° AVB, 活动性哮喘, 或反应性气道疾病)

Circulation. 2012;126:875-910

*Risk factors for cardiogenic shock (the greater the number of risk factors present, the higher the risk of developing cardiogenic shock): age greater than 70 years, systolic blood pressure less than 120 mmHg, sinus tachycardia greater than 110 or heart rate less than 60, increased time since onset of symptoms of UA/NSTEMI. Chen ZM, et al. *Lancet* 2005;366:1622–32.



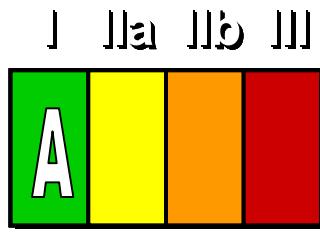
抗缺血治疗



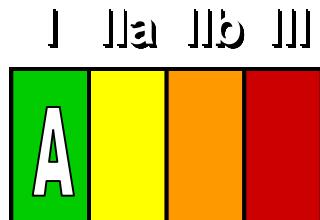
UA/NSTEMI 缺血症状持续或反复发作， β -阻滞剂禁忌时，如无 LV功能异常或其他禁忌，非二氢吡啶类CCB (e.g., verapamil or diltiazem) 可作为初始治疗



抗缺血治疗



UA/NSTEMI 肺淤血或LVEF $\leq 40\%$, 如无低血压 (SBP < 100 mm Hg 或 $<$ 平时收缩压 30 mm Hg)或其他禁忌, 前24 h应口服ACEI

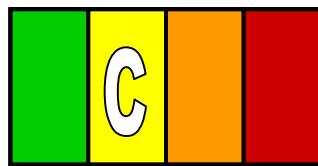


临床或影像有HF征象或LVEF $\leq 40\%$, ACEI 不耐受应使用ARB



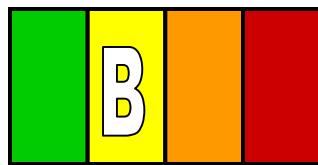
抗缺血治疗

I IIa IIb III



β -阻滞剂、硝酸酯类充分使用后，
缺血反复发作者，如无禁忌，可
口服长效非二氢吡啶类

I IIa IIb III



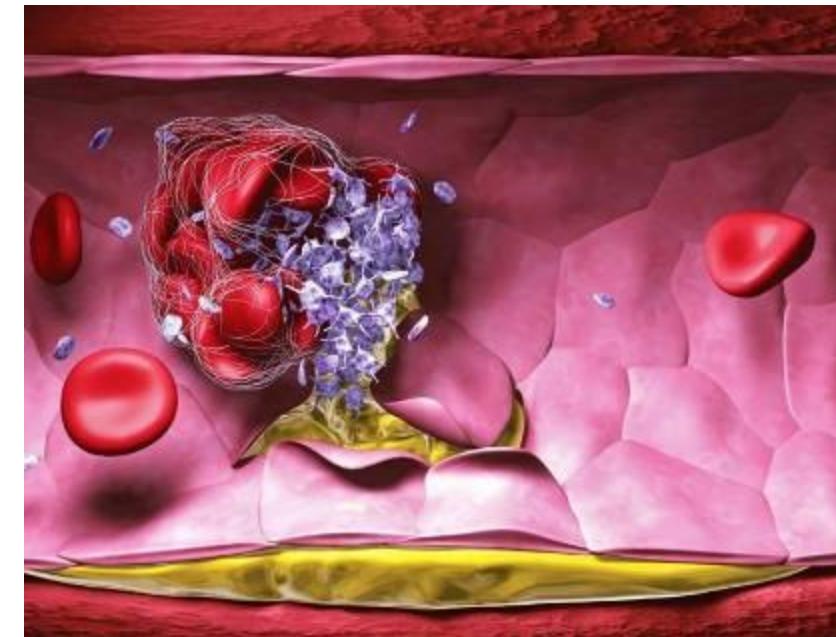
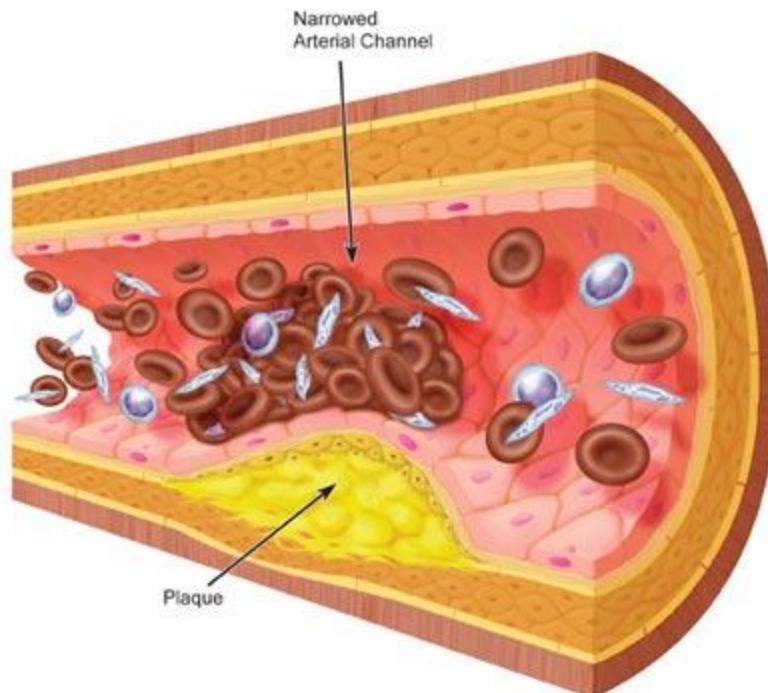
无肺淤血或LVEF $\leq 40\%$, 如无低
血压 (SBP < 100 mm Hg 或 $<$ 平时
收缩压 30 mm Hg)或其他禁忌，
前24 h口服ACEI可能有益

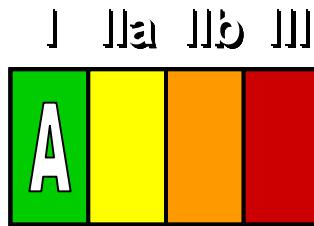
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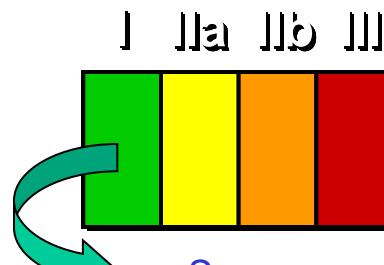
急性冠状动脉综合征

动脉粥样硬化血栓性疾病





Modified 2012

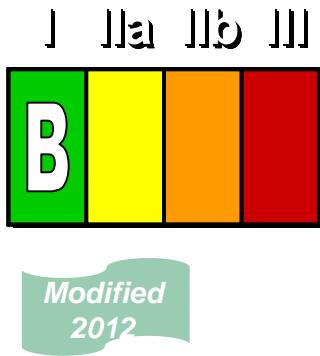


See
recommendation
for LOE

Modified 2012

患者如能耐受，尽快启动阿司匹林治疗

阿司匹林不能耐受者，负荷剂量后使用氯吡格雷 (*Level of Evidence: B*), 普拉格雷(in PCI-treated patients) (*Level of Evidence: C*), 或替卡格雷 (*Level of Evidence: C*)



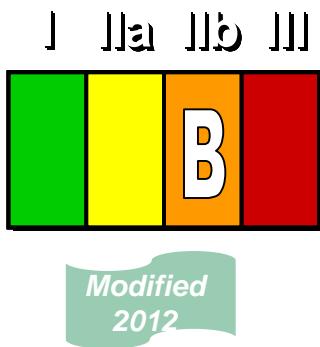
药物保守治疗患者(如：非介入)

尽快阿司匹林+氯吡格雷或替卡格雷 (负荷剂量后每日维持) 及抗凝治疗

双联抗血小板治疗维持12月 (Level of Evidence: B)



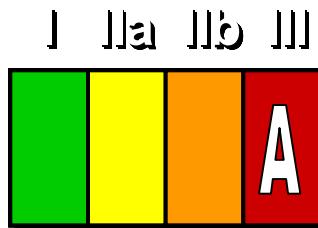
UA/NSTEMI患者抗栓治疗



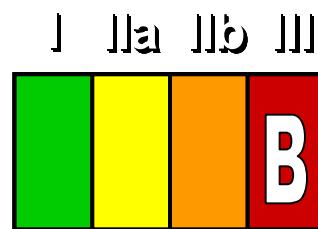
拟行介入治疗的高危UA/NSTEMI非出血高危患者，如TNI高、糖尿病或明显ST压低，在阿司匹林和一种P2Y12抑制剂 (clopidogrel or ticagrelor)基础上可使用 GP IIb/IIIa抑制剂



UA/NSTEMI患者抗栓治疗



Abciximab 不应用于非PCI



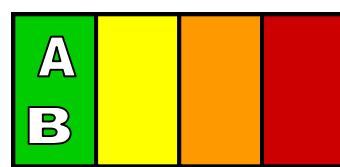
**UA/NSTEMI 缺血事件低危患者 (e.g.,
TIMI risk score ≤ 2) 或高出血风险 和
已服用阿司匹林及氯吡格雷,不推荐使
用 GP IIb/IIIa 抑制剂**

Modified
2012



尽快加用抗凝、抗血小板治疗

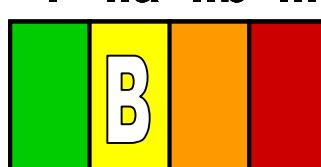
I IIa IIb III



I IIa IIb III

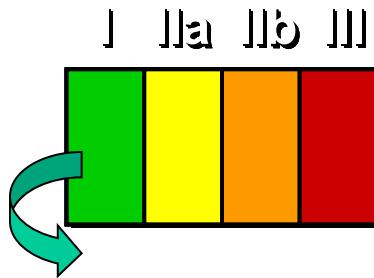


I IIa IIb III



- 保守治疗患者, 依诺肝素* 或肝素 (*Level of Evidence: A*) 或优选磺达肝葵钠 (*Level of Evidence: B*)
- 出血风险增加的保守治疗患者, 优选磺达肝葵钠
- 除非24小时行CABG, 依诺肝素或磺达肝葵钠 优于肝素

*Limited data are available for the use of other low-molecular-weight heparins (LMWHs), e.g., dalteparin.



See recommendation for LOE

Modified
2012

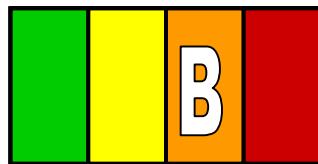
支架术后 (BMS or DES), 继续阿司匹林 (*Level of Evidence: A*) , P2Y₁₂受体抑制剂 :

- a.氯吡格雷75 mg/d, 普拉格雷 10 mg/d, 或替卡格雷90 mg BID, DES至少12月, BMS最好12月 (*Level of Evidence: B*)
- b.出血风险超过获益可提前停用 P2Y₁₂受体抑制剂 (*Level of Evidence: C*)

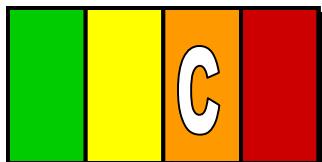


UA/NSTEMI患者抗栓治疗

I IIa IIb III

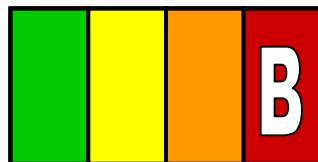


I IIa IIb III



Modified
2012

I IIa IIb III



No Benefit

Modified
2012

有抗凝指征者，继续阿司匹林，华法林 INR 2.0 - 3.0，最好2.0-2.5，机械瓣至少2.5 §

DES后继续 P2Y₁₂ 受体抑制剂 12 月
(Level of Evidence: C)

不推荐双嘧达莫，无效

‡Continue aspirin indefinitely and warfarin longer term as indicated for specific conditions such as atrial fibrillation; LV thrombus; or cerebral, venous, or pulmonary emboli.

§ An INR of 2.0 to 2.5 is preferable while given with aspirin and clopidogrel, especially in older patients and those with other risk factors for bleeding. For UA/NSTEMI patients who have mechanical heart valves, the INR should be at least 2.5 (based on type of prosthesis).

PRACTICE GUIDELINE

2013 ACCF/AHA Guideline for the Management of ST-Elevation Myocardial Infarction

A Report of the American College of Cardiology Foundation/
American Heart Association Task Force on Practice Guidelines

*Developed in Collaboration With the American College of Emergency Physicians and
Society for Cardiovascular Angiography and Interventions*

WRITING COMMITTEE MEMBERS*

Patrick T. O’Gara, MD, FACC, FAHA, Chair†;





Table 3. Adjunctive Antithrombotic Therapy to Support Reperfusion With Primary PCI

	COR	LOE
Antiplatelet therapy		
Aspirin		
• 162- to 325-mg load before procedure	I	B
• 81- to 325-mg daily maintenance dose (indefinite)*	I	A
• 81 mg daily is the preferred maintenance dose*	IIa	B
P2Y₁₂ inhibitors		
Loading doses		
• Clopidogrel: 600 mg as early as possible or at time of PCI	I	B
• Prasugrel: 60 mg as early as possible or at time of PCI	I	B
• Ticagrelor: 180 mg as early as possible or at time of PCI	I	B
Maintenance doses and duration of therapy		
<i>DES placed: Continue therapy for 1 y with:</i>		
• Clopidogrel: 75 mg daily	I	B
• Prasugrel: 10 mg daily	I	B
• Ticagrelor: 90 mg twice a day*	I	B
<i>BMST placed: Continue therapy for 1 y with:</i>		
• Clopidogrel: 75 mg daily	I	B
• Prasugrel: 10 mg daily	I	B
• Ticagrelor: 90 mg twice a day*	I	B
<i>DES placed:</i>		
• Clopidogrel, prasugrel, or ticagrelor* continued beyond 1 y	IIb	C
• Patients with STEMI with prior stroke or TIA: prasugrel	III: Harm	B



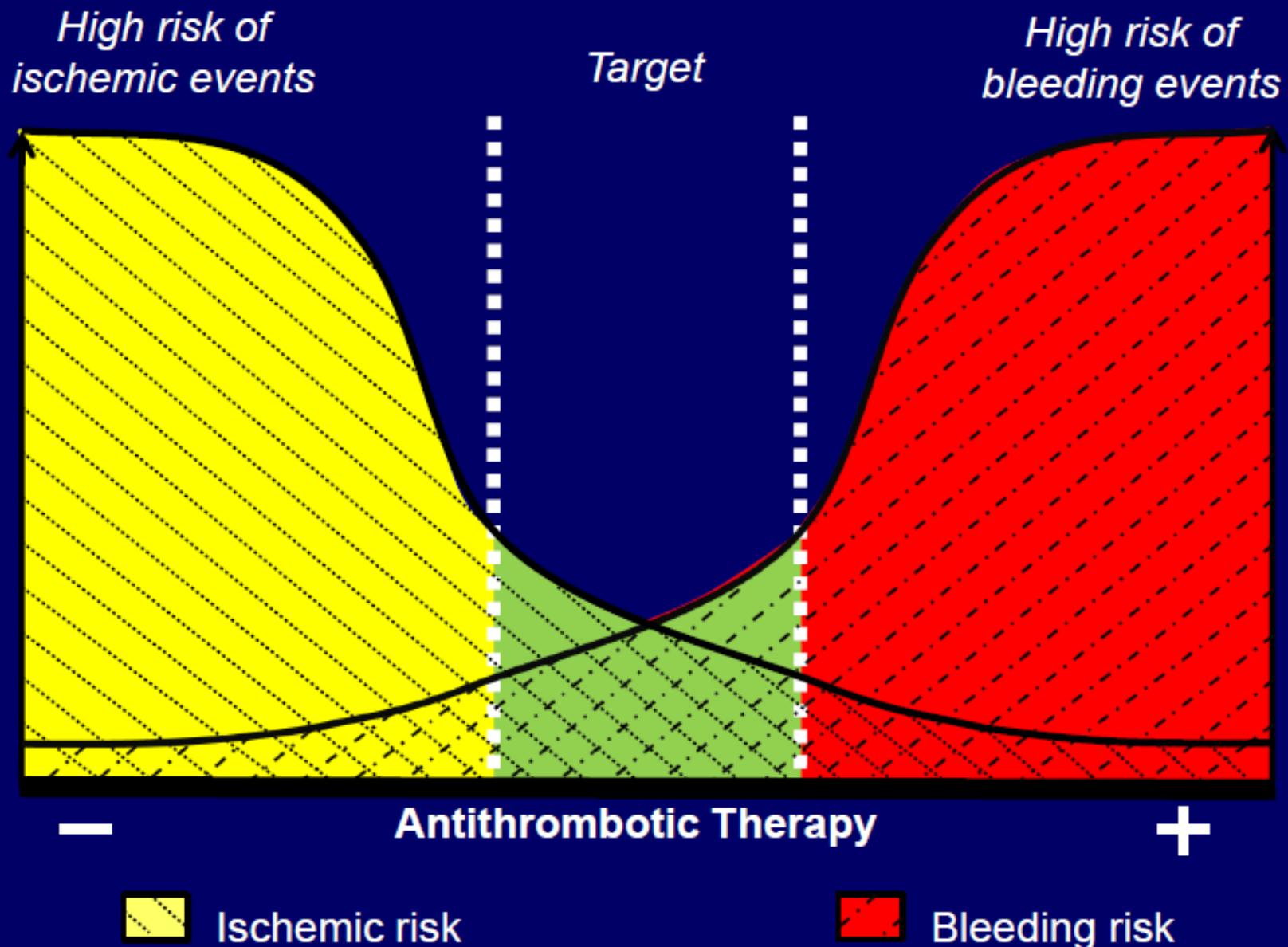
P2Y₁₂受体抑制剂

	氯吡格雷	普拉格雷	替格瑞洛
分类	噻吩并吡啶	噻吩并吡啶	环戊基三唑嘧啶
可逆性	不可逆	不可逆	可逆
激活	药物前体，受代谢限制	药物前体，不受代谢限制	活性药物
起效时间	2-4h	30min	30min
持续时间	3-10天	5-10天	3-4天
大手术前停药	5天	7天	5天

Is There a Role for Generic Clopidogrel in the Era of Prasugrel or Ticagrelor?

Indication	Clopidogrel Low dose	Clopidogrel High dose	Prasugrel	Ticagrelor
Elective PCI	++		+	+
ACS non invasive strategy	+			++
ACS PCI planned		+	+ (After angio)	++
ACS hs-troponin negative	++			
Non STE ACS			+ (After angio)	++
STEMI, primary PCI		+	++	++
STEMI, fibrinolysis	++			
ACS diabetes			++	++
ACS renal failure			+	++
ACS CABG likely				++
ACS prior stroke	+			+
ACS prior intracerebral bleed	(+)			
ACS frail patients	+			

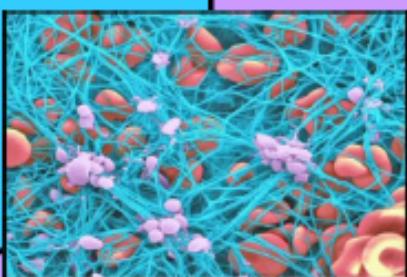
Targeting Antithrombotic Therapies



Targeting Antithrombotic Therapies in ACS

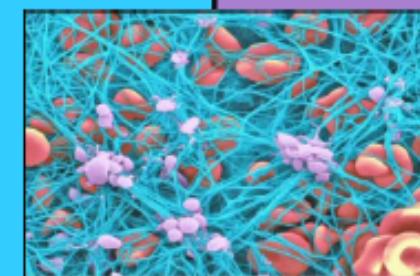
Target

Anticoagulant



Antiplatelet

Antiplatelet



Anticoagulant



- ACS患者终生服用阿司匹林（75mg-150mg/天）
- 氯吡格雷（75mg/天），或替卡格雷、普拉格雷，最好使用1年
- 高危患者，考虑长期强化双联抗血小板治疗
- 持续评估患者缺血症状和出血危险



阿司匹林治疗建议

- 服用阿司匹林后发生出血或有出血风险，选择低剂量阿司匹林(75mg-100mg/天)
- 不能耐受或禁忌使用阿司匹林的患者，可长期使用氯吡格雷75mg/d替代
- 因胃肠道出血应用氯吡格雷替代阿司匹林时，给予质子泵抑制剂



氯吡格雷治疗建议

- 服用氯吡格雷患者，拟行CABG，建议术前停用氯吡格雷至少5天，最好7天，除非血运重建紧急程度大于出血危险
- 慢性房颤和房扑，左心室血栓，应用华法林使INR控制在2-3，联合应用阿司匹林和或氯吡格雷会增加出血风险，应该严密监测。INR调整在2-2.5，阿司匹林剂量建议为75mg，氯吡格雷剂量为75mg



老年人

- 治疗决策需个体化
- 65岁以上老年人亚组分析：老年人同样从阿司匹林和氯吡格雷中获益，并且其绝对和相对获益比65岁以下人群更显著
- 阿司匹林长期剂量建议不超过100mg，急性期抗血小板药物负荷剂量应酌情降低或不用



手术或有创操作时的处理

➤ 择期手术患者

长期服抗血小板治疗是否停药，平衡手术出血和停药后血栓事件风险

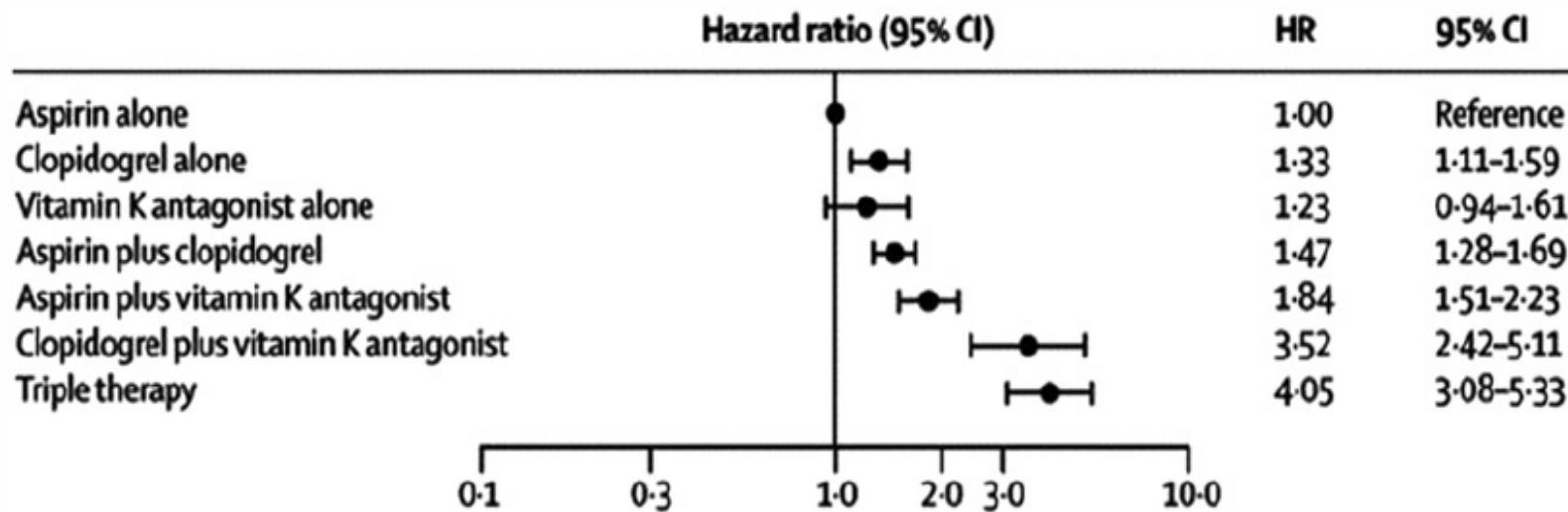
➤ 紧急手术患者

有威胁生命的出血风险时，建议输血小板或给予止血药物，如氨甲环酸



O'Gara et al.

2013 ACCF/AHA STEMI Guideline: Full Text

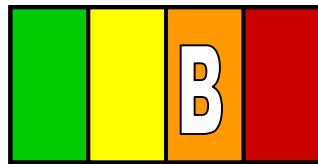


Adjusted risk of nonfatal and fatal bleeding in patients treated with aspirin, clopidogrel, and/or vitamin K antagonists after first MI. Compared with aspirin alone, triple therapy is associated with a 3- to 4-fold increased risk of fatal and nonfatal bleeding. CI indicates confidence interval; HR, hazard ratio; and MI, myocardial infarction.



华法林治疗

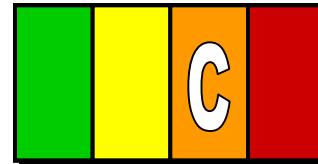
I IIa IIb III



Modified
2012

冠心病高危及出血低危，不耐受或不需 $P2Y_{12}$ 抑制剂治疗患者，华法林无阿司匹林 (INR 2.5 to 3.5) 或小剂量阿司匹林 (81 mg/d; INR 2.0 to 2.5)

I IIa IIb III



New
2012

联用阿司匹林和 $P2Y_{12}$ 抑制剂治疗患者，
目标 INR 2.0 to 2.5



北京大学第一医院
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谢谢