

The time on and off Anticoagulant, Route, Type & Dose of anticoagulant in Perioperative Management for Patients with Venous Thromboembolism

멘티: 서울아산병원 | 이장호

멘토: 울산대학교병원 | 나승원

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Suggested Risk Stratification for Patient-Specific Periprocedural Thromboembolism

Risk Category	Mechanical Heart Valve	Atrial Fibrillation	VTE
High (> 10%/y risk of ATE or > 10%/mo risk of VTE)	Mitral valve with major risk factors for stroke ^b Caged ball or tilting-disc valve in mitral/aortic position Recent (< 3 mo) stroke or TIA or other high-risk stroke situations ^c	CHA ₂ DS ₂ VASc score ≥ 7 or CHADS ₂ score of 5 or 6 Recent (< 3 mo) stroke or TIA Rheumatic valvular heart disease	<u>Recent (< 3 mo and especially 1 mo) VTE</u> Severe thrombophilia (deficiency of protein C, protein S or antithrombin; homozygous factor V Leiden or prothrombin gene G20210A mutation or double heterozygous for each mutation, multiple thrombophilias) Antiphospholipid antibodies Active cancer associated with high VTE risk ^a
Moderate (4%-10%/y risk of ATE or 4%-10%/mo risk of VTE)	Bileaflet AVR <i>with</i> major risk factors for stroke ^b	CHA ₂ DS ₂ VASc score of 5 or 6 or CHADS ₂ score of 3 or 4	VTE within past 3-12 mo Recurrent VTE Non-severe thrombophilia (heterozygous factor V Leiden or prothrombin gene G20210A mutation) Active cancer or recent history of cancer ^c
Low (< 4%/y risk of ATE or < 2%/mo risk of VTE)	Bileaflet AVR <i>without</i> major risk factors for stroke ^b	CHA ₂ DS ₂ VASc score of 1-4 or CHADS ₂ score of 0-2 (and no prior stroke or TIA)	VTE > 12 mo ago

Suggested Risk Stratification for Procedural Bleed Risk

<p>High-bleed-risk surgery/procedure^a (30-d risk of major bleed \geq 2%)</p>	<p>Major surgery with extensive tissue injury Cancer surgery, especially solid tumor resection (lung, esophagus, gastric, colon, hepatobiliary, pancreatic) Major orthopedic surgery, including shoulder replacement surgery Reconstructive plastic surgery Major thoracic surgery Urologic or GI surgery, especially anastomosis surgery Transurethral prostate resection, bladder resection, or tumor ablation Nephrectomy, kidney biopsy Colonic polyp resection Bowel resection Percutaneous endoscopic gastrostomy placement, endoscopic retrograde cholangiopancreatography Surgery in highly vascular organs (kidneys, liver, spleen) Cardiac, intracranial, or spinal surgery Any major operation (procedure duration > 45 min) Neuraxial anesthesia^b Epidural injections</p>
<p>Low-to-moderate-bleed-risk surgery/procedure^c (30-d risk of major bleed 0%-2%)</p>	<p>Arthroscopy Cutaneous/lymph node biopsies Foot/hand surgery Coronary angiography^d GI endoscopy \pm biopsy Colonoscopy \pm biopsy Abdominal hysterectomy Laparoscopic cholecystectomy Abdominal hernia repair Hemorrhoidal surgery Bronchoscopy \pm biopsy</p>

Implications of Strong and Conditional Recommendations

	Strong Recommendation (“We recommend . . .”)	Conditional Recommendation (“We suggest . . .”)
For patients	The overwhelming majority of individuals in this situation would want the recommended course of action, and only a small minority would not. <i>(It is the right course of action for >95% of patients.)</i>	The majority of individuals in this situation would want the suggested course of action, but a sizable minority would not. <i>(It is the right course of action for >50% of patients.)</i>
For clinicians	The overwhelming majority of individuals should receive the recommended course of action. Adherence to this recommendation according to the guideline could be used as a quality criterion or performance indicator. Formal decision aids are not likely to be needed to help individuals make decisions consistent with their values and preferences. <i>(It is reasonable to recommend it strongly to patients and caregivers.)</i>	Different choices will be appropriate for different patients, and the clinician must help each patient arrive at a management decision consistent with her or his values and preferences. Decision aids may be useful to help individuals make decisions consistent with their values and preferences. Clinicians should expect to spend more time with patients when working toward a decision. <i>(Slow down, think about it, discuss it with the patient.)</i>
For policy makers	The recommendation can be adopted as policy in most situations, including for use as a performance indicator. <i>(The recommended course of action may be an appropriate performance measure.)</i>	Policy making will require substantial debates and involvement of many stakeholders. Policies are also more likely to vary between regions. Performance indicators would have to focus on the fact that adequate deliberation about the management options has taken place. <i>(The recommended course of action is not appropriate for a performance measure.)</i>