Revascularization Guidelines Review

Review of Perioperative Guidelines

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Dallas Cardiovascular Innovations 2013

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Bypass Graft Conduit

Intraoperative Considerations

Which statement carries the highest Class recommendation?

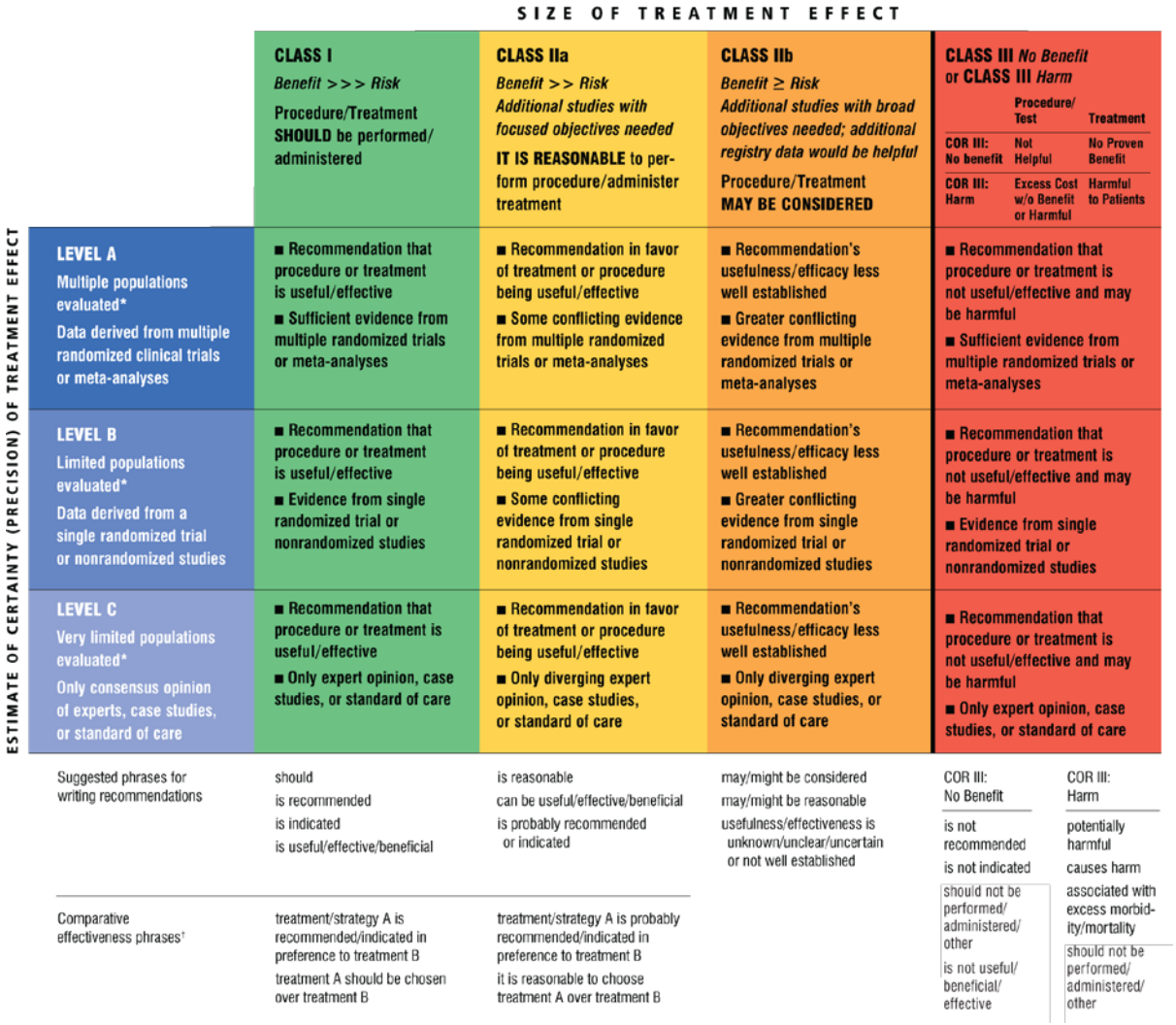
(1) If the LIMA is unsuitable, the RIMA should be used to bypass the LAD.

(2) Complete arterial revascularization is recommended in patients < 60 years old with no contraindications.

(3) A radial graft is recommended when grafting left-sided arteries with > 70% stenosis.

(4) The RIMA is recommended for grafting the RCA with >70% stenosis.

Classification of Recommendations and Levels of Evidence



SIZE OF TREATMENT EFFECT

ESTIMATE OF CERTAINTY (PRECISION) OF TREATMENT EFFECT

	CLASS I *Benefit >>> Risk* Procedure/Treatment **SHOULD** be performed/ administered	CLASS IIa *Benefit >> Risk* *Additional studies with focused objectives needed* **IT IS REASONABLE** to perform procedure/administer treatment	CLASS IIb *Benefit ≥ Risk* *Additional studies with broad objectives needed; additional registry data would be helpful* Procedure/Treatment **MAY BE CONSIDERED**	CLASS III *No Benefit* or CLASS III *Harm* Procedure/Test / Treatment COR III: No benefit — Not Helpful / No Proven Benefit COR III: Harm — Excess Cost w/o Benefit or Harmful / Harmful to Patients
LEVEL A Multiple populations evaluated* Data derived from multiple randomized clinical trials or meta-analyses	■ Recommendation that procedure or treatment is useful/effective ■ Sufficient evidence from multiple randomized trials or meta-analyses	■ Recommendation in favor of treatment or procedure being useful/effective ■ Some conflicting evidence from multiple randomized trials or meta-analyses	■ Recommendation's usefulness/efficacy less well established ■ Greater conflicting evidence from multiple randomized trials or meta-analyses	■ Recommendation that procedure or treatment is not useful/effective and may be harmful ■ Sufficient evidence from multiple randomized trials or meta-analyses
LEVEL B Limited populations evaluated* Data derived from a single randomized trial or nonrandomized studies	■ Recommendation that procedure or treatment is useful/effective ■ Evidence from single randomized trial or nonrandomized studies	■ Recommendation in favor of treatment or procedure being useful/effective ■ Some conflicting evidence from single randomized trial or nonrandomized studies	■ Recommendation's usefulness/efficacy less well established ■ Greater conflicting evidence from single randomized trial or nonrandomized studies	■ Recommendation that procedure or treatment is not useful/effective and may be harmful ■ Evidence from single randomized trial or nonrandomized studies
LEVEL C Very limited populations evaluated* Only consensus opinion of experts, case studies, or standard of care	■ Recommendation that procedure or treatment is useful/effective ■ Only expert opinion, case studies, or standard of care	■ Recommendation in favor of treatment or procedure being useful/effective ■ Only diverging expert opinion, case studies, or standard of care	■ Recommendation's usefulness/efficacy less well established ■ Only diverging expert opinion, case studies, or standard of care	■ Recommendation that procedure or treatment is not useful/effective and may be harmful ■ Only expert opinion, case studies, or standard of care
Suggested phrases for writing recommendations	should is recommended is indicated is useful/effective/beneficial	is reasonable can be useful/effective/beneficial is probably recommended or indicated	may/might be considered may/might be reasonable usefulness/effectiveness is unknown/unclear/uncertain or not well established	COR III: No Benefit: is not recommended; is not indicated; should not be performed/ administered/ other; is not useful/ beneficial/ effective COR III: Harm: potentially harmful; causes harm; associated with excess morbidity/mortality; should not be performed/ administered/ other
Comparative effectiveness phrases†	treatment/strategy A is recommended/indicated in preference to treatment B treatment A should be chosen over treatment B	treatment/strategy A is probably recommended/indicated in preference to treatment B it is reasonable to choose treatment A over treatment B		

A recommendation with Level of Evidence B or C does not imply that the recommendation is weak. Many important clinical questions addressed in the guidelines do not lend themselves to clinical trials. Although randomized trials are unavailable, there may be a very clear clinical consensus that a particular test or therapy is useful or effective.

*Data available from clinical trials or registries about the usefulness/efficacy in different subpopulations, such as sex, age, history of diabetes, history of prior myocardial infarction, history of heart failure, and prior aspirin use.

†For comparative effectiveness recommendations (Class I and IIa; Level of Evidence A and B only), studies that support the use of comparator verbs should involve direct comparisons of the treatments or strategies being evaluated.

Preoperative Antiplatelet Therapy

Perioperative Management

Which is true?

(1) ASA 81 mg daily is recommended preoperatively for patients undergoing CABG.
(2) Clopidogrel should be discontinued at least 5 days before surgery in elective CABG patients.
(3) Prasugrel should be discontinued at least 5 days before elective CABG surgery.
(4) Eptifibatide should be discontinued at least 12 hours before CABG surgery.

Management of Hyperlipidemia

Perioperative Management

Which is true?

(1) All patients undergoing CABG should receive statin therapy, unless contraindicated.
(2) Patients undergoing urgent or emergency CABG should have statin therapy instituted postoperatively.
(3) Patients undergoing elective CABG should have a target LDL < 70 mg/dL.
(4) Statin therapy can be discontinued after CABG if LDL is < 70 mg/dL.

Perioperative Glucose Control

Perioperative Management

Which of the following is true?

(1) Postoperative glucose levels < 180 mg/dL should be targeted, using continuous IV insulin.
(2) Postoperative glucose levels <180 mg/dL should be targeted, using a sliding scale subQ insulin protocol.
(3) Tight intra-operative glucose control (<140 mg/dL) is associated with improved outcomes.
(4) All of the above.

Perioperative Beta Blockers

Perioperative Management

Which of the following is true?

(1) Pre-operative administration of beta blockers before CABG is a Class I recommendation.
(2) Pre-operative administration of beta blockers before CABG is a Class IIa recommendation.
(3) Pre-operative administration of beta blockers before CABG is a Class IIb recommendation.
(4) All of the above
(5) Oh, go to Hell!

Angiotensin-Converting Enzyme Inhibitors and Angiotensin-Receptor Blockers

Perioperative Management

In which of the following is post-operative administration of ACE-Inhibitors or ARB's recommended?

(1) Patients taking them preoperatively.
(2) Patients with LVEF < 40% who are stable.
(3) Patients with CKD who are stable.
(4) Low-risk patients with normal LVEF.
(5) All of the above.

Preoperative Carotid Artery Screening

Perioperative Management

Which of the following is true based on current guidelines?

(1) Routine carotid Duplex screening of all patients undergoing CABG is reasonable.
(2) Carotid screening is a Class I indication in patients undergoing CABG who have had a prior TIA.
(3) The Guidelines recommend carotid end-arterectomy over carotid stenting in patients with severe symptomatic carotid disease who are undergoing CABG.
(4) There is no defined role for carotid revascularization in asymptomatic patients (ie without TIA or CVA) who are undergoing CABG.

Apple Pie

Perioperative Management

Which of the following "Kumbaya" recommendations is a Class I recommendation?

(1) Stop smoking.
(2) Go to cardiac rehab.
(3) Publically report outcomes after CABG.
(4) Avoid blood transfusion.
(5) Use a Heart Team approach on revascularization decisions.