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2018 ESC/EACTS Guidelines on Myocardial Revascularization

<https://www.escardio.org/Guidelines/Clinical-Practice-Guidelines/ESC-EACTS-Guidelines-in-Myocardial-Revascularisation-Guidelines-for>

Introduction

The European Society of Cardiology Congress in August 2018 saw the release of the third set of joint cardiology and cardiac surgery guidelines on myocardial revascularisation.¹ This updated guideline, last published in 2014, covers the use of diagnostic testing in planning revascularisation, strategies for acute and stable coronary disease, technical aspects of percutaneous coronary intervention (PCI) and coronary artery bypass grafting (CABG), pharmacotherapy and service delivery. There are several changes to recommendations in line with key trials of the last four years – those with the greatest impact on the multidisciplinary team (MDT), interventional strategy and surgical practice are highlighted here.

Key New Recommendations

Key new recommendations include the use of Syntax scoring to guide revascularisation in patients with left main or multivessel disease, which has been given a Class I (level of evidence B) recommendation. CABG receives a new Class I (B) recommendation as the preferred revascularisation strategy in patients with coronary disease, heart failure and severely impaired left ventricular function ($EF \leq 35\%$), with PCI an alternative (Class IIa, C). A further new Class I (B) recommendation is that stabilised NSTEMI patients should be revascularised according to the same principles as stable patients, and achieving complete revascularisation should be prioritised in deciding between PCI and CABG (Class IIa, B).

In the cath lab

In the cath lab, the use of radial access as standard for coronary angiography and PCI is a new Class I (A) recommendation, unless there are 'overriding procedural considerations'. Drug-eluting stents should be used for any PCI, regardless of clinical presentation, future surgery, or planned duration of antiplatelet therapy (Class I, A). iFR has been incorporated alongside FFR as a Class I (A) recommendation for assessment of intermediate grade stenoses. All patients should be assessed for risk of contrast-induced nephropathy (Class I, C), and pre- and post-hydration given to patients with moderate or severe chronic kidney disease and an expected contrast burden of $> 100\text{mls}$ (Class IIa, C). A new recommendation has been made that in true left main bifurcations, a DK crush 'may be preferred' to provisional T-stenting (Class IIb, B). Operators undertaking left main PCI should be performing ≥ 25 cases per year (Class IIa, C). New Class IIb recommendations have also been included to permit use of Cangrelor (level of evidence A) or GpIIb/IIIa inhibitors (level of evidence C) in P2Y12-inhibitor naïve patients undergoing PCI for NSTEMI.

Surgical Practice

Changes to surgical practice include new recommendations for the use of radial artery grafts over saphenous vein grafts in patients with high-degree stenosis (Class I, B), and the use of a no-touch technique for open vein harvesting (Class IIa, B).

Upgraded and Downgraded recommendations

A number of previous recommendations have been up or downgraded. Immediate coronary angiography in survivors of out-of-hospital cardiac arrest with an ECG consistent with STEMI has been upgraded to Class I (B), from Class IIa. From a technical perspective, the use of an up-front provisional approach to bifurcation lesions has been upgraded to Class I (A). OCT for stent optimisation has been upgraded to Class IIa (B). Routine revascularisation of non-infarct related artery lesions in patients with MI with cardiogenic shock during PPCI has been downgraded to Class III (B). Other downgrades are PCI for patients with multivessel disease, diabetes and a low Syntax score (now Class IIb), and the use of Euroscore II to assess in-hospital mortality (now Class IIb). In addition, distal protection devices in saphenous vein graft PCI have been downgraded from Class I to Class IIa, and the use of Bivalirudin in STEMI and NSTEMI (to Class IIb).

Conclusions

The changes in the updated guideline are largely in accordance with UK current practice: heart team decision-making, with PCI performed predominantly by the radial route, with increasing use of intracoronary imaging and a provisional approach to bifurcations.² The guidelines give a renewed emphasis to anatomical Syntax scoring for guiding decision making, and on achieving complete revascularisation. Finally, these guidelines also highlight a number of key gaps in the evidence base which are likely to be addressed by upcoming studies, in particular the prognostic impact of revascularisation in patients with ischaemia, the use of pressure wire assessment to guide coronary artery bypass grafting, and the timing of revascularisation in patients undergoing transcatheter aortic valve implantation.

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References

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2. Ludman P. BCIS Audit Returns Adult Interventional Procedures Jan 2016 - Dec 2016.

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