Updated NICE guidance on secondary prevention post-MI

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The new NICE guideline on secondary prevention following an MI offers a comprehensive update on standards of care.[1] This is a substantial document covering drug therapy, lifestyle advice and cardiac rehabilitation and is cross-referenced to multiple other NICE guidelines.

The aim of this editorial is to appraise the key updates in this document.

Antiplatelet medications

The new guideline recommends the use of ticagrelor (Brilique) for 12 months for primary percutaneous coronary intervention (PCI) and all non-ST segment elevation MI (NSTEMI) patients including medical management only. Ticagrelor is recommended for high-risk patients with unstable angina including patients with a prior history of MI or coronary artery bypass graft (CABG), stroke, diabetes and peripheral vascular disease.[2]

Clopidogrel may be used as a second-line antiplatelet medication and remains part of the guideline. In clinical practice, clopidogrel may be preferred in patients presenting with low-risk unstable angina or high risk of bleeding, or as an alternative to aspirin in patients with documented cerebrovascular disease after one year of dual antiplatelet therapy.

The guideline also highlights the importance of continuing aspirin and a second antiplatelet medication for 12 months after an ST segment elevation MI (STEMI) in patients treated with surgical revascularisation.

Anticoagulation

The issue of patients requiring anticoagulation in addition to antiplatelet therapy post-MI is covered. One study has reported that up to 4 per cent of STEMI patients were prescribed an anticoagulant.[3] New oral anticoagulants (NOACs) complicate this issue further.

The guideline recommends:

- aspirin plus an anticoagulant for patients treated with balloon angioplasty, CABG or medical management
- clopidogrel plus an anticoagulant if a stent is deployed
- warfarin is preferred and NOACs not recommended for patients prescribed dual antiplatelet therapy who also require anticoagulation
- avoid ticagrelor or prasugrel (Efient) with any anticoagulant.

As there is limited trial evidence on prescribing antiplatelet drugs in combination with anticoagulants, it suggests each case should be assessed individually, weighing the clinical indications against the potential risk of bleeding.

ACE inhibitors and beta-blockers

The recommendations for use of ACE inhibitors (or angiotensin-II receptor blockers if intolerant) and beta-blockers are mostly unchanged.

In the presence of left ventricular systolic dysfunction (the guideline's defined cut-off is an ejection fraction less than 40 per cent), the guideline directs readers to the NICE heart failure guidance[4] for choice of beta-blocker.

A notable difference is a marked reduction in the interval for up-titration of ACE inhibitor doses, from every one to two weeks down to every 12–24 hours. This change reflects the authors' concerns that patients were being discharged on suboptimal doses, particularly with the reduced length of inpatient stay for patients treated with primary PCI.

It is recommended that plans for subsequent up-titration of both these medications are communicated to primary care. The scarcity of evidence for continuing both these medications indefinitely is discussed, but continuation is still recommended.

Statins

Readers are referred to the NICE lipid modification guidelines,[5] which recommend that high-intensity statins be offered to all patients with acute coronary syndromes.

Other medications

The recommendations with regards to aldosterone antagonists remain unchanged. The guidance still suggests initiation 3–14 days post-MI. While being in line with the evidence, this is likely out of keeping with the trend in clinical practice to initiate as soon as possible.

Omega-3 fatty acid supplementation, either in dietary or tablet form, is no longer recommended due to lack of evidence of benefit in contemporary trials.

Device therapy

Assessment of patients for defibrillators is very briefly covered, referring readers to the NICE defibrillator guidelines,[6] which are due for an update. Neither guideline suggests an assessment pathway.

Rehabilitation and other issues

The revised NICE guidance recommends that cardiac rehabilitation should start during the index hospital admission, and the next session should take place within 10 days of discharge.

Other suggestions include allowing patients to choose which components to engage with, offering sessions out of working hours, and to ensure availability of gender and culturally sensitive

sessions. The aim is to reduce excessive delays[7] and improve poor uptake.

The updated guidelines recommend that all patients who wish to travel should contact the Civil Aviation Authority to discuss their suitability to fly (www.caa.co.uk). This in turn points passengers back to their GP or hospital consultant for advice, but despite this conflict most patients can fly after an MI.

Drivers suffering an MI are directed to the Driver and Vehicle Licensing Authority (www.dvla.gov.uk) for advice.

Summary

The updated NICE guideline puts a greater emphasis on the importance of cardiac rehabilitation and improving access to this service, which will necessitate changes to service delivery.

The advice on the combined use of anticoagulants and antiplatelet drugs is helpful.

For clarity, an algorithm to direct the appropriate choice of second-line antiplatelet medication is needed as this part of the guideline is confusing.

The advice on implantable devices refers to guidelines that are eight years old, and revision of this is eagerly awaited.

References

1. NICE. *MI – secondary prevention: Secondary prevention in primary and secondary care for patients following a myocardial infarction*. CG172. November 2013.
2. NICE. *Ticagrelor for the treatment of acute coronary syndromes.* TA236. October 2011.
3. Oudot A, *et al*. *Heart* 2006;92(8):1077–83.
4. NICE. *Chronic heart failure: Management of chronic heart failure in adults in primary and secondary care.* CG108. August 2010.
5. NICE. *Lipid modification: Cardiovascular risk assessment and the modification of blood lipids for the primary and secondary prevention of cardiovascular disease*. CG67. March 2010.
6. NICE. *Implantable cardioverter defibrillators for arrhythmias*. TA95. January 2006.
7. *National audit of cardiac rehabilitation report*. 2012.

Declaration of interests

None to declare.

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