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Rethinking Duration: An Evolving Perspective on Dual Antiplatelet Therapy

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Take Home Messages

- Recent data from DUAL-ACS and HOST-BR support shorter DAPT as a safe and effective option for many patients.
- DAPT duration should be tailored to the individual, weighing bleeding and ischemic risks instead of following a ""one-size-fits-all" approach.

The Changing Landscape

Dual antiplatelet therapy (DAPT) remains a cornerstone of management after percutaneous coronary intervention (PCI) and in acute coronary syndromes (ACS). Current European Society of Cardiology (ESC) guidelines recommend 12 months of DAPT after ACS and six months following PCI for chronic coronary syndrome (1). These recommendations, based on studies conducted during the early era of drug-eluting stents and higher baseline thrombotic risk, have shaped practice for nearly two decades.

The rationale for prolonged DAPT is well established: dual inhibition of platelet aggregation reduces the risk of stent thrombosis and recurrent ischemic events. However, these benefits come at a cost. Major bleeding events, often as life-threatening as ischaemic complications, carry significant morbidity and mortality. Over the past decade, advances in stent design, more precise PCI techniques, greater use of intravascular imaging, and improved secondary prevention strategies, have markedly lowered ischemic risk (2). Consequently, the balance between ischemic and bleeding events has shifted, prompting reconsideration of how long DAPT truly needs to continue.

Emerging Evidence for Shorter Therapy

Two major trials published in 2025 have added important clarity to the debate around optimal DAPT duration.

The DUAL-ACS trial, presented at the 2025 ESC Congress, enrolled over 5,000 patients with type 1 myocardial infarction within 12 weeks and were followed for a median of 15 months (3). The trial compared three months of DAPT with the conventional 12-month regimen, using cardiovascular death and non-fatal infarction as the primary endpoints.

Three-month DAPT was non-inferior to the 12-month strategy for the primary endpoint. Although the study was not powered to assess mortality or bleeding reductions, both outcomes showed a trend favouring the shorter regimen. These findings suggest that, for many patients, shorter DAPT may offer comparable protection with fewer adverse effects.

The HOST-BR trial from South Korea further refined the question by examining the role of bleeding risk in determining DAPT duration. The trial included 4,897 patients who underwent percutaneous coronary intervention with drug-eluting stent and compared one-month versus three-month DAPT therapy in those with high bleeding risk (HBR) according to Academic Research Consortium for High Bleeding Risk (ARC-HBR) criteria, while also assessing outcomes in non-HBR patients who were randomised to 3 or 12 months DAPT (4,5).

Among HBR patients, one-month DAPT with choice of P2Y12 inhibitor at clinician discretion failed to demonstrate non-inferiority to three months, indicating that extremely short therapy may not adequately protect this population from ischaemic events. In contrast, among patients without HBR, three-month DAPT was non-inferior to a 12-month regimen for both net adverse events and major cardiac or cerebral events. Importantly, the shorter regimen significantly reduced bleeding, reinforcing the value of individualised therapy.

Collectively, these trials support a tailored approach: in appropriately selected patients, DAPT can provide robust ischemic protection while reducing bleeding complications.

Clinical Nuances and Ongoing Questions

Despite promising data, uncertainties remain. The DUAL-ACS trial lacked sufficient power to evaluate mortality differences, and longer-term follow-up will be essential to confirm that the benefit persists. Likewise, further research is needed in high-risk subgroups such as patients with diabetes, complex coronary anatomy, or substantial comorbidities, who may derive differential benefit from extended therapy.

The HOST-BR results also underscore the continued need for careful patient selection. Frail or elderly individuals, those with a history of bleeding, or patients on concomitant anticoagulation often stand to benefit from shorter DAPT. Conversely, patients with high ischemic burden, including those with diabetes, multivessel PCI, or prior stent thrombosis may still merit longer therapy. Increasingly sophisticated risk scores are helping clinicians navigate these competing risks and tailor treatment duration accordingly.

Conclusion

The growing body of contemporary evidence is reshaping the long-standing "one-size-fits-all" approach to DAPT. Abbreviated regimens, once met with caution, now represent a credible, and in many cases preferable, alternative to the fixed 12-month standard. Ultimately, the optimal duration of DAPT should reflect each patient's unique balance of ischemic and bleeding risk, alongside stent characteristics and procedural factors.

References

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