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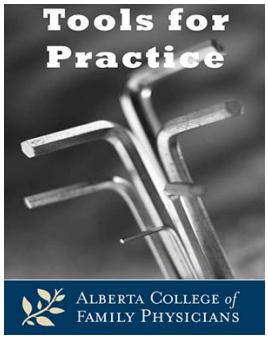

Two's Company, Three's a Crowd: Dual versus triple therapy post-PCI

Clinical Question: Should patients already on oral anticoagulation who undergo percutaneous coronary intervention (PCI), receive one antiplatelet + one anticoagulant (dual therapy) or two antiplatelets + one anticoagulant (triple therapy)?

Bottom Line: Compared to triple therapy, dual therapy lowers bleeding risk (one fewer bleed for every 6-11 patients) and may decrease cardiovascular events or mortality. Most patients on OAC having PCI should be offered dual therapy.

Evidence:
Three high-quality, randomized controlled trials (RCTs) of mostly atrial fibrillation patients (~70 years old) who received PCI. Bleeding definitions varied, clinically relevant bleeds (resulting in at least a medical visit or intervention) reported below. Results statistically significant unless indicated:

- WOEST:[1] Smallest trial (573 patients), but directly answers question. Clopidogrel + oral anticoagulant (dual) versus clopidogrel + ASA + oral anticoagulant (triple) for one month to one year (at physician's discretion). At one year:
  - Bleeding:
    - Dual 14.0%, triple 31.3%; Number Needed to Treat (NNT)=6.
  - Composite of death, myocardial infarction (MI), stroke, revascularization, or stent thrombosis:
    - Dual 11.1%, triple 17.6%; NNT=16.
  - Stent thrombosis, MI, target-vessel revascularization, and stroke (hemorrhagic or ischemic):
    - None statistically different.
  - All-cause mortality:
    - Dual 2.5%, triple 6.3%; NNT=27.
- RE-DUAL:[2] Largest trial (2,725 patients). P2Y12 inhibitor (mostly clopidogrel) + dabigatran (110 mg or 150 mg) (dual) versus P2Y12 inhibitor + ASA + warfarin (triple). Patients over age 70-80 received dabigatran 110 mg.
  - Results (dual therapy groups combined) at 14 months:
    - Bleeding:
      - Dual 17.5%, triple 26.9%, statistically significant; NNT=11.
    - No difference in other clinically important cardiovascular outcomes.

- PIONEER:[3] 2,124 patients. Three arms (including ultra-low dose rivaroxaban arm). Focusing on P2Y12 inhibitor (mostly clopidogrel) + rivaroxaban 15 mg (dual) versus P2Y12 inhibitor + ASA + warfarin (triple).
  - Results (12 months):
    - Bleeding:
      - Dual 16.8%, triple 26.7%; NNT=11.
    - Composite of death, MI, stroke, revascularization, or stent thrombosis: No difference.
- Systematic reviews report similar conclusions but included cohort studies and irrelevant RCTs.[4,5]

Context:

- Approximately 20% of patients with atrial fibrillation have coronary artery disease.[6,7]
- Canadian guidelines recommend dual therapy (oral anticoagulation + clopidogrel) for up to one year for patients with atrial fibrillation ≥65 years and $CHADS_2$ ≥1 undergoing PCI.[8]

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Disclosure:
Authors do not have any conflicts of interest to declare.

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