



## ASA in TKA and THA Patients: Back to the future for VTE prophylaxis?

### CLINICAL QUESTION

**For total knee (TKA) or hip arthroplasty (THA) patients, does ASA result in similar symptomatic venous thromboembolism (VTE) and bleeding rates as low molecular weight heparins (LMWHs) or direct-acting oral anticoagulants (DOACs)?**

### BOTTOM LINE

**After initial treatment with 10-days of LMWHs or 5-days of DOACs, switching to ASA results in similar VTE and bleeding rates. Starting ASA alone immediately after surgery results in more VTEs (3.5% versus 1.8%) than LMWH. Due to cost and ease of use, after initial treatment with LMWHs or DOACs, patients can transition to ASA for the remainder of their VTE prophylaxis.**

### EVIDENCE

- From three publicly funded, non-inferiority randomized controlled trials. Only symptomatic VTEs reported.
- After initial treatment with anti-coagulants:

- ASA versus LMWH:<sup>1</sup> 778 Canadian THA patients; received dalteparin for 10 days then randomized to dalteparin or ASA 81mg daily for another 28 days. Study terminated early due to recruitment challenges. At 3 months:
  - Symptomatic VTE, major and relevant non-major bleeding: Not statistically different.
- ASA versus DOAC:<sup>2</sup> 3424 Canadian THA/TKA patients; received rivaroxaban for 5 days then randomized to rivaroxaban or ASA 81mg daily for 9 (knee) or 30 (hip) additional days. At 3 months:
  - Symptomatic VTE, major and relevant non-major bleeding: Not statistically different.
- ASA versus LMWH immediately after surgery:<sup>3</sup>
  - 9711 Australian TKA/THA patients randomized to ASA 100mg daily or enoxaparin 40mg/day for 14 (knee) or 35 (hip) days. Study stopped early for LMWH superiority. At 90 days:
    - Symptomatic VTE: ASA 3.5% versus enoxaparin 1.8%, statistically different.
    - Major bleeding, all-cause mortality: No difference.

## CONTEXT

- Without prophylaxis, ~4% of arthroplasty patients will develop a symptomatic VTE.<sup>4</sup>
- Guidelines recommend anticoagulation for 14 (knee) and 35 (hip) days with one of LMWH, DOAC, Vitamin K antagonist, or ASA.<sup>4,5</sup>
- Medication Cost (30 days):<sup>6</sup>
  - LMWH: \$200-300
  - DOAC: \$50-100
  - ASA: \$5

## REFERENCES

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