2018

A Bridge Too Far? Risks and Benefits of Perioperative Bridging Therapy

Jordan Buchholz
University of North Dakota

Follow this and additional works at: https://commons.und.edu/pas-grad-posters
Part of the Surgery Commons

Recommended Citation
https://commons.und.edu/pas-grad-posters/8

This Poster is brought to you for free and open access by the Department of Physician Studies at UND Scholarly Commons. It has been accepted for inclusion in Physician Assistant Scholarly Project Posters by an authorized administrator of UND Scholarly Commons. For more information, please contact zeinebyousif@library.und.edu.
Anticoagulant Bridging Therapy: Thromboembolic Risks

Douketis et al. (2016) found that their BRIDGE trial that the placebo group was non-inferior when compared to the dalteparin group in reducing thromboembolic risk. Incidence rate of 0.4% (4 of 918) in placebo group compared to 0.3% (3 of 895) in the dalteparin group (risk difference, 0.1% percentage points, 95% confidence interval [CI]; 0.6 to 0.001 for noninferiority). Bousif et al. (2016) found no statistically significant difference in the occurrence of stroke/systemic embolism between the bridged and non-bridged groups at one-month of follow-up or later (HR 0.97, 95% CI 0.68 - 1.37, P=0.841 from 0.1 months follow-up, HR 0.98, 95% CI 0.67-1.43, P=0.899 from 2.3-months of follow-up).

Ayyoub et al. (2016) found no statistically significant difference in all-cause mortality (OR, 1.29, 95% CI, 0.13-11.52, P=0.82), cerebral vascular accident (OR, 0.93, 95% CI, 0.34-2.51, P=0.88), or thromboembolic events (OR, 0.72, 95% CI, 0.72-2.80, P=0.64) between the heparin bridging group and the non-bridging group at 30 days and up to 3 months.

Ono et al. (2016) demonstrated similar incidences between the HBA and non-HBA groups for exogenous blood transfusion (23.3% vs 19.4%, P = 0.587) and thromboembolic events (4.1% vs 3.2%, P=0.755). The results demonstrate no significant rise in thromboembolic events with the non-HBA group as compared to the HBA group.

Anticoagulant Bridging Therapy: Bleeding Risks

Douketis et al. (2016) found the occurrence of major bleeding events in the placebo group at 37 days post follow-up was 1.3% (12 of 915) compared to 0.95% (9 of 895) in the dalteparin group. These results indicate that the placebo group had superior outcomes in reducing bleeding risks as compared to the bridging group (relative risk, 0.41; 95% CI, 0.20 to 0.78; P=0.005 for superiority).

Bousif et al. (2016) showed an increase in major bleeding events at one-month post-follow-up in the bridging group as compared to the non-bridging group (HR 1.23, 95% CI 0.30-5.30; P=0.001). However, in the 2-month and 3-month follow-ups there was no difference in bleeding events between the two groups (HR 0.93, 95% CI, 0.70-1.23, P=0.899).

Discussion

Current data does not support the use of routine bridging in low-risk anticoagulated patients.

Multiple studies showed no statistically significant difference in the rates of thromboembolic events between the bridged and non-bridged groups.

According to Siegel et al. (2012) the "risk of thromboembolic events was not significantly different in bridged and non-bridged patients".

Forgoing bridging was associated with a risk of bleeding that was significantly lower than the perioperative with bridging.

Douketis et al. (2016) found that "forgoing a bridging therapy that was nearly triple the risk associated with no bridging".

Thromboembolic risk should be weighed against the bleeding risk associated with the procedure.

According to Siegel et al. (2012) patients receiving anticoagulant perioperative bridging were at a 3.5-fold increase in overall and major bleeding events compared to patients who received no bridging therapy.

Individualized risk assessment scores should be utilized when determining risk prior to administration of bridging therapy.

Applicability to Clinical Practice

Forgoing bridging therapy may be non-inferior to bridging therapy in regards to thromboembolic prevention in low-risk patients.

Bridging treatment is associated with a significantly higher risk of bleeding events compared to non-bridging therapy.

Clinician’s should utilize individualized risk assessment calculators (CHADS2, HAS-BLED) to calculate a patients thromboembolic and bleeding risk to help guide clinicians in their decisions to use or forgo anticoagulant bridging therapy.

References

Ayoub, K., Steinberg, B.A., Peterson, E.D., & Selvaraj (2011) found that...