Author’s response to reviews

Title: Comparison of Different Bridging Anticoagulation Therapies used after Mechanical Heart Valve Replacement in Chinese Patients - A prospective cohort study

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Comment1. For perioperative anticoagulation, there are already guidelines and many meta-analyses that have been separately explained. What is the latest conclusion of your research?

Response: Firstly, there no accordance among the guidelines [1-4], and generate a broad standard of practices in cardiovascular centers in bridging anticoagulation after MHVR. Few original article and meta-analysis only includes Chinese people, so that few data are available on efficacy and safety of different bridging anticoagulant regimens in Chinese patients [5-9]. Our current investigation provide Chinese evidences for the development of related guidelines or consensus.

Secondly, the doses of bridging anticoagulants bridging anticoagulation exist significant differences between Chinese cardiac surgery centers and foreign centers. In domestic centers, we use subcutaneous UFH 25 IU/kg/dose four times daily or subcutaneous LMWH 4,000 IU of anti-Xa/dose twice daily to bridge anticoagulation, while subcutaneous UFH≤15000 IU/day or subcutaneous Dalteparin &lt; 5,000 IU/day in foreign centers [7].So our data are necessary and meaningful.
Thirdly, we compared three different bridge anticoagulation methods (the UFH groups VS the UFH-LMWH group VS the LMWH group). Endpoints included not only routine bleeding and embolism events, but also relevant time data (ICU length of stay, postoperative length of stay and time of achieving target INR) and medical costs (hospital costs, medicine costs and drug share). These data in general were not reported in previous studies.

Fourthly, our study found a trend of reduced ICU length of stay (P=0.08), postoperative length of stay (P=0.08) and time of achieving target INR (P=0.06) between LMWH and UFH group, which were also not reported in previous studies. Higher-level studies with a larger sample sizes, a longer follow-up, or randomized prospected controlled trial are needed to explore whether LMWH can shorten these endpoints.

In conclusion, our study provide Chinese data including some data in general were not reported in previous studies. For Chinese patients, LMWH bridging anticoagulation exists challenge of increasing the incidence of bleeding events, but exists a trend that enables patients to benefit from the anticoagulation effect earlier.

Reference


Comment 2. The sentence in the article still needs to be modified by the native English expert.

Response: We have modified the sentence in the article by a native English expert, and have made marks in the manuscript.