外頸靜脈或是內頸靜脈？頭頸部自由皮瓣重建手術時吻合靜脈選擇的實證醫學探討

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External or Internal Jugular Vein? Recipient Vein Selection in Head and Neck Free Tissue Transfer: An Evidence-Based Analysis

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Purpose:
Microvascular free tissue transfer has become the choice of reconstruction for complex head and neck defects. There are more free flap failure events as a result of venous thrombosis than arterial thrombosis. The selection of a recipient vein that is suitable for microvascular anastomosis in the head and neck region is one of the several essential components for successful free tissue transfer. Debates exist about venous thrombosis when anastomosed to the external jugular vein (EJV) versus internal jugular venous (IJV) system. However, there is no consensus on recipient vein selection in head and neck free tissue transfer.

Materials and Methods:
We performed a systematic literature review by searching the PubMed database from January 2000 to December 2010. We used the following key words: head and neck, free flap reconstruction or free tissue transfer, and venous anastomosis. This search was supplemented by a review of reference lists of potentially eligible studies. We excluded the non-English articles, those with flap number less than 100, and venous anastomosis to two veins or two different venous systems. Two reviewers independently extracted data in two steps: titles and abstracts, and then full text articles. Numerical distribution of recipient veins with their number of venous thrombosis were recorded. The primary outcome was the venous thrombosis rate. Statistical analysis was performed using the chi-square two-by-two contingency with Yates correction. Values of $p < 0.05$ were considered as significant.

Results:
Through our electronic and reference search, we identified five retrospective comparative studies. We pooled 1409 free flaps for further survey. A total of 704 flaps (50.0 %) were anastomosed to the IJV system and 705 flaps (50.0 %) to the EJV. Venous thrombosis rate were 4.83 % and 5.25 %, respectively ($p > 0.05$).

Conclusion:
In this systematic review, we found no statistical significant difference in venous thrombosis rates based on recipient vein selection. Recipient vein selection between EJV and IJV system has no impact on the outcome of head and neck free tissue transfer.