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### Clinical Outcomes of Patients with Hepatic Insufficiency Undergoing Transcatheter Aortic Valve Implantation: A Systematic Review and Meta-analysis

**Zeyi Cheng**

*West China Hospital, Sichuan University, China.*

**Objective:** To investigate the effect of abnormal liver function on the outcome and safety after transcatheter aortic valve implantation (TAVI) and whether TAVI is superior to surgical aortic valve replacement (SAVR) in patients with hepatic insufficiency.

**Methods:** We searched the databases of PubMed, Embase, the Cochrane Library, Web of Science up to 31 January 2021. Studies to be eligible if mortality after TAVI in patients with and without hepatic insufficiency, or mortality and complications for TAVI versus SAVR in patients with hepatic insufficiency were reported. This meta-analysis was registered with PROSPERO (CRD42021247495) and was carried out by using RevMan 5.3 and Stata 14.0.

**Results:** This meta-analysis of 20 studies assessed a total of 220270 patients. Hepatic insufficiency was associated with higher short-term mortality [OR=1.88, 95%CI (1.38 to 2.58), P<0.00001] and 1-2 years mortality [OR=1.64, 95%CI (1.42 to 1.89), P<0.00001]. Between TAVI and SAVR in patients with hepatic insufficiency, there is statistically significant difference in in-hospital mortality [OR=0.46, 95%CI (0.27 to 0.81), P=0.007], the occurrence rate of blood transfusions [OR=0.34, 95%CI (0.24 to 0.48), P<0.00001] and the occurrence rate of acute kidney injury [OR=0.55, 95%CI (0.33 to 0.91), P=0.02].

**Conclusions:** TAVI patients with hepatic insufficiency may have negative impact both on short-term (in-hospital or 30-day) and 1-2-years mortality. For patients with hepatic insufficiency, TAVI could be a better option than SAVR.

**Keywords:** transcatheter aortic valve implantation, surgical aortic valve replacement, hepatic insufficiency, meta-analysis, mortality.

#### Biography:

Zeyi Cheng is currently working as a cardiovascular surgeon at West China Hospital, Sichuan University, China. He has attended many international conference related to his field.