

The association between preoperative disease activity and outcomes of revascularizations in Takayasu arteritis: a longstanding issue revisited

Yongjun Li, MD, Peking union medical college, BEIJING

XIAOLU LI, MD, Medical School, University of Chinese Academy of Sciences, BEIJING

ZUOGUAN CHEN, MD, Peking union medical college, BEIJING

CHENGLONG FANG, MD, Fujian Medical University, FUZHOU, FUJIAN, CHINA

Objective:

Surgical revascularization is a crucial component of treatment strategy for Takayasu arteritis (TAK) patients, particularly those experiencing the life- or organ-threatening ischemic complications. The timing of surgery is a clinically significant and long-standing issue. It has been widely accepted that revascularization should be performed during inactive disease in TAK. However, with advances in immunosuppressive therapy and perioperative management strategy, the effect of disease activity on the postoperative prognosis needs reevaluation.

Methods:

TAK patients who underwent revascularization procedures at Beijing Hospital from 2016 to 2024 were included in this retrospective cohort registry study. The associations of preoperative disease activity with early postoperative complications (EPCs) and long-term adverse outcomes (LOs) were assessed. Risk factors for EPCs and LOs were identified through multivariate regression analyses.

Results:

The outcomes of 135 consecutive TAK patients who underwent 156 surgical interventions (endovascular revascularizations [EVR], 71 [45.51%]; open surgical revascularizations [OSR], 85 [54.49%]) were analyzed. Interestingly, preoperative active state (e.g., active state defined by 2018 EULAR consensus, Kerr score, ESR, and CRP) was less relevant to the frequency of EPCs and LOs among patients receiving either EVR or OSR. Furthermore, a history of stroke was identified as an independent risk factor for developing EPCs (HR 4.95 [1.51-16.27], $P=0.008$). Perioperative immunosuppressive treatment was a prognostic factor for favorable outcomes after EVR (HR 0.36 [0.15-0.88], $P=0.025$), while shortened preoperative thrombin time (TT) was indicative of LOs in patients receiving OSR (HR 0.77 [0.66-0.89], $P<0.001$).

Conclusion:

Our follow-up data indicated that surgical revascularization might be feasible for TAK patients with active disease. Several common and distinct prognostic factors should be adequately considered in the decision-making and perioperative management of patients undergoing EVR and OSR.