

# Risk factors of hepatic dysfunction after total arch repair of acute type A aortic dissection with modified triple-branched stent graft implantation

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## Abstract

**Abstract Background:** Hepatic dysfunction (HD) is a serious complication after cardiovascular surgery. However, risk factors of developing hepatic dysfunction after acute type A aortic dissection (AAAD) are largely unclear. **Methods:** The clinical data of 227 patients with AAAD repaired by modified triple-branched stent graft implantation from January 2018 to January 2020 were collected retrospectively, including preoperative, surgical and postoperative information. Logistics regression was used to explore the potential risk factors of HD. **Results:** In the early stage after operation, a total of 57 patients were complicated with HD, accounting for 25.11%. The hospital mortality rate in these patients with HD was 19.30%, while the rate in patients without HD was only 6.5%. We found that preoperative body mass index (BMI)  $>30\text{kg/m}^2$  (OR : 7.054, 95%CI : 1.798 – 27.678,  $P = 0.005$ ), preoperative renal insufficiency (OR : 7.575, 95%CI : 2.923–19.629,  $P = 0.000$ ), preoperative moderate/severe pericardial effusion (OR : 16.409, 95%CI : 2.81 – 93.444,  $P = 0.002$ ) and cardiopulmonary bypass time  $>180\text{min}$  (OR : 7.190, 95%CI : 3.113 – 16.608,  $P = 0.000$ ) were independent risk factors for HD after AAAD repaired by modified triple-branched stent graft implantation. **Conclusions :** Preoperative BMI  $>30\text{kg/m}^2$ , preoperative renal insufficiency, preoperative moderate/severe pericardial effusion and cardiopulmonary bypass time  $>180\text{min}$  were independent risk factors for HD after AAAD repaired by modified triple-branched stent graft implantation in AAAD patients. And the occurrence of HD after operation would prolong the time of mechanical ventilation and the hospital mortality of patients. **Keywords :** risk factors, acute type A aortic dissection, hepatic dysfunction, modified triple-branched stent graft implantation

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Table 1-4.docx available at <https://authorea.com/users/435575/articles/538500-risk-factors-of-hepatic-dysfunction-after-total-arch-repair-of-acute-type-a-aortic-dissection-with-modified-triple-branched-stent-graft-implantation>