Preoperative clinical application of human fibrinogen in patients with acute Stanford type A aortic dissection: A Single-center Retrospective Study.

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Abstract

Objective: To evaluate the perioperative clinical efficacy of preoperative human fibrinogen treatment in patients with acute Stanford type A aortic dissection (ATAAD). **Methods:** Data of 159 patients with ATAAD who underwent emergency surgical treatment in our hospital from January 2019 to December 2020 were retrospectively analyzed. Patients were divided into two groups according to whether human fibrinogen was administered before surgery. The preoperative clinical data, surgical data, postoperative data, complications related to the coagulation function, and mortality of the two groups were compared and analyzed. **Results:** The in-hospital mortality was similar in the two groups (2.9% versus 9.3%, P = 0.122). However, group A had a significantly shorter operation time (279.24±39.03 versus 298.24±45.90, P=0.008), lower intraoperative blood loss (240.48±96.75 versus 353.70±189.80, P¡0.001), and reduced intraoperative transfusion requirement of red blood cells (2.61+-1.18 versus 6.05+-1.86, P¡0.001). The postoperative suction drainage within 24 hours in group A was significantly decreased (243.24+-201.52 versus 504.22+-341.08,P=0.002). The incidence of postoperative acute kidney injury (AKI) in group A was lower than that in group B (3.8% versus 14.8%, P =0.023). Similarly, the incidence of postoperative hepatic insufficiency in group A was lower than that in group B (1.9% versus 9.3%, P =0.045). In group A, the mechanical ventilation time was shorter (47.68+-28.61 versus 118.21+-173.16, P=0.004) along with reduced ICU stay time (4.06+-1.18 versus 8.09+-9.42, P=0.003), and postoperative hospitalization days (19.20+-14.60 versus 23.50+-7.56, P=0.004). **Conclusion:** Preoperative administration of human fibrinogen in patients undergoing ATAAD surgery can effectively reduce the intraoperative blood loss, blood transfusion amount, shorten the operation time, reduce postoperative complications, and improve the early prognosis of patients, in addition to being highly safe.

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`Table 1-3.docx` available at https://authorea.com/users/358219/articles/561249-preoperative-clinical-application-of-human-fibrinogen-in-patients-with-acute-stanford-type-a-aortic-dissection-a-single-center-retrospective-study