

Effect of antithrombin III among patients with disseminated intravascular coagulation in obstetrics: a nationwide observational study in Japan

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February 22, 2021

Abstract

Abstract Objective: Pregnant women may develop disseminated intravascular coagulation (DIC), possibly resulting in massive maternal haemorrhage and perinatal death. The Japan guideline recommends use of antithrombin III (ATIII) for DIC in obstetrics; however, its effect remains uncertain. The present study therefore aimed to investigate the effect of ATIII for DIC patients in obstetrics, using a national inpatient database in Japan. **Design:** Nationwide observational study **Setting:** Japan **Population:** We used the Diagnosis Procedure Combination inpatient database to identify patients who delivered at hospital and were diagnosed with DIC from July 2010 to March 2018. **Methods:** Propensity score matching analyses were performed to compare in-hospital maternal mortality and hysterectomy during hospitalization between users and non-users of ATIII on the day of delivery. **Main Outcome Measures:** In-hospital mortality, hysterectomy **Results:** A total of 9,920 patients were enrolled, including 4,329 patients (44%) who used ATIII and 5,511 patients (56%) who did not use ATIII. One-to-one propensity score matching created 3290 pairs. In-hospital maternal mortality did not differ significantly between the propensity-matched groups (0.3% in the ATIII group vs. 0.5% in the control group; odds ratio, 0.73; 95% confidence interval, 0.35–1.54). Patients in the ATIII group, compared with those in the control group, had a significantly lower proportion of receiving hysterectomy during hospitalization (5.3% vs. 8.7%; difference, -2.9%; 95% confidence interval, -4.2 to -1.6%). **Conclusions:** The present study did not show mortality-reducing effect of ATIII for patients with DIC in obstetrics. ATIII may have clinical benefit in terms of reduction in receiving hysterectomy.

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