tinzaparin (Logiparin®, Innohep®): not available in U.S. ℞ 175 anti-Xa U per kg SQ once daily.

Abnormalities in blood coagulation are relatively common after traumatic brain injury (TBI). We prospectively studied the safety of the early antithrombotic prophylaxis with low molecular weight heparin.

METHODS: We prospectively evaluated 61 patients with moderate TBI. Patients requiring surgical treatment and/or with injuries in other systems were excluded. Coagulation studies included among others prothrombin time (PT), plasma fibrinogen levels and D-dimer levels. Blood samples were collected on admission and 24 h, 48 h, and 72 h later. Prophylaxis was started within 24 hours with tinzaparin.

RESULTS: In 42 of 61 patients a form of disseminated intravascular coagulation (DIC) was detected. The severity of head injury was correlated with the severity of the coagulation disorders. The PT was prolonged in the first two days. Plasma fibrinogen levels dropped initially and increased to above normal values 2-3 days later. D-dimer levels were significantly elevated and in 19 patients remained elevated throughout the study period. Clinical manifestations of DIC were not observed.

CONCLUSIONS: Patients with moderate TBI are at a serious risk of developing brain intravascular microthrombosis. Our study supports the early use of low molecular weight heparin [1].

1)
Pahatouridis D, Alexiou GA, Zigouris A, Mihos E, Drosos D, Voulgaris S. Coagulopathy in moderate head injury. The role of early administration of low molecular weight heparin. Brain Inj. 2010;24(10):1189-92. doi: 10.3109/02699052.2010.490510. PubMed PMID: 20642324.